

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Parts 122 and 412**

[EPA-HQ-OW-2005-0037; FRL-8189-7]

RIN 2040-AE80

**Revised National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines for Concentrated Animal Feeding Operations in Response to Waterkeeper Decision****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Proposed rule.

**SUMMARY:** EPA is proposing to revise the National Pollutant Discharge Elimination System (NPDES) permitting requirements and Effluent Limitations Guidelines and Standards (ELGs) for concentrated animal feeding operations (CAFOs) in response to the order issued by the Second Circuit Court of Appeals in *Waterkeeper Alliance et al. v. EPA*, 399 F.3d 486 (2nd Cir. 2005). This proposed rule responds to the court order while furthering the statutory goal of restoring and maintaining the nation's water quality and effectively ensuring that CAFOs properly manage manure generated by their operations.

This proposal would revise several aspects of EPA's current regulations governing discharges from CAFOs. First, EPA proposes to require only the owners and operators of those CAFOs that discharge or propose to discharge to seek coverage under a permit. Second, EPA proposes to require CAFOs seeking coverage under a permit to submit their nutrient management plan (NMP) with their application for an individual permit or notice of intent to be authorized under a general permit. Permitting authorities would be required to review the plan and provide the public with an opportunity for meaningful public review and comment. Permitting authorities would also be required to incorporate terms of the NMP as NPDES permit conditions. Third, this action proposes to authorize permit writers, upon request by a CAFO, to establish best management, zero discharge effluent limitations when the facility demonstrates that it has designed an open containment system that will comply with the no discharge requirements.

This proposed rule also responds to the court's remand orders regarding water-quality based effluent limitations (WQBELs) and pathogens. EPA proposes to clarify that WQBELs are available in permits with respect to production area

discharges and non-precipitation related discharges from land application, but are statutorily unavailable in permits for Large CAFOs with respect to precipitation related land application discharges because the only allowable discharge from a land application area is due to agricultural storm water which is by statute exempt from permitting requirements. Finally, EPA proposes to clarify its selection of BCT technologies for pathogens (fecal coliform), and reaffirm its decision to set the BCT limitations for fecal coliform to be equal to the BPT limits established in the 2003 CAFO rule.

**DATES:** Comments on this proposed action must be received on or before August 14, 2006.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-HQ-OW-2005-0037 by one of the following methods:

(1) <http://www.regulations.gov>: Follow the on-line instructions for submitting comments.

(2) *E-mail*: [ow-docket@epa.gov](mailto:ow-docket@epa.gov), Attention Docket ID No. EPA-HQ-OW-2005-0037.

(3) *Mail*: Send the original and three copies of your comments to: Water Docket, Environmental Protection Agency, Mail code 4203M, 1200 Pennsylvania Ave., NW., Washington, DC 20460, Attention Docket ID No. OW-2005-0037.

(4) *Hand Delivery*: Deliver your comments to: EPA Docket Center, EPA West, Room B102, 1301 Constitution Avenue, NW., Washington, DC, Attention Docket ID No. OW-2005-0037. Such deliveries are only accepted during the Docket's normal hours of operation and special arrangements should be made for deliveries of boxed information.

**Instructions:** Direct your comments to Docket ID No. EPA-HQ-OW-2005-0037. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at [www.regulations.gov](http://www.regulations.gov), including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through [www.regulations.gov](http://www.regulations.gov) or e-mail. The [www.regulations.gov](http://www.regulations.gov) Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going

through [www.regulations.gov](http://www.regulations.gov), your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at <http://www.epa.gov/epahome/dockets.htm>.

**Docket:** All documents in the docket are listed in the [www.regulations.gov](http://www.regulations.gov) index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in [www.regulations.gov](http://www.regulations.gov) or in hard copy at the Water Docket in the EPA Docket Center, EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Water Docket is (202) 566-2426.

**FOR FURTHER INFORMATION CONTACT:** For additional information contact Kawana Cohen, Water Permits Division, Office of Wastewater Management (4203M), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: (202) 564-2345, e-mail address: [cohen.kawana@epa.gov](mailto:cohen.kawana@epa.gov) or Paul Shriner, Engineering and Analysis Division, Office of Science and Technology (4303T), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: 202-566-1076, e-mail address: [shriner.paul@epa.gov](mailto:shriner.paul@epa.gov).

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## I. General Information

### A. Does This Action Apply to Me?

This action applies to concentrated animal feeding operations (CAFOs) as defined in section 502(14) of the Clean Water Act and in the NPDES regulations at 40 CFR 122.23. The following table provides a list of standard industrial codes for operations covered under this revised rule.

TABLE 1.—ENTITIES POTENTIALLY REGULATED BY THIS RULE

Category	Examples of regulated entities	North American industry code (NAIC)	Standarial industrial classification code
Federal, State, and Local Government: Industry .....	Operators of animal production operations that meet the definition of a CAFO. Beef cattle feedlots (including veal) .....	112112	0211
	Beef cattle ranching and farming .....	112111	0212
	Hogs .....	11221	0213
	Sheep .....	1241, 11242	0214
	General livestock except dairy and poultry .....	11299	0219
	Dairy farms .....	11212	0241
	Broilers, fryers, and roaster chickens .....	11232	0251
	Chicken eggs .....	11231	0252
	Turkey and turkey eggs .....	11233	0253
	Poultry hatcheries .....	11234	0254
	Poultry and eggs .....	11239	0259
	Ducks .....	112390	0259
	Horses and other equines .....	11292	0272

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your facility is regulated under this rulemaking, you should carefully examine the applicability criteria in 40 CFR 122.23. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

### B. What Should I Consider as I Prepare My Comments for EPA?

1. *Submitting Confidential Business Information.* Do not submit this information to EPA through [www.regulations.gov](http://www.regulations.gov) or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD-ROM that you mail to EPA, mark the outside of the disk or CD-ROM as CBI and then

identify electronically within the disk or CD-ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR Part 2.

2. *Tips for Preparing Your Comments.* It will be helpful if you follow these guidelines as you prepare your written comments:

i. Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).

ii. Follow directions—The Agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

iii. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

iv. Describe any assumptions and provide any technical information and/or data that you used.

v. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

vi. Provide specific examples to illustrate your concerns, and suggest alternatives.

vii. Explain your views as clearly as possible.

viii. Make sure to submit your comments by the comment period deadline identified.

## II. Background

### A. The Clean Water Act

Congress passed the Federal Water Pollution Control Act (1972), also known as the Clean Water Act (CWA), to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters” (33 U.S.C. 1251(a)). Among the core provisions, the CWA establishes the NPDES permit program to authorize and regulate the discharge of pollutants from point sources to waters of the U.S. 33 U.S.C. 1342.

Section 502(14) of the CWA specifically includes CAFOs in the definition of the term “point source.” Section 502(12) defines the term “discharge of a pollutant” to mean “any addition of any pollutant to navigable waters from any point source” (emphasis added). EPA has issued comprehensive regulations that implement the NPDES program at 40 CFR Part 122. The Act also provides for the development of technology-based and water quality-based effluent limitations that are imposed through NPDES permits to control the discharge of pollutants from point sources. CWA sections 301(a) and (b).

**B. History of Actions to Address CAFOs under the NPDES Permitting Program**

EPA’s regulation of wastewater and manure from CAFOs dates to the 1970s. EPA initially issued national effluent limitations guidelines and standards for feedlots on February 14, 1974 (39 FR 5704), and NPDES CAFO regulations on March 18, 1976 (41 FR 11458).

In February 2003, EPA issued revisions to these regulations that focused on the 5% of the nation’s animal feeding operations (AFOs) that presented the highest risk of impairing water quality and public health (68 FR 7176) (“the 2003 CAFO rule”). The 2003 CAFO rule required the owners or operators of all CAFOs<sup>1</sup> to seek coverage under an NPDES permit. CAFO industry organizations (American Farm Bureau Federation, National Pork Producers Council, National Chicken Council, and National Turkey Federation (NTF), although NTF later withdrew its petition) and environmental groups (Waterkeeper Alliance, Natural Resources Defense Council, Sierra Club, and American Littoral Society) filed petitions for judicial review of certain aspects of the 2003 CAFO rule. This case was brought before the U.S. Court of Appeals for the Second Circuit. On February 28, 2005, the court ruled on these petitions and upheld most provisions of the 2003 rule but vacated and remanded others. *Waterkeeper Alliance et al. v. EPA*, 399 F.3d 486 (2nd Cir. 2005). The court’s decision, which applies nationally, is described in detail below.

The revisions to the 2003 CAFO rule being proposed today relate directly to the changes required by the court’s decision and continue to maintain the

focus on regulating discharges from the universe of high-risk AFOs.

**C. Ruling by the U.S. Court of Appeals for the Second Circuit**

The Second Circuit’s decision in *Waterkeeper* upheld certain challenged provisions of the 2003 rule and vacated or remanded others, as follows.

**1. Issues Upheld by the Court**

This section discusses provisions of the 2003 CAFO rule that were challenged by either industry or environmental petitioners, but were upheld by the *Waterkeeper* court and therefore remain unchanged. EPA is not proposing to revise any of these provisions and is not soliciting comment on them.

**(a) Land Application Regulatory Framework and Interpretation of “Agricultural Storm Water”**

The *Waterkeeper* court upheld EPA’s authority to regulate, through NPDES permits, the discharge of manure, litter, and process wastewater that CAFOs apply to crop or forage land. The court rejected the industry petitioners’ claim that land application runoff must be channelized before it can be considered to be a point source discharge subject to permitting. The court noted that the CWA expressly defines the term “point source” to include “any \* \* \* concentrated animal feeding operation \* \* \* from which pollutants are or may be discharged,” and found that the Act “not only permits, but demands” that land application discharges be construed as discharges “from” a CAFO. *Waterkeeper Alliance et al. v. EPA*, 399 F.3d at 510.

The *Waterkeeper* court also upheld EPA’s determination in the 2003 CAFO rule that precipitation-related discharges of manure, litter, or process wastewater from land application areas under the control of a CAFO qualify as “agricultural stormwater” only where the CAFO has applied the manure in accordance with nutrient management practices that ensure “appropriate agricultural utilization” of the manure, litter, and process wastewater nutrients. EPA’s interpretation of the Act in this regard was reasonable, the court found, in light of Congressional intent in excluding agricultural stormwater from the meaning of the term “point source” and given the precedent set in an earlier Second Circuit case, *Concerned Area Residents for the Environment v. Southview Farm*, 34 F.3d 114 (2d Cir. 1994). *Waterkeeper Alliance et al. v. EPA*, 399 F.3d at 508–09.

**(b) Effluent Guidelines**

—Identification of best available technologies. The court rejected the environmental organizations’ claim that when EPA chose the pollution control technologies on which to base effluent guidelines for CAFOs, the Agency did not meet its duty to identify the single CAFO with the best-performing technology. The court found that EPA had collected extensive data on the waste management systems at CAFOs and had considered approximately 11,000 public comments on the proposed CAFO rule, and on those bases, EPA had adequately justified its selection of “best available technologies” on which to base the regulations.

—Groundwater controls. The court upheld EPA’s decision in the 2003 rule relating to groundwater controls. In the 2003 rule EPA stated that the Agency believed that requirements limiting the discharge of pollutants to surface water via groundwater that has a direct hydrologic connection to surface water were beyond the scope of the ELGs promulgated in the rule. The Agency also stated that nothing in the 2003 rule was to be construed to expand, diminish, or otherwise affect the jurisdiction of the CWA over discharges to surface water via groundwater that has a direct hydrologic connection to surface water.

—Economic methodologies. The court upheld the analytic methodologies that EPA used for determining whether the technology-based permit requirements for CAFOs set in the 2003 rule would be economically achievable by the industry as a whole.

**2. Issues Vacated by the Court**

The following are the elements of the 2003 rule that the *Waterkeeper* court found to be unlawful and therefore vacated.

**(a) Duty to Apply**

The CAFO industry organizations argued that the EPA exceeded its statutory authority by requiring all CAFOs to either apply for NPDES permits or demonstrate that they have no potential to discharge. The court agreed with the CAFO industry petitioners on this issue and therefore vacated the “duty to apply” provision of the 2003 CAFO rule.

The court found that the duty to apply, which the Agency had based on a presumption that most CAFOs have at least a potential to discharge, was invalid, because the CWA subjects only actual discharges to permitting

<sup>1</sup> The Clean Water Act regulates the conduct of persons, which includes the owners and operators of CAFOs, rather than the facilities or their discharges. To improve readability in this preamble, reference is made to “CAFOs” as well as “owners and operators of CAFOs.” No change in meaning is intended.

requirements rather than potential discharges. The court acknowledged EPA's policy considerations for seeking to impose a duty to apply but found that the Agency lacked statutory authority to do so.

(b) Nutrient Management Plans

The environmental organizations argued that the 2003 CAFO rule was unlawful because: (1) The rule empowered permitting authorities to issue permits without any meaningful review of a CAFO's NMP, (2) the rule failed to require that the terms of the nutrient management plan be included in the NPDES permit, and (3) the permitting approach established by the rule violated the Clean Water Act's public participation requirements. The court agreed with the environmental petitioners on these three issues.

The court relied on provisions of the Act that authorize point source discharges only where NPDES permits "ensure that every discharge of pollutants will comply with all applicable effluent limitations and standards," citing CWA sections 402(a)(1), (a)(2), and (b). Because the 2003 CAFO rule did not provide for permitting authority review of a CAFO's nutrient management plan before the permit was issued, the court found that the rule did not ensure that each Large CAFO's discharges comply with these CWA provisions. In addition, the court found that by not making the NMPs part of the permit and available to the public for review, the 2003 CAFO rule violated public participation requirements in sections 101(e) and 402 of the Act. The court also found that the terms of the NMPs themselves are "effluent limitations" as that term is defined in the Act and therefore must be made part of the permit and enforceable as required under CWA sections 301 and 402.

3. Issues Remanded by the Court

The *Waterkeeper* court also remanded other aspects of the CAFO rule to EPA "for further clarification and analysis," as follows:

(a) Water Quality-Based Effluent Limits

The court agreed with EPA that agricultural stormwater is excluded from the meaning of the term "point source" and therefore is not subject to water quality-based effluent limitations in permits. However, the court directed EPA to "clarify the statutory and evidentiary basis for failing to promulgate water quality-based effluent limitations for discharges other than agricultural stormwater discharges as that term is defined in 40 CFR

122.23(e)," and to "clarify whether States may develop water quality-based effluent limitations on their own."

(b) New Source Performance Standards—100-Year Storm Standard

The 2003 CAFO rule set the new source performance standards (NSPS) for swine, poultry, and veal CAFOs at a level of zero discharge. A CAFO in these categories could fulfill this requirement by showing that either (1) its production area was designed to contain all manure, litter, process wastewater, and precipitation from the 100-year, 24-hour storm, or (2) it would comply with "voluntary superior environmental performance standards" based on innovative technologies, under which a discharge from the production area would be allowed if it was accompanied by an equivalent or greater reduction in the quantity of pollutants released to other media (e.g., air emissions). The court found that EPA had neither justified in the record nor provided an adequate opportunity for public comment with respect to either of these provisions. As a result, the court remanded these provisions to EPA to clarify, via a process that adequately involves the public, the statutory and evidentiary basis for them.

(c) BCT Effluent Guidelines for Pathogens

The court held that the 2003 CAFO rule violated the CWA because EPA had not made an affirmative finding that the BCT-based Effluent Limitations Guidelines (ELGs)—i.e., the "best conventional technology" guidelines for conventional pollutants such as fecal coliform—do in fact represent BCT technology. The court remanded this issue to EPA to make such a finding based on the BAT/BPT technologies EPA studied or to establish specific BCT limitations for pathogens based on some other technology.

*D. What Requirements Still Apply to CAFOs?*

The *Waterkeeper* decision either upheld or did not address most provisions of the 2003 CAFO rule. This section describes certain key portions of the rule that were not challenged in *Waterkeeper*. These unchallenged provisions are not addressed in or affected by today's proposal, except to provide background information. EPA has not reconsidered its initial decision regarding these provisions and is not soliciting comment on them.

The definitions provided in 40 CFR 122.23(b) of the 2003 CAFO rule remain in effect and are unchanged. First, an operation must be defined as an animal

feeding operation (AFO) before it can be defined as a concentrated animal feeding operation (CAFO). 40 CFR 122.23. The term "animal feeding operation" is defined by EPA regulation 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."

Whether an AFO is a CAFO depends primarily on the number of animals confined, which is also unchanged. Large CAFOs are AFOs that confine more than the threshold number of animals detailed in 40 CFR 122.23(b)(4). Medium CAFOs confine fewer animals than Large CAFOs and also: (1) Discharge pollutants into waters of the U.S. through a man-made ditch, flushing system, or other similar man-made device; or (2) discharge pollutants 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. 40 CFR 122.23(b)(6)(ii). The NPDES permitting authority also may, on a case-by-case basis, designate any AFO, including small AFOs, as a CAFO after conducting an on-site inspection and finding that the facility "is a significant contributor of pollutants to waters of the United States." 40 CFR 122.23(c). The permitting authority may not exercise its authority to designate a Small CAFO unless pollutants are discharged into waters of the U.S. through a man-made ditch, flushing system, or other similar man-made device, or are discharged directly into waters of the U.S. which originate outside of the facility and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation. 40 CFR 122.23(c)(3).

Although the *Waterkeeper* decision invalidated the duty to apply provision promulgated in the CAFO regulations at 40 CFR 122.23(d), there remains in the NPDES regulations a different duty to apply provision, at 40 CFR 122.21(a), that applies to point sources in general, including CAFOs. While the CAFO provision in § 122.23(d) would have required all CAFOs to apply for a permit, § 122.21(a) requires only a person who "discharges or proposes to discharge pollutants" to apply. The *Waterkeeper* decision did not invalidate § 122.21(a), nor is this provision's continued application to CAFOs inconsistent with the decision in *Waterkeeper*. Therefore, under § 122.21(a), CAFOs currently are

required to apply for an NPDES permit if they discharge or propose to discharge pollutants other than agricultural stormwater, which is not a point source discharge.

It should also be noted that the definitions of both “Medium CAFO” and “Small CAFO” in the regulations include only those facilities that have an actual discharge. Thus, under § 122.21(a), all Medium and Small CAFOs must apply for a permit.

Nutrient management planning requirements for permitted CAFOs established in the 2003 CAFO rule also were unaffected by the court’s ruling. All permitted CAFOs must develop and implement an NMP that meets the requirements of 40 CFR 122.42(e) and, for Large CAFOs subject to 40 CFR Part 412, subpart C or D, 40 CFR 412.4. The NMP identifies the necessary actions to ensure that runoff is eliminated or minimized through proper and effective manure, litter, and wastewater management, including compliance with the ELGs. Permitted CAFOs must comply with all applicable recordkeeping and reporting requirements, including those specified in 40 CFR 122.42(e).

ELG requirements for existing Large CAFOs also are unaffected by the court decision, with the exception of changes to the NMP compliance dates and BCT. ELG requirements ensure the appropriate storage of manure, litter, and process wastewater and proper land application practices. They vary depending upon the types of animals confined: Subpart A for horses and sheep; Subpart B for ducks; Subpart C for dairy cattle, heifers, steers, and bulls; and Subpart D for swine, poultry, and veal calves. (40 CFR Part 412). Additionally, New Source requirements for beef and dairy operations remain unchanged (40 CFR 412.35).

Permitted small and medium CAFOs are not subject to the ELGs specified in part 412. Rather, they must comply with technology-based requirements developed by the permitting authority on a case-by-case basis (*i.e.*, Best Professional Judgment (BPJ)).

#### *E. Status of EPA’s Response to the Waterkeeper Decision*

In addition to the changes made through this proposed rule, EPA extended certain deadlines in the NPDES permitting requirements and ELGs in a separate rulemaking in order to allow the Agency adequate time to complete this rulemaking in response to the *Waterkeeper* decision in advance of those deadlines. (71 FR 6978). That rule revised dates established in the 2003 CAFO rule by which facilities newly

defined as CAFOs were required to seek permit coverage and by which all CAFOs were required to have nutrient management plans developed and implemented. EPA extended the date by which operations defined as CAFOs as of April 14, 2003, who were not defined as CAFOs prior to that date, must seek NPDES permit coverage, from February 13, 2006, to July 31, 2007. EPA also amended the date by which operations that become defined as CAFOs after April 14, 2003, due to operational changes that would not have made them a CAFO prior to April 14, 2003, and that are not new sources, must seek NPDES permit coverage, from April 13, 2006, to July 31, 2007. Finally, EPA extended the deadline by which CAFOs are required to develop and implement nutrient management plans, from December 31, 2006, to July 31, 2007. That rulemaking revised all references to the date by which NMPs must be developed and implemented as specified in the 2003 CAFO rule.

### **III. This Proposal**

This proposed rule is in response to the Second Circuit Court’s vacature and remand orders. EPA intends to make only those changes necessary to address the court’s decision.

#### *A. Duty To Apply for a Permit*

##### **1. Provisions in the 2003 CAFO Rule**

###### **(a) Duty To Apply**

The 2003 CAFO rule required all CAFOs to seek coverage under an NPDES permit unless the Director determined that the CAFO has no potential to discharge. The breadth of this duty to apply was based on EPA’s presumption that most CAFOs have a potential to discharge pollutants into waters of the United States. Therefore, all CAFOs were required to apply for a permit, except where the Director determined a CAFO had no potential to discharge.

###### **(b) “No Potential To Discharge” Determination**

The 2003 CAFO rule included a process for CAFOs to seek a “no potential to discharge” determination by the Director. Where the Director determined, based on information supplied by the CAFO operator, that a CAFO had no potential to discharge manure, litter, or process wastewater, the CAFO operator had no duty to apply for a permit, unless circumstances at the facility changed such that the facility would have the potential to discharge. Examples of facilities that possibly would have qualified for this exemption included facilities in very arid areas,

facilities that are downslope from waters of the United States, and facilities with completely enclosed operations.

#### **2. Summary of the Second Circuit Court Decision**

The Second Circuit Court of Appeals vacated the provision that required all CAFO owners or operators to apply for an NPDES permit. The court held that the Clean Water Act authorizes EPA to require permits for the actual discharge of pollutants, but not for mere potential discharges. Because the 2003 CAFO rule imposed an obligation on all CAFOs to either apply for an NPDES permit or affirmatively demonstrate that they have no potential to discharge, the court ruled that it exceeded EPA’s authority under the Clean Water Act.

#### **3. This Proposal**

To address the court’s decision on the duty to apply, EPA is proposing changes to the 2003 CAFO rule in two areas:

- Revising the requirement that all CAFOs apply for an NPDES permit; and
- Eliminating the procedures for a no potential to discharge determination.

EPA also seeks to clarify how unpermitted CAFOs may meet the agricultural stormwater exemption when they land apply manure, litter, or process wastewater.

##### **(a) Requirement That All CAFOs With a Discharge Seek Permit Coverage**

EPA is proposing to delete the “duty to apply” requirement adopted in the 2003 rule, which states that all CAFO owners or operators must seek coverage under an NPDES permit (40 CFR 122.21(a)(1) and 40 CFR 122.23(a) and (d)(1)).

Today’s proposed rule would replace the “duty to apply” requirement of the 2003 rule with a requirement that all CAFOs that “discharge or propose to discharge” must seek coverage under an NPDES permit. This proposed change would address the *Waterkeeper* court’s ruling and would hold CAFO owners and operators to the same “duty to apply” requirement as already exists for point sources under 40 CFR 122.21(a)(1).

The result of this proposed revision is that only owners and operators of those CAFOs that discharge or propose to discharge would be required to seek coverage under an NPDES permit. This revised duty to apply applies to all owners and operators that discharge or propose to discharge, regardless of the volume or duration of the discharge except for discharges of agricultural stormwater (see below). A facility may seek permit coverage in one of two

ways, by submitting an application for an individual permit or by submitting a notice of intent to be covered by a general permit that has been issued by the permitting authority. Generally, under this proposal, it would be the CAFO's responsibility to decide whether or not to seek permit coverage based on whether they discharge or propose to discharge. This is how the NPDES program operates for other point sources. Any CAFO that discharged or proposed to discharge and failed to obtain an NPDES permit would be in violation of the NPDES regulatory requirement to seek coverage under an NPDES permit. A facility with an actual discharge would also be in violation of the CWA prohibition against discharging without an NPDES permit (33 U.S.C. 1311(a)).

Any discharge from a CAFO, even one that is unplanned or accidental, is illegal unless it is authorized by the terms of a permit. Many CAFOs have conditions that may result in a discharge. For example, manure structures that are improperly designed or, for other reasons, have insufficient capacity (e.g., due to facility expansion) may discharge. In addition, discharges can occur from a properly designed containment structure that is improperly operated and maintained or as a result of precipitation that exceeds the operating capacity of the structure. In the absence of an actual discharge or proposed discharge, CAFOs with such conditions are not required under the terms of today's proposed rule to obtain an NPDES permit. However, the owner or operator of a CAFO that fails to obtain an NPDES permit and has a discharge is subject to State or federal enforcement, as well as liability from citizen suits under CWA Section 505(a).

Because discharges are prohibited from unpermitted CAFOs, NPDES permit coverage reduces CAFO operator risk and provides certainty to CAFO operators regarding activities and actions that are necessary to comply with the Clean Water Act. Compliance with the permit is deemed compliance with the CWA and thus acts as a shield against EPA enforcement or citizen suits under CWA Section 402(k).

Furthermore, under the 2003 rule, most CAFO NPDES permits will incorporate ELG provisions that allow for discharge when precipitation causes an overflow from a structure that is properly designed, constructed, operated, and maintained, in accordance with the applicable design standards. Finally, upset provisions can protect permittees from legal liability when emergencies or natural disasters cause discharges beyond the permittee's reasonable

control, as provided in § 122.41(n). This protection is not available to unpermitted CAFOs.

There are many factors a CAFO owner or operator should consider in determining whether to seek permit coverage. For example, if the CAFO is in a flood plain, subject to high annual precipitation, or subject to lengthy rainy seasons, it is likely to have a discharge if the CAFO drains to a water of the United States. Other factors likely to result in a discharge include runoff from open feed bunkers, field storage, or other stockpiles exposed to precipitation; lagoons that are not sufficiently pumped down for the upcoming winter season; holding of process wastewater for summer irrigation that precludes adequate capacity for chronic rainfalls; and inadequate containment due to unavailability of land for manure, litter, or process wastewater application due to timing constraints associated with, for example, saturated ground or imminent rain. In addition, a discharge may occur from land application due to improper maintenance or operation of manure handling equipment that may lead to spills, and application of manure, litter or process wastewater to land in such a way that it does not qualify for the agricultural stormwater exemption (see below).

EPA recognizes that some CAFOs have a higher likelihood of actually discharging due to certain geographic and physiographic conditions. In order to guide CAFOs in making a decision on whether or not to seek permit coverage, EPA suggests that Large CAFOs falling into one or more of these categories should consider seeking permit coverage (this list is not intended to be exhaustive):

1. Where a CAFO is located in close proximity to waters of the United States with land classified in USDA Land Use Capability Classes III through VIII<sup>2</sup>;

<sup>2</sup> Land capability classification is a system of grouping soils primarily on the basis of their capability to produce common cultivated crops and pasture plants without deteriorating over a long period of time. Soil survey map units contained in United States Department of Agriculture (USDA) soil surveys typically are assigned a land capability classification. The eight classes are defined as follows: Class 1 soils have slight limitations that restrict their use; Class 2 soils have moderate limitations that reduce the choice of plants or require moderate conservation practices; Class 3 soils have severe limitations that reduce the choice of plants or require special conservation practices, or both; Class 4 soils have very severe limitations that restrict the choice of plants or require very careful management, or both; Class 5 soils have little or no hazard of erosion but have other limitations, impractical to remove, that limit their use mainly to pasture, range, forestland, or wildlife food and cover; Class 6 soils have severe limitations that make them generally unsuited to cultivation and that limit their use mainly to pasture, range,

2. Where the CAFO's production area is not designed and operated for zero discharge, including where the containment structure is not designed or maintained to contain all manure, litter, process wastewater, precipitation and runoff that may accumulate during periods when the facility is unable to land apply in accordance with a nutrient management plan;

3. Where a CAFO that land applies does not have or is not implementing nutrient management planning that is designed to ensure that any land application runoff qualifies for the agricultural stormwater exemption; and

4. Where the CAFO has had a discharge in the past and has not corrected the factors that caused the discharge to occur.

EPA seeks comment on the completeness and accuracy of the above list of situations where a discharge may occur to further assist CAFOs in their decisions regarding whether or not to seek permit coverage.

EPA also solicits comment on its proposal to replace the duty to apply provision promulgated in the 2003 CAFO rule with the narrower duty to apply provision described above.

#### (b) "No Potential to Discharge" Determination

EPA is proposing to delete the regulatory provisions adopted in the 2003 CAFO rule allowing CAFOs to demonstrate that they have no potential to discharge and authorizing the Director to make such a determination. 40 CFR 122.23(d)(2) and 122.23(f). Such a designation would be irrelevant because the proposed rule requires only those CAFOs that discharge or propose to discharge to seek coverage under a permit.

#### (c) Agricultural Storm Water

The discharge of manure, litter, or process wastewater from a land application area under the control of a CAFO is a discharge subject to NPDES permit requirements, unless the discharge is agricultural stormwater, which is excluded from the meaning of the term "point source" under 33 U.S.C. 1362(14).

As described in the preamble to the 2003 rule, EPA recognized that manure, litter, or process wastewater applied in accordance with practices designed to

forestland, or wildlife food and cover; Class 7 soils have very severe limitations that make them unsuited to cultivation and that restrict their use mainly to grazing, forestland, or wildlife; and Class 8 soils and miscellaneous areas (areas dominated by disturbed soil) have limitations that preclude their use for plant production and limit their use to recreation, wildlife, or water supply or for esthetic purposes.

ensure appropriate agricultural utilization of nutrients fulfills an important agricultural purpose, namely the fertilization of crops, while reducing the potential for a subsequent discharge of pollutants to waters of the U.S. However, EPA also recognized that some runoff may occur during rainfall events even when a CAFO applies manure, litter, or process wastewater in accordance with practices designed to ensure appropriate agricultural utilization of nutrients. EPA believed that the potential for runoff and water quality impairments would be minimized where a CAFO implemented a site-specific NMP in conformance with 40 CFR 122.42(e)(1)(vi)–(ix) and, for Large CAFOs, the additional management practices required in 40 CFR 412.4(c).

In the 2003 rule, EPA promulgated a definition of agricultural stormwater that included compliance with 40 CFR 122.42(e)(1)(vi–ix). The referenced regulatory text includes requirements for edge-of-field buffers, testing of manure and soil, land application at agronomic rates, and record keeping. While not explicitly included in the definition, Large CAFOs were also required under the effluent guidelines to comply with technical standards established by the Director, in accordance with 40 CFR 412.4(c). These more specific limitations implemented the general requirements at 40 CFR 122.42(e)(1)(vi–ix), and because all CAFOs with a potential to discharge were required to obtain permits, virtually all Large CAFOs were required to comply with them.

Under today's proposed rulemaking, Large CAFOs that have only agricultural stormwater discharges from their land application area, and no other discharges or proposed discharges from their production or land application areas, would no longer be required to seek permit coverage. (See 40 CFR 122.23(e).) However, precipitation-related discharges from CAFO land application areas would be considered agricultural stormwater only where the CAFO land applies in accordance with nutrient management practices that meet the requirements of 40 CFR 122.42(e)(1)(vi)–(ix). EPA believes that, in order for the owner or operator of a CAFO to qualify for the statutory agricultural stormwater exemption, manure, litter, and process wastewater must be applied in compliance with technical standards that are, in significant part, intended to ensure the appropriate agricultural utilization of the nutrients contained in the manure, litter, and process wastewater.

The Second Circuit upheld EPA's definition of agricultural stormwater, and EPA is not proposing to change the definition at this time, or requesting comment on such a change. However, EPA is considering requiring explicitly that Large CAFOs that are not permitted because they do not discharge or propose to discharge comply with the technical standards for land application established by the Director (in addition to meeting the requirements of 40 CFR 122.42(e)(1)(vi–ix)) in order for runoff from their fields to be considered agricultural stormwater (which is exempt from permitting requirements). Even if EPA does not adopt this requirement explicitly, EPA believes that unpermitted Large CAFOs should incorporate the technical standards established by the Director into their NMPs. EPA also recommends that small or medium AFOs use nutrient management practices consistent with 40 CFR 122.42(e)(1)(vi–ix) and comply with the applicable technical standards in their land application of manure, litter, or process wastewater. EPA requests comment on this issue.

Unpermitted CAFOs that land apply manure, litter, or process wastewater must document that they are land applying in accordance with the requirements described above in order to qualify for the statutory exclusion for agricultural stormwater. (See 40 CFR 122.42(e)(1)(ix).) The documentation required includes both the nutrient planning and the additional recordkeeping necessary to demonstrate that the CAFO properly land applied manure, litter, or process wastewater in accordance with 40 CFR 122.42(e)(1)(vi)–(ix), including the technical standards used to translate these requirements into specific land application rates and practices. EPA believes that an appropriate approach to planning and documenting such practices is by preparing a comprehensive nutrient management plan in accordance with guidance provided by USDA and the appropriate technical standards. Whatever form the documentation takes, it must be maintained on site. This documentation is crucial in determining whether the CAFO is land applying manure, litter, or process wastewater in a manner that ensures the appropriate agricultural utilization of nutrients and, as a result, is not illegally discharging pollutants from land application areas.

#### *B. Nutrient Management Plans*

##### **1. Provisions in the 2003 CAFO Rule Affected by the Court Decision**

###### **(a) Requirement to Develop and Implement a Nutrient Management Plan**

Under the 2003 CAFO rule, NPDES permits for all CAFOs must include a requirement for the permittee to develop and implement a nutrient management plan. At a minimum, the NMP must include BMPs and procedures necessary to achieve effluent limitations and standards. The plan must, to the extent applicable, include the minimum elements established at 40 CFR 122.42(e)(1)(i)–(ix). For Large CAFOs in the cattle, swine, poultry, and veal subcategories, the NMP must also meet the more detailed requirements in the Part 412 effluent limitations guidelines. For Small and Medium CAFOs, or other operations not otherwise subject to Part 412 requirements for land application, the required elements of a nutrient management plan would be further specified in the permit based on the best professional judgment (BPI) of the permitting authority. The Second Circuit's decision did not affect these provisions and EPA is not revisiting them or soliciting comments.

###### **(b) Due Dates for Developing and Implementing Nutrient Management Plans**

The 2003 CAFO rule required all CAFOs to develop and implement an NMP by December 31, 2006, except that CAFOs seeking to obtain coverage under a permit subsequent to that date were required to have an NMP developed and implemented upon the date of permit coverage. This timing was consistent with the dates for the implementation of the ELG, which required existing Large CAFOs to implement the land application requirements at 40 CFR 412.4(c) by December 31, 2006. (Following the court decision these dates were extended to July 31, 2007, to give EPA time to complete the current rulemaking (see Section II.E).)

As discussed in the preamble to the 2003 CAFO rule, EPA believed that these dates were reasonable given that operations would have had three and a half years from the time the 2003 rule was issued to conduct the necessary planning and construction to implement an NMP. For Large CAFOs that are new sources (*i.e.*, those commencing construction after the effective date of the 2003 CAFO rule), the land application requirements at 40 CFR 412.4(c) apply immediately.

EPA concluded that this timeframe also allowed States to update their

NPDES programs and issue permits to reflect the NMP requirements of the 2003 CAFO rule and provided flexibility for permit authorities to establish permit schedules based on specific circumstances, including prioritization of nutrient management plan development and implementation based on site-specific water quality risks and the availability of technical expertise for development of NMPs.

## 2. Summary of the Second Circuit Court of Appeals Decision on Nutrient Management Plans

As previously discussed, the Second Circuit Court of Appeals found that the terms of the NMPs were effluent limitations and vacated the 2003 CAFO rule insofar as the rule allowed permitting authorities to issue NPDES permits to CAFOs without: reviewing the terms of the nutrient management plans, providing for adequate public participation in the development, revision, and enforcement of the nutrient management plans, and including the terms of the nutrient management plan in the permit.

The decision did not affect the required contents of nutrient management plans established at 40 CFR 122.42(e)(1) and 40 CFR 412.4(c)(1) in the 2003 CAFO rule.

The Second Circuit court decision did not vacate any NPDES permits issued pursuant to the 2003 CAFO rule. Therefore, such permits already issued to CAFOs by States or EPA prior to June 27, 2005 (the effective date of the court's decision), are not directly affected by the court decision and the nutrient management plan requirements in those permits remain in effect until and unless the permits are modified, revoked and reissued, or terminated in accordance with State regulations.

## 3. This Proposal

To address the court's decision, EPA is proposing regulatory revisions to the 2003 CAFO rule and other provisions of the NPDES regulations to provide for:

- Receipt and review of the nutrient management plan by the permitting authority prior to issuing an individual permit or granting coverage under a general permit;
- Procedures to provide opportunity for adequate public participation prior to issuing an individual permit or granting coverage under a general permit; and
- Incorporation of the terms of the nutrient management plan into the NPDES permit.

In proposing these revisions, EPA has devoted particular attention to the process for issuance of general permits,

because most CAFOs are expected to be covered by general permits and, for those that will be permitted under individual permits, the individual permitting process already allows for review of NMPs by the permitting authority, public review of an NMP as part of the individual permit application process, and incorporation of the terms of the NMP into the individual permit consistent with the CWA. Further, EPA proposes a process to address changes to the NMP once permit coverage is granted, for both individual and general permits. To effectuate these changes, EPA is proposing regulatory revisions to 40 CFR 122.21, 122.23, 122.28, 122.42, 122.62, and 122.63. In addition, in a separate rulemaking EPA extended the deadlines set in the 2003 CAFO rule for NMP development and implementation, as well as for newly defined CAFOs to seek permit coverage. (71 FR 6978.)

The preamble discussion that follows is divided into six sections to separately address each of the following issues:

- CAFO permit application and notice of intent requirements;
- Procedures for permitting authority review;
- Procedures for public review and comment;
- Incorporation of nutrient management plan terms in NPDES permits;
- Changes to nutrient management plans; and
- Required dates to seek coverage under a permit and submit an NMP.

### (a) CAFO Permit Application or Notice of Intent Requirements for Nutrient Management Plans

In order to satisfy the court's requirements that the terms of a nutrient management plan must be publicly reviewed and incorporated into the permit, EPA is proposing to revise 40 CFR 122.21(i)(1)(x) to require the applicant to submit, as part of its permit application or notice of intent (NOI), a nutrient management plan developed in accordance with the provisions of 40 CFR 122.42(e)(1) and 40 CFR 412.4(c)(1), as applicable. Although this proposed change would be codified in the section of the regulations applicable to individual permit applications (40 CFR 122.21(i)(1)), it would also apply to notices of intent to be covered by a general permit, because 40 CFR 122.28(b)(2)(ii), the regulation governing notices of intent for general permits, incorporates the requirements of 40 CFR 122.21(i)(1) by reference. EPA Application Form 2B will also be revised to reflect these changes. The revised form is provided as Appendix A to this notice.

This approach is consistent with the decision of the Second Circuit Court of Appeals, which left undisturbed the basic substantive requirements for nutrient management plans in the 2003 CAFO rule. The proposed revisions would not change the required contents of the NMP, but would now require CAFOs to submit the plan with the application or the notice of intent rather than only at the request of the Director. The permitting authority would then make the nutrient management plan available for review prior to developing an individual permit or providing coverage under an NPDES general permit.

### (b) Procedures for Permitting Authority Review

Once the permitting authority receives an application or an NOI from a CAFO seeking permit coverage, it would be the responsibility of the permitting authority to review the application or NOI to ensure that the nutrient management plan meets the requirements of 40 CFR 122.42(e)(1) and, for Large CAFOs, the applicable requirements of 40 CFR 412.4(c). As part of that process, the Director would review the NMP for completeness and sufficiency. EPA believes that this review process responds to the *Waterkeeper* decision by providing for permitting authority review of the NMP.

For individual permits, the NMP would be submitted and reviewed as part of the permit application. The decision-making procedures in 40 CFR Part 124 continue to apply to the Director's review of the application, which now would include the NMP. Part 124 requires review of the completeness and sufficiency of the permit, includes an opportunity for the CAFO to modify the plan or provide additional information to the permitting authority, and provides for a final decision by the Director after an opportunity for public comment and a public hearing.

While the review process for NMPs in individual permits is already established in existing NPDES regulations, there are gaps in the requirements for general permitting of CAFOs that EPA proposes to fill in order to address the Second Circuit Court decision. Specifically, EPA is proposing new regulatory provisions to establish permitting authority review of NMPs for CAFO general permits. These procedures are in the proposed new Paragraph (d) to be added to 40 CFR 122.28.

Proposed 40 CFR 122.28(d) would require the Director to review the NMP submitted with the NOI and to take

appropriate steps to ensure that the NMP meets the requirements of the regulations. If upon review the permitting authority determines that additional information is necessary to complete the notice of intent or clarify, modify, or supplement previously submitted material, the Director would notify the CAFO owner or operator and request the appropriate information be provided. When the NOI is complete the permitting authority would notify the public of its receipt and of the terms of the nutrient management plan proposed to be incorporated into the existing general permit as terms and conditions applicable to that CAFO. Following an opportunity for public comment and public hearing, the permitting authority would decide whether to authorize coverage under the general permit and incorporate the terms of the NMP into the general permit for that CAFO.

EPA is considering the use of a template which could be used as a voluntary tool to facilitate completion of the NMP by CAFO applicants, as well as to facilitate review by the permitting authority. Such a template would help to systematically organize the information necessary to satisfy the NMP requirements in the regulation. The template could, for example, be used as a form, that when completed by the operator, and approved by the permitting authority, could suffice as the NMP itself. Alternatively, it could also be used as a checklist that the operator and/or permitting authority could use to organize the information in the NMP and to assist in assessing its adequacy (see Section III.B.3.d, below). It would be up to the permitting authority's discretion as to how to incorporate the terms of the NMP into the permit and permitting authorities might need to tailor any template to their permit process and technical requirements, including the technical standards established by the Director.

EPA has developed a draft template for public review that is intended to be user friendly. It follows the requirements for an NMP identified in 40 CFR 122.42(e) relating to: manure storage; management of animal mortalities; diversion of clean water; prevention of direct contact of animals with waters of the US; chemical handling; site-specific conservation practices; protocols for testing manure, litter, process wastewater and soil; protocols for land application; and recordkeeping. This draft template is in the public record for this rulemaking at [www.regulations.gov](http://www.regulations.gov) under docket # EPA-HQ-OW-2005-0037 and is also available on the EPA Web site at [www.epa.gov](http://www.epa.gov). EPA is interested in

receiving feedback on the form and content of the template.

**(c) Procedures for Public Participation Prior to Permit Coverage**

As noted above, the regulatory procedures for public participation in the issuance of individual permits are already established. (See generally, 40 CFR Part 124.) Because the NMP would be part of the individual permit application, it would be subject to existing regulations requiring public participation, including the requirement for public notice (40 CFR 124.10) and the opportunity for the public to provide comments and request a public hearing (40 CFR 124.11). Because of the proposed regulatory change requiring nutrient management plans to be submitted with the permit application (see discussion at II.B.3.i.; 40 CFR 122.21 and 122.28), the public would have access to the nutrient management plan prior to permit issuance and would also have full opportunity to comment on the adequacy of the plan and on the nutrient management terms and conditions of the draft NPDES permit developed for the specific CAFO facility. EPA believes that this process responds to the court's decision.

The general permit issuance process differs from the individual permitting process discussed above in the way in which a permit is developed and the means by which individual facilities obtain coverage under the permit. A general permit is developed by the permitting authority to cover multiple facilities without the need to receive individual permit applications from facilities in advance of the development of the permit. Once the draft general permit is developed, the public (including potential future permittees) is provided the opportunity to review the permit, submit comments, and request a hearing. After considering any comments submitted, the permitting authority then finalizes the general permit. Once the final general permit is issued, facilities may submit a notice of intent (NOI) seeking coverage under the permit. Typically, the permitting authority then grants coverage, without the need for further public notice and comment, or requires the facility to seek coverage under an individual permit.

Following the *Waterkeeper* decision, general permits for CAFOs must be modified, once issued, to include the terms of an NMP applicable to a specific CAFO. Moreover, *Waterkeeper* requires that the public have an opportunity to comment on the incorporation of NMP requirements into the permit. Thus, a second round of public notice and comment is necessary when providing

coverage for CAFOs under a general permit. There is no provision in the existing regulations that explicitly addresses incorporation of site-specific requirements into a general permit when a CAFO seeks coverage or any additional public process for such incorporation.

Today, in proposed 40 CFR 122.28(d), EPA proposes to establish new procedures applicable to the general permitting process that would allow the incorporation of the site-specific NMPs into CAFO general permits and provide an opportunity for public review of a CAFO's NOI (including the entire NMP) before the CAFO receives coverage under a general permit. The proposed procedures would also allow the public to review and comment on those terms of the nutrient management plan to be incorporated into the permit, and to request a public hearing before a CAFO receives coverage under a general permit. The discussion that follows describes the process for public participation that EPA is proposing. Further discussion of incorporation of the terms of the NMP into the general permit is provided below in section III.B.3.d of this preamble.

The proposed § 122.28(d) would provide specific procedures for public participation. The proposed rule would require that, for each facility submitting a completed NOI, the permitting authority must notify the public of the following: (1) That it has received a complete NOI; (2) that the permitting authority is proposing to allow coverage under the general permit; and (3) that the nutrient management plan is available for public review, along with the terms of the nutrient management plan proposed to be incorporated into the permit by the permitting authority.

Today's proposed rule would allow the permitting authority discretion as to how best to provide such public notification in the general permit context. For example, public notification could be provided on the permitting authority's web page or through other electronic means. Another alternative would be to use the notice or fact sheet for the general permit to establish a procedure allowing any person to request notice by mail or electronically of the receipt of an NOI, the permitting authority's proposed action, and the terms of the nutrient management plan proposed to be incorporated into the permit. EPA believes that these are appropriate ways to balance the competing concerns of providing adequate notification to the public, providing flexibility to the permitting authority, and ensuring the practicality of general permits. The

permitting authority should describe the process to be used to give the public notice of and comment opportunities on site-specific NMPs in the draft and final general permit to ensure meaningful public participation. EPA solicits comment on the methodology for providing public notice.

Under today's proposal, the Director would also have discretion to establish an appropriate period of time for public review of the NOI and proposed permit conditions incorporating the terms of the NMP into the permit. For example, the Director might establish a period of 30 days, depending upon a variety of factors. Factors to consider might include the number of NOIs being publicly noticed at any one time, the complexity of the material made available for public review, expected level of public interest based on prior notices of CAFOs seeking coverage, the relative availability of NOIs to the public (e.g., on the internet), the opportunity for the public to extend the comment period for one or more facilities, and whether individuals can request and receive individual notification of CAFOs seeking coverage in a timely fashion. Because this proposal would not mandate a 30-day public notice period as currently required in 40 CFR 124.10, EPA would require that the Director establish a time frame for public review by regulation or propose the time frame for public notice in the draft general permit and include it as a provision in the final permit. This would allow the public and other interested parties an opportunity to comment on the sufficiency of the time allotted for public notice. EPA solicits comment on this approach, as well as on fixed minimum time frames for public review, such as 7 days, 15 days, 21 days, and 30 days.

The Director would also have to provide an opportunity for the public to request a hearing. EPA further proposes that the procedures for requesting and holding a hearing on the terms of the NMP to be incorporated into the general permit would be the same as those for draft individual permits, which are provided in §§ 124.11 through 124.13. When granting permit coverage, the permitting authority would be required to respond to all significant public comments.

EPA believes that the proposed processes will provide adequate notice to affected States. CWA section 402(b)(3) provides that the Administrator, in approving State programs, shall make sure adequate authority exists to ensure notice to "any other State the waters of which may be affected" and Section 402(b)(5) provides

that the Administrator must insure that any State "whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State" and that if those recommendations are rejected that the permitting State notify the affected State in writing of the reasons for the rejection. Although today's proposal does not include provisions specifically intended to address these requirements, EPA believes that the public notice provisions are sufficient to notify affected States. Additionally, the permitting authority's response to all significant comments would include responses to comments from affected States. EPA solicits comment from States and other interested parties as to whether this approach is adequate or whether there are specific requirements for review by affected States that should be added to this proposal.

The proposed rule seeks to balance several competing concerns in crafting the public participation procedures for general permitting of CAFOs. First, EPA believes that the proposed rule would maintain the utility of a general permit program as a resource-efficient method by which to authorize multiple dischargers under an NPDES permit while meeting the court's directive to "provide for adequate public participation" in the development of site-specific effluent limitations. *Waterkeeper Alliance et al. v. EPA*, 399 F.3d at 524. Second, EPA believes the proposed rule would provide sufficient flexibility for State permitting authorities to adopt their own procedures while ensuring they meet the public participation requirements of the Clean Water Act. EPA is attempting to implement the Second Circuit decision in a way that would not have the effect of eliminating the use of general permits for CAFOs. Because of the large number of CAFOs that may seek permit coverage, the Agency considers it appropriate to develop procedures that would allow and encourage permitting authorities to continue the use of NPDES general permits as a means for applying Clean Water Act limitations and standards to CAFOs on a timely basis. Of course, the Director may always require a facility to apply for an individual permit instead of allowing coverage under a general permit (even after coverage under a general permit has been granted) under already existing regulations.

EPA seeks comment on the approach taken in today's proposal concerning public participation in the general permitting process. Specifically, the Agency is interested in comment as to whether the procedures strike an

appropriate balance between the above mentioned competing concerns.

**(d) Incorporation of Nutrient Management Plan Terms in NPDES Permits**

EPA is proposing to modify the language of 40 CFR 122.42(e)(1) to require that any individual or general permit issued to a CAFO contain the terms of the NMP. In the 2003 CAFO rule, the Agency finalized regulations that required each CAFO permit to include requirements to develop and implement a nutrient management plan that met the conditions specified in 40 CFR 122.42(e)(1)(i)–(ix) and, for Large CAFOs, that also fulfilled the requirements of 40 CFR 412.4(c). The Second Circuit decision did not affect these requirements and EPA is not revisiting its decision with respect to the contents of the nutrient management plan. The NMP must continue to include the elements in 40 CFR 122.42(e)(1)(i) through (x) and the elements required by the effluent limitation guideline at 40 CFR 412.4(c), where applicable. However, the proposal would ensure that the terms of the NMP become terms and conditions of the permit, as required by the Second Circuit.

The *Waterkeeper* decision requires the permitting authority to include the terms of a CAFO's nutrient management plan in the NPDES permit issued to the CAFO. The court's opinion appeared to distinguish between the "nutrient management plan," which must be submitted by the CAFO to the permitting authority for review (as discussed above), and the "terms" of the nutrient management plan, which must be incorporated into the permit following the public review process described above. In light of the court's opinion, EPA is proposing to require the permitting authority to incorporate the terms of the NMP into the permit as enforceable terms and conditions of the permit. At a minimum, the terms of the NMP must meet the requirements specified in 40 CFR 122.42(e)(1)(i)–(ix) and 412.4(c) (for Large CAFOs, as applicable). Thus, the terms of the NMP would need to ensure, for example, adequate storage of manure, litter, and process wastewater, proper management of mortalities, and diversion of clean water. The terms of the NMP would identify site-specific conservation practices to be implemented by the CAFO and establish site-specific requirements for proper land application of manure, litter, and process wastewater, including application rates.

EPA expects that a submitted NMP, as a whole, will include data, calculations, and other information that provide a basis for the *terms* of the NMP and any other planning decisions encompassed in an NMP. The data, calculations, and additional information are generally analogous to both the information contained in a permit application and the assumptions, calculations, and other determinations typically provided as part of the fact sheet that is prepared for every draft NPDES permit. On the other hand, the *terms* of the NMP are the sort of requirements normally found as terms and conditions in a permit. In other words, whereas a fact sheet (or, in this case, the supplemental information provided in the NMP) contains the information that forms the basis of the requirements included in a permit, the permit itself contains the actual requirements applicable to the permitted facility. A complete NMP contains both the requirements applicable to the facility ("the *terms* of the NMP") and the background information (assumptions, data, calculations, etc.) which provide the basis for those requirements.

This relationship is well illustrated when considering rates of application for land applying manure, which, for Large CAFOs, must be developed consistent with technical standards for nutrient management established by the Director in accordance with 40 CFR 123.36. These technical standards typically require application rates to be calculated using the Phosphorous Index or its equivalent established by the State. The calculations in turn are derived from data from fields where land application is to occur and predictions for nutrient utilization based upon crops to be planted in those fields. In preparing an NMP, a CAFO would include both the data necessary to determine the application rates in accordance with the applicable technical standards and the calculations it used to determine those rates.

EPA believes that it is appropriate to allow the permitting authority discretion as to how to incorporate the terms of an NMP that meets the regulatory requirements of 40 CFR 122.42(e) and 412.4 into the permit. For example, the permitting authority could simply attach the whole NMP to the permit and require implementation of the terms of the NMP as a condition of the permit. Alternatively, the permitting authority could identify and extract the terms of the NMP from the larger document and incorporate only the extracted terms into the permit. Another possibility is that the software used by some nutrient management planners to

develop NMPs could be modified to generate a separate form that would clearly identify the terms of the NMP when generating the whole NMP report. As mentioned above, the Agency is considering the use of a model or template for identification of the terms of the NMP. The Agency solicits comment on these various approaches to identify the terms of the NMP that would be included in the permit.

EPA also seeks comments on a modified approach as an alternative to the process described above for incorporating nutrient management terms and conditions into general permits. It is premised on EPA's recognition that some NMP requirements may be broadly applicable to all of the CAFOs covered by a general permit. Under this approach there would be three possible categories of permit conditions. The first category would include permit conditions that can be established in the general permit itself so as to apply to all CAFOs seeking coverage under that permit. The second category would allow for flexibility in some broadly applicable requirements. Conditions falling into this category would lend themselves to a default requirement set by the permitting authority, with the option for facilities to substitute alternative measures in their NMPs that are equivalent or more effective in achieving the same objective. In such instances, of course, it would be necessary for the permitting authority to review the NMP submitted by each CAFO that chooses such alternative measures to determine whether the selected measures satisfy the relevant regulatory requirement(s). The third category would include those requirements for which a broadly applicable condition in the general permit would not be possible because they are of necessity facility-specific. A prime example of this third category is the requirement for field-specific rates of application.

Under this alternative approach, for the first category of conditions, the permitting authority would have the discretion to incorporate some NMP requirements into the terms and conditions of the general permit itself so they are applicable to all CAFOs covered by the permit. Examples of requirements that might lend themselves to the first category include, 40 CFR 122.42(e)(1)(iii) (diversion of clean water), (iv) (prevent contact of confined animals with waters of the United States), and (v) (proper disposal of chemicals), and 40 CFR 412.37(a)(4) (mortality management)).

During the comment period on the draft general permit, the public would have the opportunity to comment and request a hearing on the broadly applicable nutrient management terms and conditions proposed by the permitting authority. If after notice and comment the permitting authority included these conditions in the final permit, the permitting authority would be free to focus greater attention on those terms of a facility's nutrient management plan that were actually site-specific (*i.e.*, those conditions in the second and third categories, described below, specified in the facility's NMP). Of course, the public would still have the opportunity to review each CAFO's nutrient management plan (as well as the terms of the NMP that would be included in the general permit) to ensure that the plan complied with all conditions of the general permit. EPA seeks comment on the feasibility of utilizing this approach under a general permit.

For the second category of permit conditions in this modified approach, the permitting authority might establish broadly-applicable permit terms that could be implemented through specific NMP measures, while allowing for flexibility as previously noted. For example, the permitting authority could set a minimum requirement for adequate storage of manure (40 CFR 122.42(e)(1)(i)) by specifying the number of days of storage capacity for each facility type. In such an instance, a facility wishing to take an alternative approach would need to describe, for example, the alternative measures it would take that would justify a shorter period of storage capacity. Other broadly applicable requirements that so many qualifiers could lend themselves to site-specific alternatives might include permit conditions requiring conservation practices to reduce soil erosion from land application areas to the tolerable rate ("T") as a standard to ensure adequate conservation practices, as required by 40 CFR 122.42(e)(1)(vi), or requiring CAFOs to address the timing of land application (40 CFR 412.4(c)(2)(i)) in part by prohibiting surface application of manure on frozen or snow-covered land that is upslope from waters of the United States. EPA solicits comment on such an approach, the sort of measures that might lend themselves to such an approach, and the sort of alternative measures that might qualify as site-specific substitutions.

Under this alternative methodology for establishing some terms of the NMP, the permitting authority would still need to identify the third category of facility-specific terms of the nutrient

management plan to be incorporated into the permit. For example, the permitting authority would need to identify the manure, litter, and process wastewater application rates in each CAFO's nutrient management plan on a site-specific basis and incorporate those rates as terms and conditions of the permit before the permitting authority could authorize coverage of the CAFO under the permit. The public would have the opportunity to review and comment and request a hearing on these site-specific terms and conditions, as well as on the NMP's adequacy to satisfy any generally applicable permit requirements, as provided by the procedures in today's proposal.

EPA believes the alternative described above has the potential to speed the pace at which unpermitted CAFOs receive authorization under general permits while being consistent with the Second Circuit decision. In seeking comments, EPA specifically asks States to comment on the possible workload burden associated with the procedures proposed today as well as the alternative described immediately above.

For either approach discussed above, EPA is proposing that the permitting authority would be required to respond to all significant comments received during the comment period. As necessary, the Director would require a CAFO owner or operator to make revisions to the CAFO's NMP in order to address issues raised during the review process. Once the Director determines that the process for the development of a CAFO's NMP has been completed, the Director must make a final decision whether to grant permit coverage to the CAFO under the general permit. If coverage is granted, the Director must incorporate the relevant terms of the NMP into the general permit and inform the CAFO owner or operator of the terms of the NMP that have been incorporated as permit conditions.

Under today's proposal, incorporation of the terms of a particular CAFO's NMP into a general permit would not be a permit modification subject to 40 CFR 122.62. Rather, EPA views this as an extension of the CAFO general permitting process itself. As discussed above, EPA intends the process proposed in 40 CFR 122.28(d)(1) to generally parallel the procedures in 40 CFR Part 124. A person who objects to the incorporation of the terms of an individual CAFO's NMP into a general permit could appeal the permit decision to the Environmental Appeals Board pursuant to 40 CFR 124.19, when EPA is the permitting authority.

EPA seeks comment on today's proposed process for incorporation of the terms of a CAFO's NMP into NPDES permits. EPA specifically seeks comment from States on the workload implications of requiring the permitting authority to respond to all significant comments on each individual CAFO's NOI (including the NMP) and the terms of the NMP to be incorporated into the permit.

#### (e) Changes to Nutrient Management Plans

When a CAFO obtains coverage under an NPDES permit, as proposed in today's notice, it would be the CAFO's responsibility to implement the terms and conditions of the nutrient management plan as incorporated into the permit, as of the date of permit coverage. Because agricultural operations sometimes modify their nutrient management and farming practices as a normal part of their operations, and because such alterations may require changes to NMPs after a permit is issued, EPA is proposing a permit revision process to specifically address these circumstances.

The Agency does not, however, believe that such a process is necessary for all operating changes at a CAFO. Most routine changes at a facility should not require changes to the NMP itself because of the way NMPs are developed. Nutrient management plans are dynamic documents and are developed to accommodate routine variations, for example changes resulting from anticipated crop rotation or climatic variability inherent in agricultural operations, as well as changes in numbers of animals and volume of manure, litter or process wastewater resulting from normal fluctuations or a facility's planned expansion. Nevertheless, as discussed in the preamble to the 2003 CAFO rule, changes to a nutrient management plan will be necessary under some circumstances; for example, when there is a substantial increase in the number of animals, or a major change in the CAFO's cropping program not anticipated in the original NMP.

EPA encourages CAFO operators to develop, at the outset, NMPs that thoughtfully anticipate, to the extent feasible, all contingencies and changes in operations that may occur over the term of the permit. The NMP should provide information on possible crop rotations or other alterations in cropping patterns with accompanying field-specific calculations for manure, litter, and process wastewater application rates based on realistic crop yield goals, soil characteristics, weather, and other site-specific field conditions. In this

way, the public will have the opportunity to review all anticipated operational scenarios and associated field-specific manure, litter, and process wastewater application rates, including the calculation on which these rates were based. In this manner, NMPs and associated permit conditions can address most year-to-year changes in nutrient management practices during the term of the permit and greatly reduce the need for NMP and associated permit modifications as a range of potential operational scenarios will have already been accounted for.

For example, the NMP could specify: (1) The maximum amount of manure that the CAFO may apply to land application areas under its control, based on its total available land application area and the capacity of its waste storage and treatment facilities, as well as manure and soil test results; (2) the maximum amount of manure that may be transferred to other persons (see § 122.42(e)(3)) by the CAFO, given limitations on available markets, the cost of transporting wastes, etc.; (3) a complete inventory of all of the fields under the CAFO's control that might receive manure, with the associated acreage, soil types, soil tests and testing protocols, setbacks, and other soil conservation measures; (4) a list of all of the crops the CAFO may wish to grow on each of those fields, with a matrix of the associated realistic yield expectations and land application rates consistent with the various field conditions; and/or (5) plans to address contingencies (e.g., a spill or especially heavy rainfall event), including consultation with the permitting authority as appropriate.

The NMP should indicate calculations necessary to determine rates of application for the array of crops most likely to be planted in accordance with the cropping system utilized by the CAFO operator, including likely fallback scenarios. For Large CAFOs, the land application rates must comply with the ELG requirements of 40 CFR 412.4. The NMP may also identify other crops that could be planted and other fields that might be utilized for land application, thus allowing the CAFO to utilize a mix of fields and crops different from the most likely or preferred combinations. Nevertheless, the NMP should reasonably forecast the practices most likely to be utilized by the CAFO. EPA solicits comment on the degree of flexibility that should be allowed in NMPs. Greater flexibility would minimize the need for subsequent permit revisions, but will also increase the up-front work load, both for the permittee and for the

permitting authority, and provide the permitting authority and the public with less certainty as to which practices the CAFO will actually utilize.

Even when a CAFO owner or operator develops an NMP that encompasses a significant degree of flexibility, it nevertheless may be necessary to revise the NMP during a CAFO's term of permit coverage. EPA believes that, due to the issues associated with agricultural operations and the variables associated with nutrient management planning, including seasonal variations, weather, soil and slope variation, and availability of feed, seed, and other resources, it is necessary to provide flexibility in the best management practice requirements for CAFOs beyond that typically available for other permit conditions. Consistent with this objective, EPA is proposing to establish specific protocols to allow changes to an NMP after permit coverage has been granted.

EPA is proposing formal public notice and comment procedures that the permitting authority would be required to follow for permit modification when a CAFO is seeking to make substantial changes to its NMP. EPA is proposing that substantial changes would include, but are not limited to: (1) Changes that could result in an increase in runoff of manure, litter, or process wastewater from the facility; (2) an increase in the rate of nutrients from manure, litter, or process wastewater applied to the land application area that is significant in relation to technical standards established by the Director; (3) a significant change in the nutrient balance at the CAFO caused by: (i) An increase in the ratio of animals, manure, litter, or process wastewater to the available land application acreage or storage capacity; (ii) changes in the CAFO's procedures for handling, storage, treatment, or land application of manure, litter, or process wastewater; (iii) a significant increase in the number of animals; or (iv) a significant reduction of manure, litter, or process wastewater hauled off site when there is no equivalent decrease in the amount of manure, litter, or process wastewater produced; and (4) the addition of land application areas not previously included in the nutrient management plan. Specific examples of such changes would include changes to the method of land application from injection to surface application, changes in timing from spring to late fall or winter application, and installation of new drainage systems that would increase runoff from land application fields. The proposed new paragraph 40 CFR 122.42(e)(5)(iv) identifies what would constitute substantial changes to the

facility's NMP that would trigger this process for permit revisions.

For these types of changes, EPA is proposing to create new procedures in 40 CFR 122.42(e)(5) to allow CAFOs to change their nutrient management plans after the Director has incorporated the terms of the NMP into the permit. These procedures, which would be available to CAFOs operating under both individual and general permits, would be nearly identical to those for CAFOs seeking coverage in the first place. The Agency believes that such a process satisfies the need for the permitting authority and the public to have ample opportunity to review and comment on changes to a facility's NMP, while allowing the CAFO the flexibility it needs.

In addition, there may be changes at a facility that were not contemplated in the currently applicable NMP that do not require substantial changes to the terms of the NMP in the permit. In these instances, while a revised NMP would need to be submitted to the Director, the Director should not need to seek public comment on the revised NMP. Such changes might include, for example, changes in cropping patterns not anticipated in the original NMP where they are managed consistent with the original plan and properly documented. In such instances, today's proposal would require the CAFO owner or operator to provide the revised NMP, along with appropriate documentation to reflect changed conditions, to the permitting authority. The better the documentation of the terms in the NMP, including calculations, the easier it will be for a permitted facility to demonstrate that changes in its nutrient management practices are non-substantial modifications of its NMP.

Today's proposal (see proposed 40 CFR 122.42(e)(5)) would require that, whenever a CAFO makes any change to its NMP, the owner or operator would provide the Director with the revised NMP and identify the changes from the previous version submitted to the permitting authority. The Director would then review the changes to ensure that the NMP still meets the requirements of 40 CFR 122.42(e)(1)(i) through (x) and, for Large CAFOs, 40 CFR 412.4(c) and technical standards developed by the Director. If the changes are not substantial, the Director would simply modify the permit as necessary and notify the public of such modification (and not seek public comment). If the changes are substantial, the nutrient management plan would be revised using procedures similar to those proposed for the initial incorporation of an NMP into a general permit. Thus, today's proposed rule

would require the Director to notify the public of substantial changes, and provide an opportunity for public notice and comment. Moreover, the appeals process would be the same as that for incorporation of NMPs into a general permit. EPA solicits comment on the approach proposed to deal with NMP revisions, as well as on the conditions concerning what constitutes a substantial change to an NMP.

Because the process in 40 CFR 122.42(e)(5) would allow for public review of changes to the terms of nutrient management plans and the underlying data and calculations, EPA proposes that the incorporation of changes to the permit through this process would be treated as a minor permit modification, under § 122.63(h), and not require additional review. EPA considered requiring any change to the NMP to be considered a permit modification requiring procedures under § 122.62, but rejected this option as it would significantly burden permitting authorities and CAFO operators' ability to make necessary and timely minor changes to NMPs as discussed above.

For substantial changes, the Agency also proposes to expressly allow the facility, at the Director's discretion, to proceed in implementing the change for up to 180 days before completion of public review and permitting authority approval, so long as the change is not likely to result in increased runoff of manure, litter or process wastewater from the facility. Given the importance of timing in farming, EPA recognizes that CAFOs may be unable to delay the implementation of a substantial change to their nutrient management plan to allow for public review and still implement the change in a timely fashion.

EPA believes that it would be reasonable to allow the Director to temporarily allow substantial changes so long as certain conditions are met. First, the approval would be temporary, allowing the CAFO to implement the changes for only 180 days. Second, the facility would need to provide to the Director documentation to demonstrate that the change would not result in increased runoff of manure, litter, or process wastewater from the facility. Third, the Director would have to review the documentation and conclude that the changes would not result in increased runoff of manure, litter, or process wastewater from the facility. Finally, the Director would have to include such expedited decisions with the permit in the public record and notify the public of its decision. Moreover, by the end of the 180 day

period, these changes would need to undergo the public review procedures required for all substantial changes and be incorporated into the CAFO's permit by the Director. Changes EPA intends to encompass within this provision include the addition of new fields for land application where the Director determines that such additional or replacement fields have equivalent phosphorous ratings (based on the Phosphorous Index, for example) for nutrient uptake as the fields they are supplementing or replacing, whichever may be the case. EPA is interested in commenters' views concerning this proposed provision. EPA specifically solicits comment on whether a change that would result in increased rates of land application of manure, litter, or process wastewater in addition to those changes likely to result in increased runoff, should also be precluded from expedited implementation during the 180 day period.

EPA is also interested in taking comment on an approach that might allow greater flexibility for CAFO operators in making cropping decisions while assuring permitting authorities and the public that they are complying substantively with the terms of the NMP as incorporated into the permit, even if the CAFO modifies its practices somewhat from those articulated in the NMP and the permit. Under this approach, the Agency would modify the annual report requirements for permitted CAFOs in 40 CFR 122.42(e)(4) to require all CAFOs to submit information with the annual report indicating how the CAFO achieved substantive compliance with the terms of the NMP as set forth in the permit. If the CAFO implemented any cropping options not included in the calculations provided in the NMP, the CAFO would document the procedures and nutrient management practices utilized, including crops grown and fields planted, together with nutrient management calculations that governed its land application practices for the prior calendar year, and explain how the modified cropping options as implemented continued to comply with the substantive terms of the NMP incorporated into the permit. Under this option, EPA would include guidance in either rule or preamble text on which types of deviations from the NMP would be allowed, and what would be required to demonstrate in the annual report that these deviations substantively complied with the permit terms. The Agency solicits comment on whether such an approach would be practical and the extent to which it could allow greater

flexibility for CAFOs to meet the NMP requirements incorporated into their permits, while still ensuring appropriate permitting authority and public oversight of permit compliance.

#### (f) Required Dates

In a separate rulemaking, EPA revised the dates in the 2003 CAFO rule by which CAFOs were required to develop and implement their NMPs. (71 FR 6978.) The 2003 CAFO rule required newly defined CAFOs to seek coverage under an NPDES permit by February 13, 2006, but required the development and implementation of a nutrient management plan by December 31, 2006. This would have conflicted with today's proposal that CAFOs submit their NMPs with their permit applications or notices of intent, as required by the Second Circuit Court's decision. The new rule requires CAFO owners and operators to submit their NMPs at the time of the permit application by extending the deadline for both to July 31, 2007. EPA extended these deadlines in a separate rulemaking so as to provide the Agency sufficient time to develop the regulatory revisions proposed in this rulemaking that more broadly respond to the Waterkeeper decision.

#### C. Remand Concerning Water Quality Based Effluent Limitations

Water quality-based effluent limitations (WQBELs) are one of two fundamental types of limitations imposed in NPDES permits. The other is technology-based limitations. Technology-based limitations are required in all NPDES permits, unless the permit writer imposes more stringent WQBELs in the permit where necessary to ensure that water quality standards are attained in the receiving waters. (See CWA Section 301(b)(1)(c), 33 U.S.C. 1311(b)(1)(c), and 40 CFR 122.44(d).) Where WQBELs are necessary, the permit writer establishes them without consideration of the availability or effectiveness of treatment technologies or the costs that dischargers would incur to meet those water quality-based limits. (See *Arkansas v. Oklahoma*, 112 S.Ct. 1046, 1054 (1992); *Westvaco v. EPA*, 899 F.2d 1383 (4th Cir. 1990).)

The environmental petitioners claimed that the 2003 CAFO rule violated both the Clean Water Act and the Administrative Procedure Act because it failed to promulgate WQBELs for CAFO discharges and also barred States from doing so. The Second Circuit agreed in part with this claim, as described in Section II.D.3 above, and

remanded this issue to EPA for further clarification.

The terms of the 2003 CAFO rule itself do not contain any requirements concerning WQBELs, but EPA addressed the subject of WQBELs in the preamble. In fact, there was only one WQBELs issue that EPA addressed or intended to address in the preamble—whether WQBELs can be imposed for land application discharges of agricultural stormwater—and on that issue, the court expressly agreed with EPA's discussion. What appears to have troubled the court were certain statements in the preamble that the court thought might also address how WQBELs apply to other types of discharges. EPA therefore offers the following clarification.

#### 1. The Application of WQBELs to CAFO Discharges Under the 2003 CAFO Rule

How WQBELs apply to a CAFO's land application runoff is different from how they apply to discharges from a CAFO's production areas, as explained below.

##### (a) Land Application Discharges

In the 2003 rule, to determine how WQBELs apply to land application discharges at CAFOs, EPA first had to consider the statutory exclusion for agricultural stormwater. In the Clean Water Act, the definition of "point source" specifically includes CAFOs but excludes agricultural stormwater discharges. (See CWA Section 502(14).) In the 2003 CAFO rule, EPA interpreted how this exclusion applies to discharges from land application at CAFOs. EPA found that where a CAFO applies manure, litter, or process wastewater to its fields, the resulting discharges from those fields are regulated by the Clean Water Act as point source discharges except where they qualify as agricultural stormwater. EPA determined that land application discharges qualify as agricultural stormwater only where manure, litter, or process wastewater has been applied in accordance with site-specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater, as specified in § 122.42 (e)(1)(vi)–(ix). (See 40 CFR 122.23(e).) Where a CAFO has not followed such practices, EPA concluded that any resulting precipitation-related discharge was not intended by Congress to be excluded from the Act as agricultural stormwater and is therefore subject to NPDES requirements.

The land application requirements of the 2003 CAFO rule reflected this interpretation by EPA of the agricultural stormwater exclusion in the Act. EPA

found that where a CAFO follows these practices, any and all precipitation-related discharges of manure, litter, or process wastewater that occur from land application fields would be covered by the agricultural stormwater exclusion and would thus be considered nonpoint source runoff. (68 FR 7198.) In other words, a CAFO that follows the requirements in the 2003 rule eliminates all precipitation-related point source discharges from its land application fields. While physically there may still be some runoff from the fields related to precipitation, the CAFO has no discharge of *regulated* precipitation-related runoff, since any remaining precipitation runoff is agricultural stormwater.

Because the CAFO effluent guidelines—the *technology-based regulations*—already prohibit all precipitation-related land application discharges that are subject to regulation, EPA noted in the 2003 rule that it is not possible for a CAFO permit writer to add any other permit limitations on these discharges that are more stringent than the CAFO effluent guidelines, including any water quality-based limitations. (See 68 FR at 7198.) Only discharges of agricultural stormwater, which are nonpoint source discharges, remain. The Second Circuit agreed that the rule “does not present a problem to the extent that [it] fails to promulgate—and bars States from promulgating—WQBELs for any ‘agricultural stormwater discharge’ \* \* \*.”

Agricultural storm water discharges are, after all, statutorily exempt from any effluent limitations, including WQBELs, because they are non-point source discharges.” *Waterkeeper*, 399 F.3d at 522.

It should be noted that the key point of this discussion—that water quality-based effluent limits are not available to limit land application discharges that are agricultural stormwater—involves, in the first instance, only precipitation-related land application discharges, since only precipitation-related discharges can be agricultural stormwater. Water quality-based effluent limits are available to the permit writer to limit any non-precipitation related (*i.e.*, dry-weather) discharges that occur at land application areas to levels that are more stringent than the technology-based limitations (effluent guidelines), and EPA never intended to indicate otherwise. As EPA stated in the 2003 rule, “any dry weather discharge of manure or process wastewater resulting from its application to land area under the control of a CAFO would not be considered an agricultural stormwater

discharge and would thus be subject to Clean Water Act requirements.” 68 FR 7198. To be sure, in most instances, a CAFO’s requirement to meet technology-based permit limits that require manure to be applied at appropriate agronomic rates should itself eliminate all or most dry weather discharges. Nevertheless, if such discharges remain, the need for additional water quality-based effluent limits to control them will be determined by the permit writer based on the circumstances of each particular case.

#### (b) Production Area Discharges

In contrast to precipitation-related land application discharges, under the 2003 rule, WQBELs can be applied by permit writers in appropriate cases to further limit discharges from CAFO production areas (except for new source CAFOs in the swine and poultry sectors, as discussed below). WQBELs can be imposed on these production area discharges, where appropriate, because the effluent guidelines do not, by themselves, prohibit all “regulatable” discharges from the production area. The effluent guidelines allow occasional overflow discharges from properly designed, operated, and maintained lagoons and storage ponds. It is possible that WQBELs might be necessary in a particular permit to further limit these discharges beyond the levels that are authorized under the CAFO effluent guidelines. It should also be noted that the exclusion for agricultural stormwater does not apply to discharges from the CAFO production area, as EPA stated in the 2003 rule. (See 40 CFR 122.23(e) and 68 FR 7198). Thus, the agricultural stormwater exclusion does not serve to limit how WQBELs may be imposed to control production area discharges.

For new source CAFOs in the swine and poultry sectors, however, no WQBELs can be imposed in permits for the production areas. This is because the effluent guidelines already prohibit all production area discharges from these new sources. (See 40 CFR 412.46(a).)

#### 2. Discussion

The Second Circuit expressed two concerns with EPA’s discussion of how WQBELs apply at CAFOs. First, the court found that it was “unclear \* \* \* why the CAFO Rule exempts discharges other than agricultural storm water discharges from WQBELs.” (See 399 F.3d at 522.) EPA had indicated its intention, the court found, “not to promulgate any WQBELs whatsoever.” As an initial matter, WQBELs for CAFOs

are derived, where appropriate, on a case-by-case basis for individual permits, not promulgated in EPA regulations. EPA never intended to “promulgate” any WQBELs in the 2003 rule, but simply to discuss how WQBELs might apply once a CAFO applied for a permit.

Specifically, the court was concerned by EPA’s preamble statement that “EPA does not expect that water quality-based effluent limitations will be established for CAFO discharges resulting from the land application of manure, litter, or process wastewater.” 399 F.3d at 522, citing 68 FR 7207. The court may have been concerned that EPA was exempting from the application of WQBELs not only agricultural stormwater discharges from CAFO land application areas (which the court agreed are not subject to WQBELs) but also any other discharges from land application areas or even production areas. (See 399 F.3d at 522 (“EPA has \* \* \* only justified its determination not to impose WQBELs \* \* \* only insofar as agricultural stormwater discharges are concerned \* \* \* The EPA has not attempted, in any way, to explain its failure to promulgate WQBELs for CAFO discharges other than agricultural stormwater discharges \* \* \*.”).) This was not EPA’s intent. EPA intended only to affirm that where the precipitation-related discharge from land application areas has been limited to only agricultural stormwater, WQBELs are not available as further limitations on those discharges.

Based on its understanding, the court directed EPA “to explain whether or not, and why, WQBELs are needed to assure that CAFO discharges will not ‘interfere with the attainment or maintenance of that water quality in a specific portion of the navigable waters which shall assure protection of public health, public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water,’” citing 33 U.S.C. 1312(a). 399 F.3d at 523. In response, EPA clarifies that WQBELs are not available for permits with respect to precipitation-related land application discharges for CAFOs. However, water quality-based effluent limits can be included in permits as necessary with respect to non-precipitation-related land application discharges and with respect to production area discharges, as discussed above. For example, with respect to production area discharges, under the effluent guidelines, a CAFO may be subject to a permit requirement that allows production area discharges

only if the CAFO designs and operates its lagoon or pond to contain all process wastewater plus any storm water runoff resulting from the 25-year, 24-hour storm. But water quality considerations may lead the permit writer to impose a more stringent permit requirement such as allowing discharges only if the lagoon or pond is designed and operated to contain water from an even bigger storm.

The court's second concern was that the 2003 rule preamble was "ambiguous about whether States may promulgate WQBELs for discharges other than agricultural stormwater discharges." 399 F.3d at 523. The court directed EPA to explain this issue more clearly on remand. In response, the reasoning described above applies to State-issued as well as EPA-issued NPDES permits. Permit writers in NPDES-authorized States can include WQBELs as necessary with respect to non-precipitation-related land application discharges and with respect to production area discharges.

There are two additional considerations, however, with respect to State-issued permits. First, the effluent guidelines require CAFOs to limit their land application of wastes to levels that comport with State technical standards for manure management. In the 2003 rule preamble, EPA encouraged States to address water quality protection issues in setting those technical standards for appropriate land application practices. (See 399 F.3d at 523, citing 68 FR 7198). Thus, although the effluent guidelines are by their nature technology-based, EPA encouraged the States to address water quality concerns in setting their technical standards for manure management. But this does not change the basic regulatory scheme under which, once those technology-based standards are applied in a permit, the only remaining precipitation-related runoff is agricultural stormwater, for which water quality-based effluent limitations are not available.

Second, it is possible that a State can have additional requirements under its own State regulatory authorities that would go beyond the requirements of the federal NPDES program. Thus, where the only runoff from a CAFO's land application area is agricultural stormwater, that remaining runoff, though not subject to further NPDES regulation, could be subject to additional State requirements that are broader in scope, including additional requirements related to water quality. 33 U.S.C. 1370 and 40 CFR 123.1 and 123.25. These requirements, however, would not be federally enforceable.

#### D. New Source Performance Standards for Subpart D Facilities

##### 1. Provisions in the 2003 CAFO Rule

###### (a) 100-Year, 24-Hour Rainfall Event Design Standards

The Clean Water Act requires EPA to promulgate New Source Performance Standards (NSPS) for new, as opposed to already existing, sources of pollution. (See 33 U.S.C. 1316.) The Act provides that these standards must "reflect the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants." 33 U.S.C. 1316(a)(1). The Act further requires that EPA "take into consideration the cost of achieving such effluent reduction, and any non-water quality, environmental impact and energy requirements." 33 U.S.C. 1316(b)(1)(B). EPA is given considerable discretion to weigh and balance the various factors required by statute to set NSPS. *Riverkeeper, Inc. v. EPA*, 358 F.3d 174, 195 (2d Cir. 2004).

The 2003 CAFO rule effluent guidelines for new Subpart D (swine, poultry, and veal) operations prohibit the discharge of any pollutants from CAFO production areas. It is common for new poultry, veal, and swine operations to confine the animals so that they are never exposed to rainfall or storm water runoff. In addition, many new operations employ manure handling systems that greatly reduce or eliminate the use of water as a conveyance or handling mechanism for the manure, and typically contain manure in covered or indoor facilities. (See 68 FR 7219 and Chapter 8 of the "Technical Development Document for the Final Revisions to the National Pollutant Discharge Elimination System Regulation and the Effluent Guidelines for Concentrated Animal Feeding Operations" (EPA-821-R-03-001) or "TDD" for more information.) Based on these technologies, EPA determined that a no discharge standard was technologically feasible.

EPA recognized that CAFOs may use different technologies to meet the no discharge standard and that these technologies may have slightly different vulnerabilities to extreme weather events. Therefore, the 2003 CAFO rule would have allowed CAFOs to meet the no discharge standard by using waste management and storage facilities designed, constructed, operated, and maintained to contain all manure and

process wastewater including the runoff and precipitation from a 100-year, 24-hour rainfall event.<sup>3</sup> The 100-year, 24-hour rainfall event is a statistical event defined as the amount of rainfall that has a one percent chance of being exceeded in a 24-hour period in any given year. Thus, a facility that was adequate to contain both the process wastewater generated at the facility and the runoff and precipitation from the 100-year event would not discharge in circumstances resulting in runoff and precipitation less than that produced in the 100-year event, when properly operated and maintained. EPA provided the 100-year, 24-hour rainfall event criteria to provide clarity to the regulated community about how to design, operate and maintain their manure handling systems to achieve the no discharge standard.

###### (b) Superior Alternative Performance Standards

The 2003 CAFO rule also allows existing CAFOs in Subparts C and D, and new beef, dairy, and heifer CAFOs to voluntarily participate in the *Voluntary Alternative Performance Standards* program. The alternative performance provisions allow CAFOs to request that the Director establish alternate permit effluent limitations in place of the 25-year, 24-hour storm standard that would otherwise apply. This provision enables CAFOs to implement new technologies and management practices that perform as well as or better than the baseline effluent guidelines at reducing pollutant discharges to surface waters from the production area. To demonstrate that an alternative control technology would achieve equivalent or better pollutant reductions than the baseline effluent guidelines, the CAFO must submit a technical analysis, which first calculates the pollutant discharges based on the site-specific modeled performance of a system designed to comply with the baseline effluent guidelines and then demonstrates that the proposed alternate limitations would result in equal or lower discharges. The minimum specific components of the technical analysis were included in the ELGs at 40 CFR 412.31(a)(2).

For new Large swine, poultry, and veal CAFOs (new sources under Subpart D), the 2003 rule had a similar provision for alternative permit limitations—the "Voluntary Superior Environmental Performance Standards" provision. This NSPS provision empowered permitting

<sup>3</sup> All storage structures must be operated in accordance with the additional measures specified in the regulations at 40 CFR 412.37(a) and (b).

authorities to establish site-specific alternative performance standards that allow production area discharges, so long as such discharges were accompanied by reductions of pollutant discharges to other media. (See 40 CFR 412.46(d).) Specifically, the quantity of pollutants discharged from the production area had to be accompanied by an equivalent or greater reduction in the quantity of pollutants released to other media from the production area (e.g., air emissions from housing and storage), the land application areas for all manure, litter, and process wastewater at on-site and off-site locations, or both. The Director was given the discretion to request supporting information to supplement such a request.

## 2. Summary of the Second Circuit Court Decision Concerning Remanded Issues

The Second Circuit Court of Appeals remanded several elements of the 2003 CAFO rule related to new sources. Specifically, the court directed EPA to clarify the statutory and evidentiary basis for allowing subpart D CAFOs to comply with the NSPS requirements by either the 100-year storm standard or the alternative performance standards. With respect to the 100-year storm standard, the Court noted that while certain studies showed that the production area BMPs adopted by the 2003 CAFO rule would have substantially prevented the production area discharges documented in the record, the court explicitly stated that substantially preventing discharges is not the same as prohibiting them outright. With respect to the alternative performance standards, the court held that EPA had not justified its decision to allow compliance with the no discharge standard through an alternative standard permitting production area discharges so long as the aggregate pollution to all media is equivalent to or lower than that resulting from the baseline standards. The court further held that EPA did not provide adequate notice for either of these provisions under the Clean Water Act's public participation requirements. (See 33 U.S.C. 1251(e) ("Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this Act shall be provided for, encouraged, and assisted by the Administrator and the States").)

## 3. This Proposal

### (a) 100-Year Storm Containment Structure

EPA has reconsidered the NSPS in light of the Second Circuit decision. As a result of its review, EPA is proposing to delete 40 CFR 412.46(a)(1), the provision allowing CAFOs to meet the no discharge standard through the use of a 100-year, 24-hour rain event containment structure. If EPA adopts this change, all discharge of manure, litter, and process wastewater would be prohibited from the production area for new source swine, poultry, and veal calf operations. The land application requirements would remain unchanged. Regulatory language implementing the proposed change may be found in today's proposed rule text.

As part of this approach, EPA also proposes to modify Section 412.37(a)(2) by removing the requirement that all surface liquid impoundments at new sources have a depth marker indicating the minimum capacity to contain the runoff and direct precipitation from a 100-year, 24-hour rain event. The removal of the 100-year storm containment structure provision for new sources makes this provision irrelevant. Although the Agency proposes to delete the 100-year, 24-hour depth marker requirement, EPA recognizes that a marker indicating depth can be an excellent means of displaying how much storage a CAFO has, and whether it is time to pump down levels in the lagoon or pond. EPA believes depth markers are a useful tool to help with the management of any facility, and proposes to maintain, in 412.37(a), the depth marker requirement in the rule, even though EPA removed the 100-year, 24 hour rainfall specification. EPA solicits comment on this provision of the ELCs.

Additionally, EPA is proposing an alternative that would authorize the NPDES Program Director to establish no discharge best management practice effluent limitations based upon a site-specific evaluation for an individual CAFO. Compliance with such limitations would provide an alternate approach for CAFOs to meet the zero discharge requirement. Specifically, EPA is proposing to authorize permit writers, upon request by a CAFO, to establish best management, zero discharge effluent limitations on a case-by-case basis when a facility demonstrates through a rigorous modeling analysis that it has designed an open containment system that will comply with the no discharge requirements. If a facility has complied with all of the specified site-specific

design, construction, operation, and maintenance components of such a system demonstrated to meet the zero discharge requirement, it would be deemed to be in compliance with the no discharge requirement even in the event of an unanticipated discharge.

EPA continues to recognize that CAFOs may use different technologies to meet the no discharge standard and that these technologies may have different vulnerabilities to extreme weather events. While some CAFOs may use closed containment systems to ensure meeting the no discharge requirements, EPA seeks to encourage new source CAFOs to consider implementation of anaerobic digesters, multi-cell treatment lagoons, and nitrification and/or denitrification technologies. While these innovative technologies should be able to achieve zero discharge, and the operator must demonstrate to the permit authority's satisfaction that the system will be designed, operated and maintained to do so, there may be greater uncertainty in the performance of these systems during exceptionally heavy rainfalls and other rare weather conditions. To address such situations, EPA believes it appropriate to allow a facility to use an upset/bypass defense under 40 CFR 122.41(m)–(n), for events that are beyond the reasonable control of the operator, including weather events as well as other unforeseen or uncontrollable conditions. However, EPA recognizes that the upset and bypass provisions do not provide certainty to the operator that any particular unpermitted discharge will be excused. CAFOs operating innovative technologies in particular may be reluctant to rely on these provisions. Therefore, in order to provide some upfront assurance that the design, construction, operation, and maintenance of their system meets the requirements of the new source effluent guidelines, EPA is proposing to allow permit writers to verify in advance that the designed system is a zero discharge system. EPA is proposing this alternative approach in order to provide this additional level of certainty and to encourage the development of new and innovative open system technologies.

While one component of preventing discharge from an open system is to provide adequate storage of manure and wastewater during critical periods, ensuring adequate physical capacity is not sufficient. Rather, adequate storage is based on a site-specific evaluation of the CAFO's entire waste handling system. Adequate storage has to be based on climate-specific variables that define the appropriate storage volume,

but of equal importance are the nutrient management plan and other management decisions that dictate when and how the storage can be emptied. The link between adequate storage and land application practices is one of the most critical considerations in developing and implementing a site-specific nutrient management plan. For example, the amount of land available for application, the hydraulic limitations (ability of the land to handle additional water without the occurrence of runoff), geology, and soil properties of the available land base can play an important role. See Chapter 2 of EPA's technical guidance for CAFOs "Managing Manure Nutrients at Concentrated Animal Feeding Operations" (EPA-821-B-04-00) for more information.

Given these considerations, EPA is proposing requirements for approval of site-specific management practices for such open containment systems with the expectation that a system designed in accordance with these requirements will meet the no discharge standard within the limits of design and operational foreseeability. EPA believes that the design, operation and maintenance elements and analytical assessment required under this alternative are sufficient for this purpose. The assessment process was previously described in two papers delivered to the American Society of Agricultural Engineers, available in today's record (Moffitt *et al.*, (2003), DCN 1-01233 and Moffitt and B. Wilson, (2004), DCN 1-01224).

The first step is to gather information about the specific operation to be analyzed and the regulatory framework in which it operates. The regulatory framework could include: state requirements for minimum storage periods for rainy seasons or winter or additional minimum capacity requirements for chronic rainfall; technical standards that prohibit or otherwise limit land application to frozen, saturated, or snow-covered ground; standards that further limit land application where there is a high risk of nutrient transport; increased storage requirements for manure intended to be transferred to another recipient at a later time; and any other special requirements that would impact the size of the storage facility. The operator's management options and needs should also be included in the design and evaluation, as discussed below. The accuracy of this first step is critical to designing and evaluating a manure storage facility. A check sheet of possible considerations based on 40 CFR 412.46(a)(1) may help ensure the

right information is gathered, and EPA solicits comment on what relevant information must be included in the analysis as a minimum.

The second step is the *design* of the storage facility using design procedures in the USDA Natural Resources Conservation Service's (NRCS) "Agricultural Waste Management Field Handbook," NEH-651. This will be done using Animal Waste Management (AWM) software, which is NRCS's manure storage and treatment planning/design software tool for animal feeding operations that can be used to estimate the production of manure, bedding, and process water and to determine the appropriate size of storage/treatment facilities. The Common Computing Environment (CCE) version of AWM 2.10 is currently available on the web, and planned software updates in the near future are not expected to change the general form of the tool. Site-specific input to AWM includes climate data for 30 years consisting of historical average monthly precipitation obtained from local weather stations, and evaporation values obtained from the National Oceanic and Atmospheric Administration (NOAA) handbook. Additional inputs include animal numbers and typical animal sizes/weights, added water and bedding (if any), and the size and condition of outside areas exposed to rainfall and contributing runoff to the storage facility. AWM allows the user to specify a storage period (months), and the software will design for the series of months with the most rainfall. The program will not design a system in excess of 12 months, as such designs are not recommended. As an alternative, the user can designate months when the storage pond can be emptied, and AWM sizes the pond based on the months with the most precipitation between pumping events. The output of this step is the design of a waste storage facility. AWM provides a series of reports describing the storage facility and providing a listing of the related specifications including the dimensions of the storage facility, daily manure and wastewater additions, the size and characteristics of the fields, and other management assumptions such as storage period.

The third step is an evaluation of the adequacy of the AWM designed storage facility using the Soil Plant Air Water (SPAW) Hydrology Tool. The current version of SPAW is 6.1. SPAW is a field-level tool that uses a modified Soil Conservation Service Curve Number Method to develop water budgets for agricultural fields. SPAW is used by NRCS to evaluate the design procedure

in the "Agricultural Waste Management Field Handbook," NEH-651 (DCN 1-1231). Water budget processes are evaluated by making daily adjustments to crop canopy cover and antecedent soil moisture. Field water budgets can be used for evaluating runoff and infiltration from precipitation events. SPAW also provides an integrated pond module to develop pond water budgets that is ideal for assessing the adequacy of an open containment system. Input to SPAW includes daily precipitation, temperature, and evaporation data; storage facility dimensions and manure related quantities extracted from AWM; and the strategies for managing the storage facility. For each user-specified soil profile and crop rotation, SPAW simulates possible runoff from fields as well as the irrigation water needs of fields receiving the storage effluent. Hydrologic groups are used to rate soils for potential to release excess water down grade.

EPA notes that where AWM software is used for design and SPAW is used for evaluation, additional software for nutrient management planning may be appropriately linked and the NMP data can then be imported. For example, see 6-12 of "Managing Manure" (EPA-821-B-04-009) for a discussion of "Manure Management Planner" or "MMP," a comprehensive Windows-based planning tool for manure management.

SPAW is then run with the site-specific historic rainfall records to see if the open containment system (referred to as a pond in SPAW) and associated management and land application was adequate to eliminate any discharge. EPA has concluded that 100 years of data is an adequate timeframe for simulation purposes and will support a reasonable finding of no discharge. However, EPA is aware that 100 years of continuous rainfall data may not be available for many CAFOs. The SPAW model can be run using actual rainfall data where available, and then simulated with a confidence interval analysis over a period of 100 years. The SPAW model shows not only that the storage facility does not discharge, but also that there is no runoff of wastewater from fields during land application activities, which is necessary to ensure that the open containment system is operated in a way to meet the land application requirements of the rule. In practice, if the SPAW evaluation indicated any level of discharge or any spillway flow, the pond design volume could be increased in size in AWM, the new dimensions converted to SPAW input, and the simulation done again. This iterative procedure could continue until

the pond simulation predicts no discharge. If the facility shows no discharge over the 100 year simulation, then EPA has concluded that the lagoon or pond has been designed to achieve the requirement of no discharge.

EPA has obtained several case studies using this approach to design. Example CNMPs were obtained from Georgia, South Carolina, Nebraska, North Carolina, and Iowa. Each of these CNMPs was used as the basis of design for a new facility. The CNMPs were used to get animal numbers and average weights, crop acreage, location for climate records, storage period, and information about spreading of manure and wastewater. The design volume is generally pumped out of the storage facility twice a year (once in the spring, and once in the fall). These are large pump down events, and it is part of the planning and design process to assure that there is sufficient land and pumping capacity to accomplish this activity. These case studies allow two weeks for this pump down to occur. In the few instances when the storage volume approaches the volume reserved for precipitation and runoff, the additional volume is pumped out of the storage facility as soil conditions permit. In some cases, wastewater removals for irrigation were simulated based on crop consumptive use capability. These are small pump out events. The first case study is a confinement swine operation in Nebraska which had 1600 grower pigs with an average weight of 140 lbs. This example facility has the waste storage pond emptied three times a year. The storage pond has an emergency spillway at nine feet and the depth of storage for the design storm is six inches. Several years within the simulation, the storage volume did reach the level reserved for the design storm, but pump-out was able to occur to restore the storage volume. See DCN 1-01225 for more information. The second case study is a similar facility in Georgia which uses a center pivot irrigation system. In this particular case, the landowner can irrigate almost year round since the crop is a hayfield with a winter small grain. This particular facility is designed for a 150 day storage period. This facility was simulated using a two times per year pumpdown schedule as well as a year-round pumpdown, both resulting in a no discharge system. Additional case studies may be found in EPA's record (DCN 1-01226.).

In these case studies, the AWM design is simulated using SPAW with the result of no predicted discharges. If the AWM design does not result in a system that would comply with the no discharge

requirements, the CAFO could evaluate different design and management options (such as different storage periods and dewatering schedules consistent with the CAFO's NMP) that do not result in any predicted discharges, or the CAFO could conclude an open system is not appropriate for the particular site being evaluated.

Under today's proposal, EPA would require certain specified information regarding design, operation, and maintenance of the system to be included in the CAFOs NMP under 40 CFR 122.42(e)(1). This includes the key user-defined inputs and model system parameters. EPA proposes to require a site-specific analysis and require certain elements of the analysis be submitted to the Director. (See 40 CFR 412.46(a)(1).) These site-specific design, construction, operation, and maintenance measures would then become enforceable requirements in the CAFO's permit. As long as the CAFO complies with these requirements, the CAFO would presumptively meet the no discharge requirement. The burden would be on the CAFO to demonstrate that any open system it employed meets the new source standard. EPA believes that this would provide a clear and enforceable standard for the CAFO as well as provide assurance to the public that the proposed system would comply with the no discharge requirements.

Under today's proposal, the Director has the discretion to require additional information from a new source Subpart D CAFO owner or operator to support site-specific effluent limitations. EPA is aware that other peer-reviewed models and programs have been or may be developed that could be determined to be equivalent to AWM and SPAW. Therefore the proposed rule gives the Director the discretion to approve design software or procedures equivalent to AWM and SPAW. EPA solicits comment on this approach to demonstrating that an open storage system meets the no discharge requirements and providing an alternate approach for facilities that comply with the enforceable design, construction, operation and maintenance measures developed under the approach.

The information, design, and evaluation process in today's proposal is intended to allow CAFOs the flexibility to demonstrate compliance with the no discharge requirements for any type of open storage facility. As a practical consideration, EPA expects most CAFOs selecting this compliance alternative will submit designs for open manure storage structures accompanied by a narrow range of acceptable operation and management practices. However,

for a given type of storage facility design (for example, a constant volume anaerobic digester followed by an open storage pond sized for 12 months storage of treated manure), EPA believes it is possible to conduct a series of assessments for a specified geographic area that fully encompass the range of operational and management measures that would be used across multiple CAFOs with the specified storage facility. In this case, SPAW could be run to validate a wide range of NMP and storage pond management scenarios. The Director may then determine that any CAFO using the specified facility type and submitting a plan that falls within the pre-approved range of operational and management practices would not need to conduct the assessment step (*i.e.*, the validation using SPAW) individually. EPA solicits comment on this approach to streamlining the evaluation process for those CAFOs submitting "pre-approved" designs and operational procedures.

EPA is proposing this compliance option only for new Subpart D facilities that employ open manure storage structures, because EPA believes that facilities employing other manure handling technologies (*e.g.*, under house pits) will be able to ensure zero discharge of manure, litter, and process wastewater without having to employ the detailed design, modeling, and evaluation approach described here. However, EPA recognizes that other types of new Subpart D facilities required to meet the zero discharge standard might believe that such an approach should be available to them as well. EPA thus requests comment on whether it should develop a comparable provision for facilities other than those employing open manure storage structures under which a facility could demonstrate in advance through a rigorous modeling analysis that it was designed, operated and maintained to achieve zero discharge, and subsequent compliance with the site-specific design, construction, operation and maintenance components of this demonstration would then constitute compliance with the no-discharge requirement in the rule.

#### (b) Superior Alternative Performance Standards

EPA proposes to delete 40 CFR 412.46(d) and remove the voluntary superior performance standards provision for new swine, poultry, and veal sources. The court ruling states that EPA cannot establish production area standards that substantially prevent discharges as equivalent to standards

that prohibit discharges outright. In accordance with this ruling, EPA is proposing to withdraw this provision.

#### *E. Remand Concerning Pathogens for BCT*

##### **1. What Were the BCT Provisions in the 2003 CAFO Rule?**

The CWA requires compliance with progressively more stringent technology-based limitations. The Act requires existing point sources to comply with limitations achievable by application of the “best practicable control technology presently available” or “BPT.” These limitations control conventional, priority, and/or nonconventional pollutants, and are typically based on the average pollutant removal performance of the best facilities examined by EPA. EPA also bases limitations on the discharge of toxic or non-conventional pollutants on the “best available technology economically achievable,” or “BAT.” The 1977 amendments to the CWA required EPA to identify effluent reduction levels for conventional pollutants associated with “best conventional pollutant control technology” or “BCT” for discharges from existing industrial point sources. BCT is not an additional limitation, but replaces BAT for control of conventional pollutants. Effluent limitations based on BCT may not be less stringent than the limitations based on BPT. Thus, BPT effluent limitations are a “floor” below which BCT effluent limitations cannot be established. Section 304(a)(4) designates the following as conventional pollutants: biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform (FC), pH, and any additional pollutants defined by the Administrator as conventional. The Administrator designated oil and grease as an additional conventional pollutant, on July 30, 1979 (44 FR 44501).

The Clean Water Act Amendments that created BCT also specify that the cost associated with BCT effluent limitations be “reasonable” with respect to the effluent reductions. Accordingly, the “BCT Methodology” was developed to answer the question of whether it is “cost-reasonable” for industry to control conventional pollutants at a level more stringent than already required by BPT effluent limitations. The BCT methodology was originally published on August 29, 1979, along with the promulgation of BCT ELGs for 41 industry subcategories (44 FR 50732). The crux of the methodology was a comparison of the costs of removing conventional pollutants for a candidate

BCT technology within a particular industry segment, to the costs of removal for an average-sized publicly owned treatment works (POTW). The Fourth Circuit remanded the regulation, and directed EPA to develop an industry cost-effectiveness test in addition to the POTW test. EPA proposed a revised BCT methodology in 1982 (47 FR 49176) that addressed the industry cost-effectiveness test (the “second” test). EPA proposed to base the POTW benchmark on model plant costs in a 1984 notice (49 FR 37046). The final BCT methodology was published on July 9, 1986 (51 FR 24974), maintaining the basic approach of the 1982 proposed BCT methodology and adopting the use of the new POTW data.

In the 2003 CAFO rule, EPA established BPT-based effluent limitation guidelines or “ELGs” for large beef, dairy, veal, swine, and poultry CAFOs. These effluent limitation guidelines prohibit the discharge of manure, litter, or process wastewater into waters of the U.S. from the production areas at the CAFOs. (40 CFR 412.31(a).) However, when precipitation causes a discharge of manure, litter, or process wastewater, this may be allowed provided certain conditions are met. (40 CFR 412.31(a)(1).) In order to qualify for this allowance, the CAFO must have a properly designed and constructed storage structure with the capacity to contain all manure, litter, and process wastewater and the runoff and direct precipitation from a 25-year, 24-hour rainfall event. (40 CFR 412.31(a)(1)(i).) In addition, the CAFO’s production area must be operated in accordance with specified best management practices (BMPs). (40 CFR 412.31(a)(1)(ii).) The rule also established other BMPs governing CAFO wastes applied to land under the control of the CAFO. (40 CFR 412.4.) EPA estimated that the ELGs will achieve significant reductions in the annual water pollutant load from Large CAFOs nationwide, including 155 million pounds of nutrients (e.g., nitrogen and phosphorus), over two billion pounds of sediments, and a 46 percent reduction in discharges of pathogens including fecal coliform. (68 FR 7239, Table 7.2.)

In establishing the ELGs in the 2003 rulemaking, EPA also considered reductions in conventional pollutants, including BOD, fecal coliform, and TSS. However, it was difficult for EPA to assess fecal coliform loadings and reductions because they vary greatly depending on site characteristics. Moreover, quantifying discharges of conventional pollutants from land application areas is difficult due to the

challenges of: Distinguishing between CAFO sources of pollutants and non-CAFO sources of pollutants; determining what share of pollutants reaching the edge of field reach surface waters; and quantifying the potential for regrowth of fecal coliform both after treatment and after land application of manure. Despite these challenges, EPA estimated approximate reductions of fecal coliform associated with the following technology options considered in the 2003 rule: Option 1 (nitrogen-based land application rates and zero discharge from the production area with an overflow allowance under specified conditions); Option 2, the final option selected (limiting nutrient-based land application rates and zero discharge from the production area with an overflow allowance under specified conditions); Option 3 (Option 2 plus permeability limitations on lagoons and ponds for protection of ground water based on synthetic lagoon liners); Option 5 (Option two except no overflow allowance for swine and poultry); Option 5a (Option 5 plus drier manure management such as composting for beef and dairy operations); and Option 6 (Option 2 plus anaerobic digestion with energy recovery for large swine and dairy operations). Pollutant reduction estimates for these options were provided in the final rule. For beef and dairy operations (subcategory C facilities), EPA also evaluated BOD and TSS reduction associated with Option 7 (Option 2 plus a national prohibition on land application of manure to frozen, snow-covered, or saturated ground), but did not present the pollutant removal estimates for this option.

Because of the difficulties associated with quantifying reductions of conventional pollutant discharges, EPA relied primarily on sediment discharges (as a surrogate for TSS) in establishing BCT requirements. Following this approach, EPA identified no BCT technology option that achieves significantly greater TSS removals than the BPT requirements eventually promulgated in 2003 *except for Option 5*. EPA determined Option 5 was not economically achievable for subcategory D (68 FR 7218). EPA therefore concluded that there were no available BCT technologies on which to base limits for conventional pollutants that were more stringent than BPT, and established BCT requirements equal to BPT in the 2003 CAFO rule (see 40 CFR 412.33 and 412.44). If EPA had identified available technology options that achieve greater reductions of conventional pollutants than are

achieved by BPT, then EPA would have performed the two-part BCT cost test required by CWA section 304(b)(4)(B). (68 FR 7224).

## 2. Summary of the Second Circuit Court Decision

In its February 28, 2005, decision, the Second Circuit Court of Appeals remanded the 2003 CAFO rule's BCT standard for pathogens. In the court's view, the 2003 CAFO rule violated the Clean Water Act because EPA did not make an affirmative finding that the BCT-based ELGs adopted in the CAFO rule do *in fact* represent the best conventional pollutant control technology for reducing pathogens—specifically, fecal coliform. The court noted that EPA may well determine that the ELGs otherwise adopted by the CAFO rule do in fact represent the best conventional pollutant control technology for reducing pathogens. The court further noted that EPA may determine, after considering all the relevant factors, that the ELGs otherwise adopted by the 2003 CAFO rule will directly—not just incidentally—reduce pathogens and do so better than any other pollutant control technology.

## 3. This Proposal

In today's notice, EPA finds that the BCT-based ELGs adopted in the 2003 CAFO rule *do in fact* represent the best conventional pollutant control technology for removal of pathogens, including fecal coliform. First, EPA discusses its evaluation of various candidate technologies to assess whether they are technologically feasible for facilities in a subcategory and would achieve greater reductions of fecal coliform than the technologies selected as the basis for BPT limitations in the 2003 rule. Specifically, EPA presents pathogen reductions associated with technology Options 3, 5, 6 and 7 described previously and discussed in the 2003 docket. EPA notes that these regulatory options are discussed here even though EPA has already determined these options are either not technologically feasible or not economically achievable, because these options may provide more reductions of pathogens than the option selected for the final 2003 CAFO ELGs. EPA did not consider Options 1 and 4 because they do not provide any further pollutant reductions over the final selected Option 2. Today, EPA also presents additional candidate technologies for pathogen reductions: Fluidized bed incinerators; composting for poultry; chemical addition for disinfection; and additional storage to comply with a national prohibition of land application

to frozen, saturated, or snow-covered ground (Option 7) for the swine industry (Option 7 for the beef and dairy industries was already presented in 2003).

Second, today's proposal provides results of the BCT cost-reasonableness test for the candidate technology options. EPA finds that none of these candidate technologies would pass either part of the BCT cost test. Therefore, EPA has concluded that any combination of these technologies developed into a regulatory option for a subcategory would also not pass the BCT cost test. Finally, because the traditional BCT cost test has been based on pollutants other than fecal coliform, today's proposal presents an approach to conducting the POTW cost test for CAFOs that explicitly addresses fecal coliform. Today's notice presents the results of applying this cost test to the candidate BCT technology options considered for CAFOs. None of the candidate technology options would pass the alternative BCT cost test. Each of these analyses is described in more detail below.

### (a) Are There Technically Feasible Candidate Technologies That Achieve Greater Reductions for Fecal Coliform Than Technologies Selected for BCT in the 2003 Rule?

EPA evaluated numerous sources of data on CAFO manure management systems, including treatment technologies and best management practices (BMPs) for pollution prevention, as well as for the handling, storage, treatment, and land application of wastes. These data sources included available technical literature, over 11,000 comments submitted by industry and other public commenters, and insights gained from conducting over 116 site visits to CAFOs. EPA specifically identified several technologies and BMPs for the reduction of fecal coliforms and other pathogens, including digesters, fluidized bed incinerators, chemical addition for disinfection, composting, and deep stacking of poultry litter (see descriptions of these and other technologies in Chapter 8 of the TDD). Production area practices and land application practices were also evaluated. Each of these potential candidate BCT technologies is summarized below:

**Anaerobic Digestion.** EPA specifically evaluated anaerobic digesters as a candidate technology option in the 2003 rule, identified as Option 6 in the preamble and supporting documents (see Chapter 1 of the "Cost Methodology for the Final Revisions to the NPDES

and ELG for CAFOs" or "Cost Report," EPA-821-R-03-004). However, EPA rejected this technology for BCT because anaerobic digesters are not demonstrated to be technically feasible at all CAFOs. Specifically, wastes from beef, heifer, and poultry operations would not support the operation of these treatment systems. (68 FR 7217.) Even for those types of CAFOs that generate quantities and types of manure and wastes more conducive to the digestion process (e.g., dairy and swine facilities above a minimum size), the use of digesters does not necessarily lead to significant reductions for many of the pollutants present (e.g., nutrients, metals).

There are three basic temperature regimes for anaerobic digestion: Psychrophilic, mesophilic, and thermophilic. Psychrophilic, or low-temperature, digestion is a natural decomposition process at temperatures typically found in lagoons. The hydraulic retention time for stable operation varies from 30 days to 90 days depending on temperature. EPA notes this same time-temperature relationship occurs in typical manure storage facilities, and results in some of the reduction of pathogens (including fecal coliform) that were estimated for the 2003 CAFO rule. Mesophilic digestion reduces the retention period to 12 to 20 days. In some limited cases digesters were shown to reduce fecal coliform by as much as 99 percent, particularly by thermophilic (higher temperatures in the range of 135 to 155 degrees Fahrenheit) digestion, but regrowth of both fecal coliform and other pathogens was shown to occur during effluent storage. (68 FR 7217.) EPA did not receive any public comments or data during the 2003 rulemaking process that provided a reliable means of either quantifying this regrowth or differentiating the performance of digesters from the die-off and regrowth that occurs in untreated manure storage facilities. Most importantly, a digester does not eliminate the need for the CAFO to have liquid impoundments for process wastewater, treated wastewater, and storm water runoff. EPA previously noted that the digester process may stabilize manure, and may offer certain other benefits (e.g., energy recovery, control of methane emissions), but as a result of the storage requirements (and associated potential for regrowth) the technology would not necessarily result in decreased discharges of pollutants (including pathogens) beyond the selected BPT option. (68 FR 7217.) EPA notes that digestion may also be conducted aerobically, but this variation

is rarely seen at CAFOs due to process problems, design challenges, high energy requirements, and disproportionately high costs. (See Table 8–14 of the TDD for a list of aerobic digestion and activated sludge processes.)

EPA further notes that digesters do not reduce the total nutrients in animal wastes. Most of the phosphorus removed from the effluent is concentrated in the digested solids, which are often used for land application. Other data show that changes in pollutant composition, particularly the soluble forms of nitrogen, could result in *increased* discharges of pollutants following land application of digested manure, specifically ammonia releases and other emissions. (See Chapter 8 of the TDD.) Similarly, metals are not reduced and remain in the digester effluent and solids. EPA further rejects this technology as practical for all CAFOs due to the high failure rate of these systems at certain types of facilities (see Cost Report, page 5–119), as well as the substantial costs including significant capital costs and the large uncertainty in any potential annual cost offset due to energy recovery. As of October 2002, there were 40 CAFOs with operating digesters out of several hundred thousand AFOs nationwide, of which 35 were able to partially offset costs through biogas recovery. In addition, EPA continues to believe that mandating the use of anaerobic digesters could divert resources from or complicate the installation of other technologies that can potentially achieve better performance overall. This finding does not alter EPA's previous conclusion that the use of digesters by CAFOs on a site-specific basis may be appropriate in some circumstances (e.g., as part of a manure management system to comply with the new source requirements (see 68 FR 7220), but today's proposal concludes that the technology is not an appropriate basis for setting national BCT standards for conventional pollutants.

Despite EPA's conclusion that digesters are not technologically feasible for many CAFOs across a subcategory, today EPA presents the BCT cost test for those CAFOs where the digester technology is most likely to be feasible—large swine and dairy facilities. This option includes treatment in a mesophilic digester (either a heated covered-lagoon digester, plug flow, or complete mix digester, with biogas recovery) prior to manure storage. Treated manure is assumed to be stored in the CAFOs existing manure storage facility and land applied

consistent with the BPT requirements of 40 CFR 412.

To evaluate costs and pollutant reductions of all technologies presented today, EPA used the same 1,600 farm-based cost models EPA used in the 2003 CAFO rule (68 FR 7243; also see Chapters 2 and 5 of the Cost Report). Digester costs were determined using EPA's AgStar Farmware (version 2). As described above, quantifying pathogen reductions is difficult. For purposes of conducting the cost-reasonableness test, EPA assumes the heated digester system will reduce fecal coliforms in the stored manure by 99 percent (atwolog order reduction). EPA's digester option costs include cost-offsets due to biogas recovery and energy recovery, and a new storage pond for effluent storage if the CAFO did not already utilize a liquid storage structure. EPA's costs also include annual technical consultation and services necessary to assure effective digester system operation, and optimal biogas generation and energy recovery.

Runoff of land applied manure was simulated using the Groundwater Loading Effects of Agricultural Management Systems (GLEAMS) models EPA developed for the 2003 CAFO rule (see III–19 of “Loads Report”). GLEAMS is a field-scale model that simulates hydrologic transport, erosion, biochemical processes such as chemical transformation and plant uptake, and nutrient losses in surface runoff, sediment, and groundwater leachate and is described in the Loads Report. The National Water Pollution Control Assessment Model (NWPCAM) is a national surface-water quality model designed to characterize water quality for the nation's network of rivers, streams, and lakes. In the 2003 CAFO rule analysis, NWPCAM simulations predicted that, on average nationwide, 75 percent of fecal coliform, 88 percent of BOD<sub>5</sub>, and 79 percent of TSS that reach the edge-of-field will reach surface waters (all calculated at the RF3 storm reach level). EPA combined the reduced discharges of conventional pollutants from modeled production area overflows (see Loads Report for more information) with the reduced land application discharges based on the edge-of-field load analyses (the GLEAMS simulations followed by attenuation in the NWPCAM model) to quantify reductions in conventional pollutant discharges from both the production area and the land application area. EPA also conducted sensitivity analyses on the range of costs of this technology by considering alternative cost offsets for biogas

recovery for energy production. The specific assumptions and resulting model farm costs may be found in DCN 22177 and DCN 1–02001.

The incremental costs (annualized costs in 2001 dollars) and pollutant reductions are shown in Table E.2 which follows the discussion of technology options analyzed. 2001 dollars are used for comparability with POTW benchmark costs. The cost index used to bring forward CAFO costs to year 2001 is the same index that was used to bring forward POTW benchmark costs to year 2001 dollars. Since the POTW cost test compares cost to pollutant ratios for both industry and POTWs, applying the same cost index to both ratios would not change the overall comparison of these ratios. For this reason, EPA has determined that it is not necessary to bring the 2001 costs forward to current year dollars for any technology option presented today.

**Fluidized Bed Incinerators.** This technology was reviewed but not considered as a technology option in the 2003 CAFO rule. Fluidized bed incineration is a proven technology for reducing waste volume and for converting the waste to useful products (e.g., energy, nutrient enriched ash), and is being used at municipal waste disposal facilities. However, even at municipal operations, incineration can be a costly method of disposal and frequently requires co-combustion with other feedstocks.

In addition, incinerators are not widely used in the United States to manage animal manure because they are generally not affordable to individual CAFOs. Application of this technology has been attempted unsuccessfully by a beef feedlot in the U.S., but the incinerator thermal output could not be sustained (TDD, 8–93 to 8–95). Fluidized bed incinerators are also sensitive to moisture content and fuel particle size, limiting incinerator effectiveness to those wastes that are no more than 15–20 percent moisture.

Individual poultry CAFOs in the U.S. do not currently use incineration as a method of handling excess poultry litter, although centralized incinerator projects have been successfully developed in the European Union in selected geographic areas with a high density of poultry operations, and several similar systems have been proposed in the U.S. These centralized incinerators reduce pathogens in the litter. However, large-scale, centralized incineration plants have not yet successfully translated into feasible, smaller-scale units for individual CAFO use. (See Chapter 8 of the TDD.)

EPA is aware that it is also possible to gasify manure solids on-farm, but this technology is still in the pilot stage. EPA is further aware of a demonstration project that heats the manure in a refractory oven, and uses the gasses to replace propane in a mortality handling system. EPA is not aware of any individual CAFOs using incineration due to fuel costs, the high capital costs of the incineration unit, and the inability to sustain the technology for most animal manures. EPA therefore rejects this technology as not technologically feasible for individual CAFOs.

**Chemical Disinfection.** Methods of disinfection include chemical addition, heat, mechanical methods, and radiation. Various types of chemical addition for the purpose of disinfection were reviewed but not selected as part of a technology option in the 2003 CAFO rule. (See Chapter 8 of the TDD for more information.) Commonly used disinfection technologies in the U.S. include the addition of chemicals such as chlorine, calcium hypochlorite, sodium hypochlorite, lime, and ozone. Chlorination has a history of select pathogen destruction effectiveness and is relatively inexpensive when used as a polishing step for final incremental removal of pathogens. The Occupational Safety and Health Administration (OSHA) has established intensive training and safety measures for chlorine use. (DCN 1-01198.) Organic compounds present in typical CAFO wastewater can combine with chlorine to form chloroform (a documented animal carcinogen), monochloramines, and other toxic chloro-organic compounds. Chlorine dioxide is widely used as an alternative bactericide, but requires expensive generating equipment, and produces chlorate and chlorite as potentially undesirable by-products. Chemical addition is not commonly practiced in the United States for treatment of animal wastes. In order for chlorination to be optimally effective and to minimize the generation of chlorinated by-products, the treated wastewater should have low levels of suspended solids—generally 30 to 50 mg/l or less. Therefore, to implement chlorine-based disinfection, animal wastewater would require primary and/or biological treatment prior to disinfection. Storage tanks, dosage control equipment, and mixing equipment would need to be retrofitted. The capital investment to modify a typical CAFO's existing manure management system would be costly and operation of the system would

require higher levels of maintenance and operator skill.

Lime addition is used as a disinfectant for animal wastes found in barns and milking parlors. Lime addition is a proven treatment technology for achieving Class A and Class B biosolids standards. To meet Class B requirements using lime stabilization, the pH of the biosolids must be elevated to more than 12 for two hours and subsequently maintained at more than 11.5 for 22 hours. The material also needs to be kept at high temperature (70 degrees Celsius) for at least 30 minutes, which would require outside heating of the material to be treated. EPA has very little data on the scalability of the technology to individual CAFOs. What data there is suggests that the capital costs for holding tanks, dosage tanks, mixing equipment, and neutralization tanks necessary for retrofitting this technology at CAFOs would be high. The addition of lime results in an increase in sludge volume, although lime stabilization generally requires less storage space than alternatives such as composting. Most high moisture CAFO wastes would require some sort of digestion and/or dewatering prior to stabilization. EPA believes additional costs for operator training, safety controls, chemical purchases, and increased volume of materials that must be hauled and land applied may be another reason the technology has not been adopted by CAFOs given the successful application of lime addition to biosolids. Lime addition in poultry houses has been shown to interfere with pesticide functionality, and lime addition to poultry litter has been shown to cause a huge flush of ammonia emissions from the litter. EPA further notes that the addition of lime to organic wastes in general has been shown to accelerate ammonia emissions.

Ozone is a highly effective germicide against a wide range of pathogenic organisms, including bacteria, protozoa, and viruses. Ozone use in U.S. wastewater treatment is limited due to high capital and operating costs and intensive energy requirements. Ozonation, like chlorination, requires a wastewater that has relatively low levels of solids to avoid regrowth of microorganisms after disinfection and limit costs associated with oxidizing oxygen demanding solids. Ozone disinfection technology is not commonly used in the United States for treatment of animal wastes. The processes are costly and require higher levels of maintenance and operator skill. Efficient ozone disinfection requires a pH of 6–10 and temperature of at least

36 degrees Fahrenheit. (TDD, p. 8–117.) To implement this technology, animal wastewater would require primary and/or biological treatment prior to disinfection (DCN 1–01198). Therefore, EPA rejected ozonation as impractical due to high operation and maintenance requirements, high operator skill requirements, considerable worker safety concerns, and overall high costs.

For the above reasons, EPA finds that all of these chemical addition technologies are not technically feasible for individual CAFOs.

**Deep Stacking and Composting of Poultry Litter.** Deep stacking consists of piling litter in a conical pile or stack after it is removed from a poultry house and raising the temperature to a maximum of 140 Fahrenheit (60 Celsius) by microbes. As with anaerobic digestion, incineration, and in some cases, chemical addition, the heat (high temperature) reduces pathogens. Although the practice of deep stacking poultry litter enhances its potential value as a feedstuff for ruminants by reducing concern about possible pathogen transmission, the stacked poultry litter is not pathogen free. The stacked litter is not mixed out of concern that re-aeration will create the potential for excessive heating. Thus, outer regions of the deep stacked litter do not reach the temperatures necessary for pathogen destruction. In practice, deep stacking may be considered a specialized approach to composting in which oxygen availability limits the overall temperature and the degree to which dry matter (“volatile solids” or “VS”) are destroyed. (TDD, p. 8–131 to 8–132.) Due to the lack of reliable data on the overall effectiveness of the technology in reducing fecal coliform, the operational similarities to windrow composting (an option already evaluated), and limited applications to limited types of poultry CAFOs, EPA rejects deep stacking as not technically feasible for consideration as a BCT candidate.

For more general composting practices (e.g., windrow composting), EPA notes that the effectiveness of the technology is weather dependent, it requires a large amount of land, and additional runoff controls and wastewater storage, and its use would impose a much higher operating cost on CAFOs. (TDD, p. 8–102 to 8–110; Cost Report, Section 5.12.) Not notwithstanding these limitations, some CAFOs successfully use composting technologies. Windrow composting in particular is available to a range of CAFOs, and was included in technology option 5a for beef and dairy operations in the 2003 rule. Composting is also a

technically feasible technology for incremental pathogen removals at most poultry operations. Composting was therefore further evaluated for cost reasonableness for beef, dairy, and poultry operations as part of today's proposal.

As with the digester option, the model farms used in the analysis were the same as those used in the 2003 final CAFO rule. Costs were based on windrow composting, and include turning equipment, labor, berms for runoff controls, a storage pond for collection of compost site effluent, and solid-liquid separation for beef and dairy facilities. For purposes of this analysis, EPA assumes 99 percent reduction of fecal coliform in the manure or litter prior to overflows from storage ponds or runoff from land application of the manure. EPA is aware that some composting operations today offset their costs through sales of the composted material. EPA believes regulatory requirements that resulted in all facilities in a geographical area composting their manure would flood the local market and significantly reduce a CAFO's ability to offset costs through compost sales. For this reason, compost sales cannot reliably be included as cost offsets for this option.

*Ground water controls.* As discussed above, the ground water option (2003 CAFO rule Option 3) may result in decreased discharges of pollutants in comparison to the final BPT requirements. However, EPA concludes the conventional pollutant reductions for Option 3 are small. In analyzing this option, soil permeability was used to determine leakage values (a reflection of the pollutant mobility in the soil under the manure storage area). Estimated costs included a retrofit installation of synthetic liners plus monitoring wells in the vicinity of manure storage structures. EPA estimated national pollutant reductions by first looking at each geographical region's probability for ground water contamination. Factors influencing potential for ground water contamination include the presence of sandy soils, shallow groundwater tables, and the presence of karst or karst-like terrain (see Table 29 in section III.G of the Loads Report). Regional loads were summed to generate a national load estimate. The incremental costs and pollutant reductions for this option in the 2003 CAFO rule analysis are presented in Table E.2.

*No discharge option.* As discussed above, the no discharge option for existing swine and poultry facilities (2003 CAFO rule Option 5) would result in decreased discharges of conventional pollutants in comparison to the final

BPT requirements. In the earlier rulemaking, EPA rejected this option for BAT because it was not found to be economically achievable. Consequently, this option is not an available BCT technology. The incremental costs and pollutant reductions from the 2003 CAFO rule analysis are presented in Table E.2.

*Production Area Management Practices.*

One mechanism for pathogen discharges to surface waters is catastrophic spills. In the 2003 rule, EPA required various production area management practices to address catastrophic spills, and has not identified any additional production area management practices that would further reduce pathogen discharges from the production area.

EPA expects that the 2003 rule requirements for no discharge from the production area, as well as routine inspection and mandatory management practices for the control of liquid impoundment levels, will reduce catastrophic spills (40 CFR 412.37(a)(1) and (2)). At the production area, operators are required to handle animal mortalities in a manner so as to prevent contamination of surface water (40 CFR 412.37(a)(4)). The proper use of manure as a fertilizer is closely linked with manure storage, typically resulting in increased storage capacity and longer retention times of both liquid and solid manure allowing increased opportunity for die-off of pathogens due to competition, UV, and other factors. For example, runoff from fields receiving poultry litter that had been stored prior to application showed no significant difference in pathogen content from runoff from control fields to which manure had not been applied (GEIS, 1999), demonstrating that pathogen reductions from lengthy storage times are significant. (See Response to Comments Document, CAFO400085–16.)

Minimum storage periods, while site-specific, are nonetheless necessary to meet the land application requirements of the 2003 CAFO rule (see "Cost Methodology" report for more information on typical storage periods; see Chapter 2 of "Managing Manure" for more information on the link between adequate storage and land application practices). Adequate storage, though not specifically defined by the 2003 CAFO rule, already accomplishes significant pathogen reductions. (See "Loads Report" for pollutant reduction estimates attributed to storage and the production area management practices required by the final CAFO rules.) EPA has not identified any additional production area management practices

that will result in additional reductions of pathogens.

*Land Application Practices.* Although the requirements of the 2003 rule related to land application of manure were not specifically designed to reduce the pathogens in animal wastes, they are effective at achieving reductions of pathogens in CAFO discharges. In addition to the production area management practices described above, CAFO discharges of pathogens are further reduced by applying manure at rates that ensure appropriate agricultural utilization of nutrients and establishing setbacks or buffers where manure, litter, and other process wastewater are not applied. Accordingly, the final rule requirements include several land application practices, such as appropriate rates and timing of application, overall consideration of whether any land application should occur, and application setbacks and buffers. The 2003 CAFO rule also requires field-specific assessments of the potential for nutrient transport for each field to which manure may be land applied. Such assessments must address the source, form, timing, and method of application. Application rates must minimize phosphorus and nitrogen transport from the field to surface waters (40 CFR 412.4(c)(2)). Application rate has been identified as the single most important factor affecting pollution of surface waters from fields receiving manure. In one case study, swine lagoon effluent applied to tile drained fields at 1.1 inches showed no difference in runoff quality from the control fields, but application at three times this rate yielded high levels of fecal coliform in the adjacent surface water.

The final selected option also specifies that manure, litter, or other process wastewaters are not to be applied within 100 feet of any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface waters (40 CFR 412.4(c)(5)). This setback is an area where manure, litter, or other process wastewaters are not applied, but crops may continue to be grown. The setback achieves pollutant reductions by increasing the distance pollutants have to travel to reach surface waters. The transport of nutrients and other pollutants (including pathogens) in manure to surface waters and the rate at which transport occurs is dependent on the land use, geography, topography, climate, amount and method of manure application, and the nature and density of vegetation in the area. As a compliance alternative to the setbacks

requirement, CAFOs may use vegetated buffers (40 CFR 412.4(c)(5)). EPA's record shows numerous examples of buffers with trapping efficiencies as high as 91% (e.g., see DCNs 385026, 321083, 22374). Buffer strips stabilize streambanks and shorelines, and prevent loss of pollutants from bank erosion and slumping. (Response to Comments Document, CAFO400085-16.) As indicated above, EPA considered and selected nutrient management and use of setbacks or buffers for the BPT ELGs (see 40 CFR 412.4 and 412.37). Because pathogen transport often occurs through adherence to soil or other solid particles, management practices that reduce discharges of other pollutants, particularly TSS, will also reduce pathogen discharges.

As described previously, pathogen die-off occurs during the period manure is stored prior to land application, and further die-off of pathogens occurs when the animal waste is exposed to sunlight following surface application to land. Pathogenic bacteria in particular are sensitive to changes in environmental conditions. EPA applied the GLEAMS model to estimate changes in pollutants leaving the land application areas of CAFO facilities. EPA also calculated reductions in pathogen indicator loadings from the production area of facilities. (See Response to Comments Document, Appendix A, Essay: CAFOs as Sources of Pathogens and Related Risks).

Additional factors affecting pathogen content in the runoff from land application areas include incorporation methods, tillage practices, saturation of the receiving field, and elapsed time following application before a rainfall. These factors are expected to be addressed, where appropriate, in the State technical standards required under 40 CFR 412.4(c)(2). For examples, see "Managing Manure," 2-12 for a discussion of additional storage capacity for the winter season; Appendix L for technical guidance on minimizing risks of runoff of manure in the winter; and Appendix M for guidance on estimating the minimum level of rainfall at which runoff begins.

In the 2003 CAFO rule, 40 CFR 412.4 requires technical standards for nutrient management to address the form, source, timing, and method of application to each field. At the time EPA evaluated, but did not select, technology Option 7 (same as Option 2 plus prohibition of land application of manure to frozen, snow-covered, or saturated ground). The incremental costs and pollutant reductions from the 2003 CAFO rule analysis for this option for beef and dairy facilities are

presented in Table E.3. Today, EPA also presents the costs and conventional pollutant reductions of this technology option for swine facilities. To comply with this requirement at swine facilities, EPA has calculated the costs for additional storage capacity (up to six months additional storage in the Midwest and Mid-Atlantic regions; facilities in the Southern region were assumed not to need additional containment for manure storage over the winter). In all other respects, the cost models and model farms are the same as those used in the 2003 CAFO rule. EPA notes some incremental pollutant reductions from the production area occur as a result of this requirement due to a reduction in frequency of overflows from manure storage areas, and that minimal reductions occur from the land application areas because the technical standards and NMPs required by the 2003 CAFO rule, while not banning application of manure to frozen, snow covered and saturated fields outright, already address timing issues associated with application of manure. EPA did not identify any additional land application management practices that will result in additional reductions of pathogens.

(b) Do Any of These Technologies Pass the BCT Cost-Reasonableness Test?

In addition to other factors specified in Section 304(b)(4)(B), the CWA requires that EPA establish BCT limitations after consideration of a two part "cost-reasonableness" test. The "cost reasonableness" test evaluates "the reasonableness of the relationship between costs of attaining a reduction in effluent and the effluent reduction benefits derived, and the comparison of the cost and level of reduction of such pollutants from the discharge of POTWs to the cost and level of reduction of such pollutants from a class or category of industrial sources \* \* \*." EPA explained its methodology for the development of BCT limitations in July 1986 (51 FR 24974). In developing the BCT methodology, EPA was guided by legislative history of the Clean Water Act, in particular, Congress' concern that controls for conventional pollutants at levels more stringent than BPT were likely to be unreasonably expensive in some cases. The BCT methodology answers the question of whether it is "cost-reasonable" for industry to control conventional pollutants at a level more stringent than BPT already requires.

Establishing BCT effluent limitations for an industrial category or subcategory begins by identifying technology options that provide additional conventional pollutant control beyond

that provided by application of BPT effluent limitations. EPA evaluates the candidate technologies by applying the two-part BCT cost test. To "pass" the POTW test (the first part of the cost-reasonableness test), the cost per pound of incremental conventional pollutant removed in upgrading from BPT to the candidate BCT must be less than the cost per pound of incremental conventional pollutant removed in upgrading POTWs from secondary treatment to advanced secondary treatment. The second part of the test that the "candidate" BCT technology must pass is the industry cost-effectiveness test, discussed below.

Historically, EPA has evaluated the cost-reasonableness of each technology option on a subcategory basis. However, the candidate BCT technologies being evaluated for CAFOs vary significantly in costs and feasibility by animal type within a subcategory of CAFOs (Cost Methodology Report, EPA-821-R-03-004). For CAFOs, the specific candidate technologies are not universally applicable. If EPA were to evaluate each technology across a subcategory, there would not be any technology that could be applied to an entire subcategory to be evaluated, and EPA would conclude no technology exists that could be used to potentially establish BCT limitations more stringent than BPT. Therefore EPA has evaluated each candidate technology on a species-specific basis (the animal species for which the technology is believed to be technologically available). These species-specific results may then be assembled into candidate technology options that are practical for a subcategory. This provides a meaningful evaluation of cost-reasonableness for the entire subcategory, and is therefore both appropriate and necessary for applying the BCT cost reasonableness methodology to CAFOs.

As described in the 1986 BCT methodology, the two conventional pollutants used in calculating the POTW pollutant removal benchmark are BOD and TSS. As previously discussed, EPA relied primarily on sediment removals as an indicator of conventional pollutant reductions. The models available for simulating pollutant reductions from land application practices (GLEAMS, EPIC, and BASINS) do not measure BOD, and EPA was not able to quantify BOD loadings from land application in the 2003 CAFO rule. Runoff from land application areas contains BOD from manure and process wastewaters, but it also contains BOD from organic matter including background soil organic materials and crop residues. In contrast to crop

residues, manure BOD is highly sensitive to moisture and aerobic conditions, and quickly forms inorganic materials and nutrients after land application, as evidenced by significant off-gassing (odor) as the manure decomposes. (DCN 1-01230.) BOD deliveries to surface water are also highly variable, but current literature suggests the timing of land application in relation to future rainfall events is a key parameter.

Since the 2003 CAFO rule, models including WAM (Watershed Assessment Model) and WMM (Watershed Management Model) were developed that have some watershed level BOD modeling capability (for example, see "TMDLs for Nutrient, DO, and BOD for Delaney Creek," March 2005, DCN 1-01222). The data required for the WMM

model include: Area of all the land use categories and the area served by septic tanks; percent impervious area for each land use category; event mean concentration of runoff (EMC) for each pollutant type and land use category; percent EMC of each pollutant type that is in suspended form; and annual precipitation. The lack of data/literature to support estimation of national BOD loadings from land applied manure is a significant issue. EPA concludes the capability is still not available to model BOD runoff.

The 2003 CAFO rule prohibits dry weather discharges from land application areas, and the BPT land application requirements (including technical standards for timing, form, and rate of application, as well as the required vegetated buffer, setback, or

equivalent practices) already minimize discharges of BOD from land application areas. However, the reductions in BOD in runoff from land application areas, specifically the BOD attributable to manure and process wastewater, are minimal in comparison to production area discharges of BOD. Therefore EPA's load reductions for BOD include production area discharges (overflows and runoff from manure storage), but do not include land application. (See the TDD for discussion of EPA's modeling of overflows from the production area and runoff from land application areas; also see "Loads Report".) Table E.1 provides a summary of the costs and pollutant reductions of the 2003 CAFO rule BPT.

TABLE E.1.—2003 CAFO RULE BPT COSTS AND POLLUTANT REMOVALS

Sector	Annualized costs (\$2001, millions, pre tax)	BOD removed (million pounds)	TSS removed (million pounds sediment)	Total pounds removed (million pounds)
Beef .....	86	0	1201	1201
Dairy .....	128	0	99	99
Swine .....	25	0	113	113
Poultry .....	41	6	181	187

Table E.2 provides incremental costs and incremental pollutant removals of candidate technologies in relation to BPT. Incremental costs are the costs of the technology option minus the BPT

costs from Table E.1. Incremental load reductions are the pounds removed by the technology option minus the BPT load reductions from Table E.1. Total incremental reductions include BOD

and TSS. See Section D.1(c) of today's preamble for additional discussion of pathogens (fecal coliform) reductions.

TABLE E.2.—INCREMENTAL COSTS AND CONVENTIONAL POLLUTANT REMOVALS OF CANDIDATE TECHNOLOGIES

Candidate technology	Animal sector	Annualized cost of candidate technology option (\$2001, millions, pre-tax)	Incremental costs (\$2001, millions, pre-tax)	Incremental BOD removed (million pounds)	Incremental TSS removed (million pounds sediment)	Total incremental reductions (million pounds)
Ground water Controls <sup>1</sup> .....	Beef .....	231	145	0	0	0
	Dairy .....	316	188	0	0	0
	Swine .....	61	36	0	0	0
No Discharge .....	Swine .....	133	108	7	1	8
Composting .....	Beef .....	1,367	1281	3	25	28
	Dairy .....	277	149	1	7	8
	Poultry .....	508	467	0	0	0
Anaerobic Digestion .....	Dairy .....	505	377	2	9	11
	Swine .....	79	54	6	0	7
Land Application Timing Restrictions .....	Beef .....	112	26	0	0	0
	Dairy .....	318	190	2	7	9
	Swine .....	37	12	7	1	8

<sup>1</sup> Only reduced discharges to surface waters via a hydrologic connection are included in this analysis.

The POTW upgrade cost is referred to as the POTW benchmark; its derivation is described in the 1986 final BCT methodology notice (51 FR 24974). The upgrade cost to industry must be less

than the POTW benchmark of \$0.25 per pound (in 1976 dollars) or \$0.65 per pound (in 2001 dollars). Table E.3 provides the cost per pound of conventional pollutants (BOD and TSS)

removed by the candidate technology. (See the Addendum to the TDD, DCN 1-10227 for additional information on the POTW benchmark.)

TABLE E.3.—COST TEST PART ONE  
[POTW test results]

Candidate technology	Animal sector	Incremental cost per pound removed by technology (\$/lb)	POTW test result
Ground water controls .....	Beef .....	<sup>1</sup> NC	Fail.
	Dairy .....	NC	Fail.
	Swine .....	NC	Fail.
No discharge .....	Swine .....	13.55	Fail.
Composting .....	Beef .....	46.39	Fail.
	Dairy .....	17.84	Fail.
	Poultry .....	NC	Fail.
Anaerobic Digestion .....	Dairy .....	34.15	Fail.
Land Application Timing Restrictions .....	Swine .....	7.89	Fail.
	Beef .....	366.65	Fail.
	Dairy .....	20.90	Fail.
	Swine .....	1.55	Fail.

<sup>1</sup> Values were not calculated because no additional pollutant reductions to surface waters were expected for these options.

In all cases, the POTW benchmark is lower than the cost per pound of conventional pollutants removed by the candidate technology. Since the candidate technologies all fail the POTW cost test, the candidate technologies are not cost-reasonable. EPA notes that even though a candidate technology may be affordable for a subcategory, the candidate technologies must be cost-reasonable to be considered as a basis for setting BCT limitations.

EPA concludes that since all candidate technologies fail the POTW test for each species evaluated, any technology option developed for subcategories C or D utilizing a combination of these candidate technologies also fails the POTW test. In addition, EPA believes the results presented here for beef, dairy, swine, and poultry operations are reasonably extrapolated to veal calf operations (which are typically total confinement

operations like swine) and heifer operations (which use similar waste management technologies to beef feedlots). EPA notes veal calf and heifer operations comprise approximately two percent of all Large CAFOs. Once the candidate technology fails the POTW test, the candidate technology fails the cost-reasonableness test. The industry cost-effectiveness test (the second test for determining cost reasonableness) is only relevant if the POTW test (the first test) is passed. The following discussion of the industry cost-effectiveness test is provided today for completeness.

The second test that the candidate BCT technology must pass to be considered cost-reasonable is the industry cost-effectiveness test. To pass the industry cost test, EPA computes a ratio of two incremental costs. The first incremental cost is the cost per pound removed by the candidate technology relative to BPT. The second incremental cost is the cost per pound removed by

BPT relative to no treatment (*i.e.*, raw wasteload). As in the POTW test, the ratio of the first cost divided by the second cost is compared to an industry cost benchmark. The industry cost benchmark is the ratio of two incremental costs: The cost per pound to upgrade a POTW from secondary treatment to advanced secondary treatment is divided by the cost per pound to initially achieve secondary treatment. If the industry ratio is lower than the benchmark, then the candidate technology passes the cost test. The industry cost benchmark is 1.29 (see 51 FR 24974; also see the Pulp and Paper Final Rule Technical Development Document, EPA-821-R-97-011). Table E.4 shows the ratio of the incremental costs for the candidate technology options. (See Addendum to the TDD for additional information on the cost ratio calculations.)

TABLE E.4.—COST TEST PART TWO  
[Industry cost-effectiveness test results]

Candidate technology	Animal sector	Candidate technology cost ratio	Industry cost benchmark	Industry cost test result
Ground water controls .....	Beef .....	NC	1.29	Fail.
	Dairy .....	NC	1.29	Fail.
	Swine .....	NC	1.29	Fail.
No discharge .....	Swine .....	61.15	1.29	Fail.
Composting .....	Beef .....	647.70	1.29	Fail.
	Dairy .....	13.86	1.29	Fail.
	Poultry .....	NC	1.29	Fail.
Anaerobic digestion .....	Dairy .....	26.52	1.29	Fail.
	Swine .....	35.63	1.29	Fail.
Land Application Timing Restrictions .....	Beef .....	5,119.52	1.29	Fail.
	Dairy .....	16.23	1.29	Fail.
	Swine .....	6.99	1.29	Fail.

In all cases, the candidate technology's cost ratio is higher than the industry cost benchmark, and the technology would fail the second test. EPA concludes that since all candidate technologies fail the industry cost-effectiveness test for each species evaluated, any technology option developed for subcategories C or D utilizing a combination of these candidate technologies also fails the industry cost test for similar reasons described above.

(c) How Is EPA Evaluating Pathogens in Its BCT Cost Reasonableness Analysis?

As stated above, EPA establishes BCT effluent limitations for an industrial category or subcategory by identifying technology options that provide additional conventional pollutant control beyond that provided by application of BPT technologies. EPA evaluates candidate technologies by applying the two-part BCT cost test where one requirement is that the cost per pound of conventional pollutant removed in upgrading from BPT to the candidate BCT must be less than the cost per pound of conventional pollutant removed in upgrading POTWs from secondary treatment to advanced secondary treatment. The two

conventional pollutants used in calculating the POTW pollutant removal benchmark are BOD and TSS.

For the candidate technology's cost comparison, the 1986 BCT methodology describes the use of BOD and TSS, and also oil and grease when appropriate in the context of the industry and technology being evaluated. When the Agency promulgated the BCT methodology (including descriptions of how to apply the cost test), fecal coliform and pH were not included in the calculations because, unlike BOD and TSS, these pollutants were not measurable as "pounds removed." Section 304(b)(4)(B) authorizes EPA to consider other appropriate factors in establishing BCT. The 1986 methodology envisioned the need for adjustments to the BCT cost test methodology in future rulemakings to account for lack of comparable data or other industry-specific factors. (51 FR 24974, 24976 (July 9, 1986).) For CAFOs, where pathogen reductions are a factor to be considered, including fecal coliform for the determination of BCT cost reasonableness is an appropriate application of such flexibility.

The Second Circuit directed EPA to make an affirmative finding that the BCT-based ELGs adopted in the 2003

CAFO rule do in fact represent the best conventional pollutant control technology for reducing *pathogens*, specifically fecal coliform. Although fecal coliform is not typically used in BCT cost calculations, in light of the Second Circuit's direction and the flexibility inherent in the BCT methodology, EPA developed procedures to evaluate cost-reasonableness for fecal coliform removal for this industry. Therefore, today's proposal includes an additional set of cost comparisons to directly account for pathogens by specifically including fecal coliform, the only conventional pollutant that is a possible pathogen. EPA thus adds fecal coliform to the BCT determination, which is an appropriate adjustment to the BCT methodology for the CAFO industry. The proposed approach parallels the two-part cost-reasonableness test conducted above for pounds of conventional pollutants, but here, pounds of conventional pollutants is replaced by colony forming units (CFU) of fecal coliform. Table E.5 presents the costs and fecal coliform (FC) removals of the 2003 CAFO rule (BPT).

TABLE E.5.—2003 CAFO RULE BPT COSTS AND FC REMOVALS

Sector	Annualized costs (\$2001, millions, pre-tax)	FC removed (million CFU)
Beef .....	86	$10.56 \times 10^{13}$
Dairy .....	128	$0.97 \times 10^{13}$
Swine .....	25	$0.42 \times 10^{13}$
Poultry .....	41	$6.74 \times 10^{13}$

Table E.6 provides incremental costs and incremental fecal coliform (FC) removals of candidate technologies in relation to BPT. In this analysis, EPA has again evaluated the candidate technologies first on a species-specific

basis. These results may then be combined to form candidate technology options that can be used to conduct the cost-reasonableness test on a subcategory wide basis. Costs are the same as those presented in Table E.2.

Fecal coliform removals were determined using the 2003 CAFO rule methodology as described above in section E.3(a).

TABLE E.6.—INCREMENTAL COSTS AND FC REMOVALS OF CANDIDATE TECHNOLOGIES

Candidate technology	Animal sector	Incremental annualized cost (\$2001, millions, pre-tax)	Incremental FC removed (million CFU)
Ground water controls .....	Beef .....	145	<sup>1</sup> ND
	Dairy .....	188	ND
	Swine .....	36	ND
No discharge .....	Swine .....	108	$7.4 \times 10^{13}$
Composting .....	Beef .....	1281	$250 \times 10^{13}$
	Dairy .....	149	$30.4 \times 10^{13}$
	Poultry .....	467	$0.460 \times 10^{13}$
Anaerobic digestion .....	Dairy .....	377	$22.9 \times 10^{13}$
	Swine .....	54	$136 \times 10^{13}$
Land Application Timing Restriction .....	Beef .....	26	$0.560 \times 10^{13}$
	Dairy .....	190	$22.9 \times 10^{13}$

TABLE E.6.—INCREMENTAL COSTS AND FC REMOVALS OF CANDIDATE TECHNOLOGIES—Continued

Candidate technology	Animal sector	Incremental annualized cost (\$2001, millions, pre-tax)	Incremental FC removed (million CFU)
	Swine .....	12	$136 \times 10^{13}$

<sup>1</sup> Values were non-zero, but too small to report in the indicated units.

EPA needed to develop a new benchmark to use for this alternative POTW part of the BCT cost test which reflects the cost to reduce fecal coliform at a POTW. To do this, EPA first examined the costs of removal of fecal coliform at secondary and advanced secondary plants. EPA defined both secondary and advanced secondary plants in the same way as in the 1986 BCT cost methodology. Secondary plants are assumed to be activated sludge plants and advanced secondary plants are activated sludge plants with polymer addition. EPA reviewed the POTW costs presented in the July 9, 1986, **Federal Register** Notice, and confirmed that the costs reflect both chlorination and biological treatment (see 51 FR 24982). Performance data show that the majority of fecal coliform removal (90 to 98 percent) occurs during secondary treatment and is accomplished through removal of the biosolids. Disinfection, such as through chlorination or ultraviolet decomposition, is used as a polishing

step to reduce fecal coliform to below 200 CFU/100 mL. EPA concludes that the POTW benchmark must reflect the cost of biological treatment as well as a polishing step for disinfection.

Second, EPA evaluated the amount of fecal coliform removed at POTWs. EPA evaluated reported influent and effluent fecal coliform data reported by POTWs on their discharge monitoring reports (as assembled in EPA's Permit Compliance System). EPA determined, however, that there were insufficient influent data to develop a representative national influent concentration for fecal coliform. Therefore, EPA used reference data on typical domestic wastewater concentrations of fecal coliform (Metcalfe and Eddy, *Wastewater Engineering: Treatment, Disposal, and Reuse* (1991 3d ed.), DCN 1-01002.) EPA notes that the limited PCS influent data falls within the range of the domestic wastewater reference data. (See DCN 1-01002.)

Final effluent fecal coliform concentration from POTWs with secondary treatment was set at 200 CFU

per 100 mL (Ambient Water Quality Criteria for Bacteria, DCN 1-01004). EPA used data from EPA's Permit Compliance System to evaluate national effluent concentrations of fecal coliform from POTWs with advanced secondary treatment. The data shows those POTWs with advanced secondary treatment generally achieved fecal coliform effluent concentrations of 20 to 40 CFU/100 mL, with a median effluent of 21 CFU per 100 mL. (See DCN 1-01005.)

Finally, EPA estimated the benchmark cost to remove a trillion CFU per year for each of the five flow categories evaluated in the 1986 BCT cost methodology, and weighted the costs by total POTW flow for the category. The resulting incremental cost per trillion CFU removed was \$0.33 (2001). (See Addendum to the TDD for additional information on the POTW benchmark calculations.) Table E.7 shows the POTW test results using this fecal coliform POTW benchmark for conducting part one of the cost-reasonableness test.

TABLE E.7.—FECAL COLIFORM COST TEST PART ONE  
[POTW test results]

Candidate technology	Animal sector	Cost per trillion CFU removed by technology	POTW test result
Ground water controls .....	Beef .....	<sup>1</sup> NC1	Fail.
	Dairy .....	NC	Fail.
	Swine .....	NC	Fail.
No discharge .....	Swine .....	1.46	Fail.
Composting .....	Beef .....	0.51	Fail.
	Dairy .....	0.49	Fail.
	Poultry .....	101.44	Fail.
Anaerobic digestion .....	Dairy .....	1.64	Fail.
	Swine .....	0.04	Pass.
Land Application Timing Restrictions .....	Beef .....	4.58	Fail.
	Dairy .....	0.83	Fail.
	Swine .....	0.01	Pass.

<sup>1</sup> NC means not calculated.

For most sectors, the alternate POTW benchmark is lower than the cost per CFU removed by the candidate technology. In these cases, the candidate technologies fail the POTW test for fecal coliform. The remaining candidate technologies are assumed to pass the

POTW test and move on to the second cost test.

The second test that the candidate BCT technology must pass to be considered cost-reasonable is the industry cost-effectiveness test. As described previously, to pass the industry cost test, EPA computes a ratio of two incremental costs. In the

alternative cost test, the fecal coliform reductions are used in lieu of pounds of TSS and BOD. The first incremental cost is therefore the cost per trillion CFU removed by the candidate technology relative to BPT. This is divided by the cost per trillion CFU removed by BPT relative to no treatment (i.e., raw

wasteload). The industry cost benchmark is the ratio of two incremental costs: The cost per trillion CFU to upgrade a POTW from secondary treatment to advanced secondary treatment over the cost per

trillion CFU to initially achieve secondary treatment. If the industry ratio is lower than the benchmark, then the candidate technology passes the cost test. The industry cost benchmark is 0.04. Table E.8 shows the ratio of the

incremental costs for the candidate technology options and the results of the second test. (See Addendum to the TDD for detailed calculations of the industry cost benchmark.)

TABLE E.8.—COST TEST PART TWO

[Industry cost-effectiveness test results for the fecal coliform cost test]

Candidate technology	Animal sector	Candidate technology cost ratio	Industry cost benchmark	Industry cost test result
Anaerobic digestion .....	Swine .....	6.63	0.04	Fail.
Land Application Timing Restrictions .....	Swine .....	1.48	0.04	Fail.

In both cases, the industry cost ratio is higher than the benchmark. Therefore, none of the candidate technologies pass the industry cost-effectiveness test. Since all candidate technologies fail the BCT cost test for each species evaluated, any technology option developed for subcategories C or D utilizing a combination of these candidate technologies also fails the cost test. EPA notes the reductions in fecal coliform achieved by the candidate technologies (*i.e.*, greater than 99 percent fecal coliform removal in the case of digesters and composting) represent the upper bound attainable by any technology. Finally, EPA's record shows all candidate technologies would fail the second test even under EPA's sensitivity analyses that assume considerable cost-offsets and cost-sharing. (See Addendum to TDD for additional information on the sensitivity analysis for cost-offsets. EPA solicits comment on all of these data and analyses.)

**(d) What BCT Limitations Are Proposed Today?**

EPA found that the primary sources of discharges from CAFOs were production area overflows due to inadequate operation and maintenance of the infrastructure for containing and transporting liquid manure and wastewater, and discharges from the application area due to agriculturally improper application of manure, litter, and process wastewater. EPA previously concluded that the BPT standards requiring operation, maintenance, and record-keeping BMPs along with no discharge from the production area, and land application BMPs that require appropriate agricultural utilization of manure, litter, and process wastewater, significantly reduce water pollutant discharges, including pathogen loads.

The technologies already evaluated by EPA generally show high removals (99 percent) of conventional pollutants. In order to pass the cost-reasonableness

test, EPA believes any additional candidate technologies would need to show similar pollutant removals and significantly lower costs. EPA is also aware of technologies that may, on a site-specific basis, be used to provide further reductions of conventional pollutants. However, EPA's record shows these other technologies are not available engineering alternatives for most CAFOs, and they are therefore not technologically feasible candidates. (See Chapter 8 of the TDD and the docket accompanying today's proposal for descriptions of these additional technologies.) EPA further assumes variations of the technologies evaluated today (for example, plug-flow or complete mix anaerobic digesters versus activated sludge systems) will have comparable or higher costs and comparable pollutant reductions. Therefore, EPA concludes that variations of the candidate technologies evaluated today will not pass the cost-reasonableness test. EPA solicits comment on these findings.

In summary, EPA identified several candidate technologies that can potentially achieve greater removals of conventional pollutants than the BPT standards. EPA evaluated these candidate technologies by conducting the two-part cost reasonableness test. If any candidate technologies are feasible and pass both the POTW and the industry cost test, then the most stringent technology option among them becomes the basis for setting BCT effluent limitations. Alternatively, if no candidate technology more stringent than BPT passes, then BCT effluent limitations are set equal to BPT effluent limitations. Today EPA finds that all candidate technologies fail the cost-reasonableness test. EPA also finds that all candidate technologies fail the alternative cost-reasonableness test that is based on fecal coliform. Accordingly, EPA proposes BCT effluent limitations equal to the 2003 CAFO rule BPT limitations, and affirms that the 2003

CAFO rule BPT limitations do in fact represent the best conventional pollutant control technology. EPA solicits comment on all aspects of the cost-reasonableness analysis and the alternative cost test presented today.

**IV. Impact Analysis**

*A. Environmental Impacts*

When EPA issued the revised CAFO regulations on February 12, 2003, it estimated annual pollutant reductions for the rule at 56 million pounds of phosphorus, 110 million pounds of nitrogen, and two billion pounds of sediment. The new proposed rule will retain these environmental benefits since the technical requirements for facilities that discharge are not affected and all facilities will still need to control nutrient releases from the production and land application areas. The overall magnitude of the benefits will increase over 2003 due to growth in the industry, but the analysis for today's proposed rule does not recalculate these effects since the increase is not due to changes in the CAFO regulations.

The premise that environmental benefits are retained is based in large part on the assumption that facilities that do not apply for permits will, in fact, not discharge and will still manage wastewater, manure and litter appropriately at both production and land application areas. The preamble for the proposed rule makes clear that, although it is not necessary for a CAFO to be covered by an NPDES permit in order to qualify for the agricultural storm water exemption, it is the Agency's view that if a facility wants to claim that precipitation-related discharges from land-application areas are agricultural storm water runoff, the CAFO should be land-applying at agronomic rates that correspond to the requirements in 40 CFR 122.42(e)(1)(vi)–(ix) for land application.

The premise that benefits are retained is also based on the conventional modeling assumption of “full compliance,” which in this case involves assuming that all facilities that discharge will seek permit coverage. EPA is aware that the permitting history of CAFOs to date could be viewed as calling into question the validity of this assumption. At the time of the 2003 CAFO rule, current estimates indicated that only 4,000 CAFOs were permitted out of a total universe of approximately 13,000 CAFOs potentially covered under the pre-2003 CAFO regulations. (See the Technical Development Document for the 2003 rule, Chapter 9.) This difference was driven by two key factors. First, many operations claimed the 25-year, 24-hour storm exemption available under the old regulations. Second, many authorized States were at that point still developing their NPDES CAFO programs and were using a variety of mechanisms to control discharges from CAFOs.

The ongoing reporting on NPDES CAFO permitting completed by EPA since passage of the 2003 rule continues to augment information on CAFOs, and indicates that the number of permitted CAFOs is growing. Currently, EPA estimates that approximately 8,500 CAFOs are covered by NPDES permits. EPA plans to continue to work to ensure full NPDES coverage for discharging CAFOs by expanding its partnership with industry stakeholders.

EPA seeks comment on its assumptions regarding the benefits of the rule (no change from the 2003 rule).

#### B. Administrative Burden Impacts

Since there is no change in technical requirements, changes in impacts on respondents are estimated to result exclusively from changes in the information collection burden. To determine the administrative burden for the Paperwork Reduction Act (PRA) analysis for today's proposed rule, the Agency examined the two key permitting changes resulting from the *Waterkeeper* decision and how they would be implemented under the proposal. These two permitting features are the change in the duty to apply for CAFOs and the change to the NMP-related provisions for CAFO permits.

The 2003 CAFO rule had a universal duty to apply requirement which required virtually all CAFOs to obtain NPDES permit coverage. The supporting analysis for the rule estimated that as a result of this requirement, approximately 15,500 CAFOs would ultimately receive NPDES permits. (See the Technical Development Document for the 2003 rule, Chapter 9.) Today's

proposed rule changes the duty to apply requirement so that only CAFOs that discharge or propose to discharge would need to seek NPDES coverage. To derive the number of CAFOs that could ultimately fall into this category, EPA first estimated industry size for 2005 by projecting industry growth from the 2003 estimates using both USDA 2002 Census of Agriculture statistics as well as Agency-based sector expertise. This exercise yielded an estimate of approximately 18,800 total CAFOs for 2005. EPA then combined the 2005 projections for each animal sector with information on standardized operational profiles to anticipate the numbers of facilities as of 2005 that might experience discharges. For example, when inclement weather precludes land application or dewatering activities, open lot type facilities, such as beef lots and dairy operations, are more likely to experience conditions that could result in a discharge due to the use of open on-site lagoons common at many of these facilities. Additionally, EPA assumed that all dairies generate wastewater from the production area and generally have uncovered on-site lagoons. Thus, for purposes of burden estimates, EPA assumed that all dairies and most beef feedlots would apply for permits.

Even though the industry grew to roughly 18,800 CAFOs from 2002 to 2005 (an aggregate growth factor of approximately 22% due to industry expansion and the trend toward larger, more concentrated facilities), the change in the duty to apply requirement is anticipated to reduce the number of facilities needing permit coverage to approximately 14,000 CAFOs. Based on these updated figures, EPA estimates that approximately 25 percent fewer CAFOs would ultimately receive permits under today's proposed rule than under the requirements of the 2003 rule. These projections are discussed in more detail in documentation available in the public record for today's proposal.

These figures may overestimate CAFO NPDES permits in that they make conservative categorical assumptions about the likelihood of a discharge based on broad operational profiles and do not account for more subtle stratifications within specific operational categories. For instance, although most dairies generate washwater from the production area and have on-site lagoons, there do, in fact, exist dairies designed to be zero-discharge operations.

Using the CAFO universe numbers discussed above, EPA projects that CAFO operators will experience an aggregate administrative burden

reduction of nearly \$15.5 million annually as a result of the court decision to vacate the duty to apply requirement since fewer facilities will need to apply and submit the paperwork for NPDES permits. Similarly, permit authorities (“State respondents”) will experience a roughly \$5.2 million reduction in administrative burden due to the court decision to vacate the duty to apply requirement.

In contrast, the administrative burden impacts from the NMP-related changes made in response to the court ruling go up. EPA is revising the permitting process for both individual and general permits to ensure that CAFOs seeking permits submit their NMPs with their permit application. (NMPs were already required for all CAFOs under the 2003 rule.) EPA projects that facilities collectively would only experience a minimal increase in administrative burden—nearly \$111,000 for all facilities annually—as a consequence of this change. However, State permitting authorities would face a \$5.7 million annual increase in administrative burden as a result of the significant effort needed to review the NMPs for each permittee, arrange for public review and conduct public hearings if requested, respond to comments, and incorporate the terms of the NMP into the NPDES CAFO permit. For permit authorities, these costs would more than offset the burden reduction from the change in the duty to apply and the resulting decline in the number of CAFO permits.

Table 1 below summarizes the administrative burden changes expected to occur as a result of the proposed rule. Baseline A presents the costs to facilities and permitting authorities of implementing the 2003 CAFO rule as described above. In addition, Table 1 provides an illustration in Baseline B of the administrative burden costs in the absence of EPA's proposed rule. The permit processing burden (“duty to apply”) for State permitting authorities in this scenario would increase rather than decrease due to a lack of clarity on the appropriate permitting processes for implementing the court ruling. Specifically, under this baseline, EPA assumes that States would not be able to realize time savings from the use of general permits for CAFOs because of the Court's directive that CAFO permits include facility-specific terms of the CAFO's NMP. EPA instead used burden estimates associated with the individual permit process when costing the burden for CAFO permits under Baseline B. The proposed rule provides a mechanism for States to realize some time savings through the use of general permits while

still complying with the Court's directive.

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**Table 1: PRA Burden Impact Changes**

*Note: Numbers may not add due to rounding.*

		Baseline A: Total PRA Burden under 2003 CAFO Rule Requirements <sup>1</sup>	Baseline B: Total PRA Burden under 2005 Court Ruling (Proposed Rule not Promulgated)	Total PRA Burden Under Proposed Rule	Net Paperwork Burden <i>Change(Baseline A to Proposed Rule)</i>
<i>Permitting universe</i>		<i>All CAFOs need permits</i>	<i>CAFOs that discharge need permits</i>	<i>CAFOs that discharge need permits</i>	
Total CAFOs in 2005		18,800	18,800	18,800	--
CAFOs needing permits <sup>2</sup>		18,800	14,100	14,100	-4,700
Annualized Costs (\$000) <sup>3</sup>	CAFOs	Duty to Apply New NMP Provisions Total CAFO Burden	\$58.8 n/a \$58.8	\$43.3 \$0.1 \$43.4	\$43.3 \$0.1 \$43.4 -\$15.5 \$0.1 -\$15.4
	Permitting Authorities	Duty to Apply New NMP Provisions Total Permit Authority Burden	\$19.9 n/a \$19.9	\$20.7 \$5.7 \$26.4	\$14.7 \$5.7 \$20.4 -\$5.2 \$5.7 \$0.5
	All Respondents		\$78.7	\$69.8	\$63.8 -\$14.9

<sup>1</sup> 2003 baseline impacts adjusted to reflect 2005 labor rates, 2005 growth in facilities.

<sup>2</sup> Facility totals are annualized over 5 years in burden calculations presented in the table to reflect CWA requirement for NPDES permit renewal every 5 years.

<sup>3</sup> Annualized costs represent labor, capital and O&M costs.

Overall, under Baseline A as previously described, the administrative burden under the proposed rule (*i.e.*, the difference between Baseline A and the proposed costs of the proposal) is projected to decline to a total of approximately \$64 million, which constitutes a reduction of roughly \$15 million compared to the 2003 CAFO rule. This burden impact estimate accounts both for growth in the industry and changes in labor rates since the 2003 rule was issued. In addition, the changes are based on annualized impacts, and assume a permit term of five years as stipulated in the Clean Water Act. More documentation on the administrative burden impacts is available in the public record for today's proposal in the supporting documents for the Paperwork Reduction Act analysis.

## V. Cross Media Approaches

Since 2003, EPA and some stakeholders have been interested in developing a framework to enable CAFOs to pursue superior environmental performance across all media. We are aware that today some CAFOs voluntarily conduct whole-farm audits to evaluate releases of pollutants to all media through Environmental Management Systems, self-assessment tools, EPA's performance track, ISO 14001 certification, and state-approved trade offs in reducing discharges to water and emissions to air that accomplish the best overall level of

protection given state and local conditions. EPA continues to believe that the development of new and emerging technologies offers the potential to achieve equivalent or greater pollutant reductions relative to those achieved by the effluent guidelines and standards. Many of these are superior from a cross media perspective, and EPA would like to encourage superior cross media solutions. These regulations regarding nutrient management plans may provide a unique opportunity for EPA to encourage cross media approaches at CAFOs. For example, the nutrient value in the animal byproducts provides a valuable source of fertilizer for crops. However, inappropriate application can lead to preventable discharges to water and emissions to air. Optimal application technologies and rates reduce potential water quality and air quality standards violations.

EPA would like to take comment on the feasibility (including consideration of legal, technical, and implementation issues) of allowing flexibility in how facilities can meet various programmatic requirements, for instance those of the Clean Air Act and the Clean Water Act, in order to achieve greater cross-media pollutant reductions. We are interested in exploring this type of approach for both existing and new CAFOs.

EPA continues to believe the development of new and emerging technologies offers the potential to match or surpass the pollutant

reductions achieved by today's effluent guidelines and standards. EPA does not want to discourage approaches that are superior from a cross media perspective. Some CAFOs today voluntarily conduct whole-farm audits to evaluate releases of pollutants to all media. EPA plans to consider future opportunities and incentives for CAFOs to participate in such activities. We are not currently proposing such an approach through this action. The development of any such approach would proceed through future notice and comment rulemaking.

## VI. Statutory and Executive Order Reviews

### A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735 (October 4, 1993)) the Agency must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

1. Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

2. Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
3. Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
4. Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, OMB has notified EPA that it considers this a "significant regulatory action" within the meaning of the Executive Order. EPA has submitted this action to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

#### *B. Paperwork Reduction Act*

The information collection requirements in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document prepared by EPA has been assigned EPA ICR number 1989.03.

Under the 2003 rule, all CAFOs were required to apply for a permit and develop and implement a nutrient management plan. Today's proposed rule would reduce the universe of CAFOs that are subject to these requirements specifically to those CAFOs that discharge or propose to discharge.

Overall, the administrative burden under the proposed rule is projected to decline to a total of approximately \$64 million, which constitutes a reduction of approximately \$15 million compared to the 2003 CAFO rule. The overall labor burden decreases by 777,366 hours. Much of this burden reduction arises from the reduced burden to facility respondents—*i.e.*, those CAFOs subject to permitting. EPA estimates that these operations will experience an aggregate administrative burden reduction of nearly \$15.5 million annually (810,751 labor hours) as a result of the portion of the court decision that vacates the duty to apply requirement since fewer facilities will need to apply and submit the paperwork for NPDES permits. However, State permitting authorities would face an increase in administrative burden as a result of the significant effort needed to review the NMPs for each permittee, arrange for public review and conduct public hearings if requested, respond to comments, and incorporate the terms of the NMP into the NPDES CAFO permit.

This increase in burden to States offsets the burden reduction experienced by CAFOs, and is explained in more detail in Section IV of the impact analysis for today's proposal.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR Part 9.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this rule, which includes this ICR, under Docket ID number EPA-HQ-OW-2005-0037. Submit any comments related to the ICR for this proposed rule to EPA and OMB. See **ADDRESSES** section at the beginning of this notice for where to submit comments to EPA. Send comments to OMB at the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, Attention: Desk Office for EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after June 30, 2006, a comment to OMB is best assured of having its full effect if OMB receives it by July 31, 2006. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

#### *C. Regulatory Flexibility Act*

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies

that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's proposed rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration (SBA) at 13 CFR 121.201 size standards; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's proposed rule on small entities, I certify that this action will not have a significant adverse economic impact on a substantial number of small entities since the proposed rule involves a net burden reduction compared to the burden placed on facilities under the 2003 CAFO rule. Additionally, this proposed rule would not affect small governments as the permitting authorities are State or federal agencies. We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

#### *D. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the

Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this proposed rule would not contain a federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. The proposed rule would increase the burden to the States by \$502,000 (30,300 hours) annually, which reflects the fact that although States will need to process fewer permits, the effort associated with each permit is greater. The proposed rule would also decrease the burden to CAFO respondents by nearly \$15.4 million (807,659 hours) annually due to the smaller number of facilities that will need permits. In total, EPA estimates a net reduction of \$15 million annually (777,366 hours) in the information collection burden as a result of the proposed rule. Thus, today's proposed rule is not subject to the requirements of sections 202 and 205 of the UMRA. For the same reason, EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. Thus, today's proposed rule is not subject to the requirements of section 203 of UMRA.

#### *E. Executive Order 13132: Federalism*

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under section 6(b) of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. Under section 6(c) of Executive Order 13132, EPA may not issue a regulation that has federalism implications and that preempts State law, unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

EPA has concluded that this proposed rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. EPA estimates that the average annual impact on all authorized States together is \$502,000. EPA does not consider an annual impact of this magnitude on States to be a substantial effect. In addition, EPA does not expect this rule to have any impact on local governments.

Further, the revised regulations would not alter the basic State-federal scheme established in the Clean Water Act under which EPA authorizes States to carry out the NPDES permitting program. EPA expects the revised regulations to have little effect on the relationship between, or the distribution of power and responsibilities among, the federal and State governments. Thus, Executive Order 13132 does not apply to this rule.

Consistent with EPA policy, EPA nonetheless consulted with representatives of State governments early in the process of developing the proposed regulation to permit them to have meaningful and timely input into its development. Through a variety of meetings with State associations, States have been apprized of the issues related to addressing the court's decisions. States provided input during these meetings. State concerns generally focused on the process for incorporating NMPs into permits and the related public review process, and also on guidance related to what is a discharge from a CAFO given that the proposal would now require only those operations that have a discharge to apply for a permit. These concerns have been addressed in detail in this proposal

in such a way as to build in flexibility, yet accountability, for the new permit application requirements and review processes proposed herein today.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicits comment on this proposed rule from State and local officials.

#### *F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

Executive Order 13175, entitled, "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications."

This proposed rule does not have tribal implications. It will not have substantial direct effects on tribal governments, on the relationship between the federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to this rule.

In the spirit of Executive Order 13175, and consistent with EPA policy to promote communications between EPA and tribal governments, EPA specifically solicits additional comment on this proposed rule from tribal officials.

#### *G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks*

Executive Order 13045: "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be "economically significant" as defined under E.O. 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This regulation is not subject to Executive Order 13045 because it is not economically significant as defined under E.O. 12866, and because the Agency does not have reason to believe

the environmental health and safety risks addressed by this action present a disproportionate risk to children. The benefits analysis performed for the 2003 CAFO rule determined that the rule would result in certain significant benefits to children's health. (Please refer to the *Benefits Analysis* in the record for the 2003 CAFO final rule.) Today's action does not affect the environmental benefits of the rule.

**H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use**

This proposed rule is not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355 (May

22, 2001)) because it is not a significant regulatory action under Executive Order 12866.

**I. National Technology Transfer and Advancement Act**

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Pub. L. 104-113, Section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standard bodies. The NTTAA directs EPA to provide

Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

Today's proposal does involve the use of technical standards for land application of manure and elimination of discharges from the production area. However, the specific standards applicable to a specific operator are generally determined by the permitting authority on a State-wide or site-specific BPJ basis. EPA encourages the use by permitting authorities of voluntary consensus standards, such as those developed by USDA, in establishing the site-specific technical requirements in CAFO permits.

**BILLING CODE 6560-50-P**

**APPENDIX – FORM 2B**  
**NPDES Application Form for Concentrated Animal Feeding Operations (and**  
**Concentrated Aquatic Animal Production Facilities)**

<b>EPA I.D. NUMBER (copy from Item 1 of Form I)</b>		
<b>FORM 2B NPDES</b>	<b>EPA</b>	<b>U.S. ENVIRONMENTAL PROTECTION AGENCY APPLICATIONS FOR PERMIT TO DISCHARGE WASTEWATER CONCENTRATED ANIMAL FEEDING OPERATIONS AND AQUATIC ANIMAL PRODUCTION FACILITIES</b>
<b>I. GENERAL INFORMATION</b> Applying for: Individual Permit <input type="checkbox"/> Coverage Under General Permit <input type="checkbox"/>		
<b>A. TYPE OF BUSINESS</b>		<b>B. CONTACT INFORMATION</b>
<input type="checkbox"/> 1. Concentrated Animal Feeding Operation (complete items B, C, D, and Section II)  <input type="checkbox"/> 2. Concentrated Aquatic Animal Production Facility (complete items B, C, and section III)		Owner/or Operator Name: ..... Telephone: ( ..... ) ..... Address: ..... Facsimile: ( ..... ) ..... City: ..... State: ..... Zip Code: .....
		<input type="checkbox"/> 1. Existing Facility  <input type="checkbox"/> 2. Proposed Facility
<b>D. FACILITY INFORMATION</b>		
Name: ..... Telephone: ( ..... ) ..... Address: ..... Facsimile: ( ..... ) ..... City: ..... State: ..... Zip Code: ..... County: ..... Latitude: ..... Longitude: .....		
If contract operation: Name of Integrator: ..... Address of Integrator: .....		
<b>II. CONCENTRATED ANIMAL FEEDING OPERATION CHARACTERISTICS</b>		
<b>A. TYPE AND NUMBER OF ANIMALS</b>		<b>B. Manure, Litter and/or Wastewater Production and Use</b>
2. ANIMALS		1. How much manure, litter and wastewater is generated annually by the facility? ..... tons ..... gallons  2. If land applied how many acres of land under the control of the applicant are available for applying the CAFOs manure/litter/wastewater? ..... acres  3. How many tons of manure or litter, or gallons of wastewater produced by the CAFO will be transferred annually to other persons? ..... tons/gallons (circle one)
<b>1. TYPE</b>	<b>NO. IN OPEN CONFINEMENT</b>	<b>NO. HOUSED UNDER ROOF</b>
<input type="checkbox"/> Mature Dairy Cows		
<input type="checkbox"/> Dairy Heifers		
<input type="checkbox"/> Veal Calves		
<input type="checkbox"/> Cattle (not dairy or veal)		

<input type="checkbox"/> Swine (55 lbs. or over)			
<input type="checkbox"/> Swine (under 55 lbs.)			
<input type="checkbox"/> Horses			
<input type="checkbox"/> Sheep or Lambs			
<input type="checkbox"/> Turkeys			
<input type="checkbox"/> Chickens (Broilers)			
<input type="checkbox"/> Chickens (Layers)			
<input type="checkbox"/> Ducks			
<input type="checkbox"/> Other Specify .....			
3. TOTAL ANIMALS			

C.  TOPOGRAPHIC MAP

## D. TYPE OF CONTAINMENT, STORAGE AND CAPACITY

1. Type of Containment	Total Capacity (in gallons)
<input type="checkbox"/> Lagoon	
<input type="checkbox"/> Holding Pond	
<input type="checkbox"/> Evaporation Pond	
<input type="checkbox"/> Other: Specify .....	

2. Report the total number of acres contributing drainage: ..... acres

3. Type of Storage	Total Number of Days	Total Capacity (gallons/tons)
<input type="checkbox"/> Anaerobic Lagoon		
<input type="checkbox"/> Storage Lagoon		
<input type="checkbox"/> Evaporation Pond		
<input type="checkbox"/> Aboveground Storage Tanks		
<input type="checkbox"/> Belowground Storage Tanks		
<input type="checkbox"/> Roofed Storage Shed		
<input type="checkbox"/> Concrete Pad		
<input type="checkbox"/> Impervious Soil Pad		
<input type="checkbox"/> Other: Specify.....		

**E. NUTRIENT MANAGEMENT PLAN**

1. Has a nutrient management plan been developed for the facility and included with this permit application?  Yes  No
2. If no, when will the nutrient management plan be developed? Date: \_\_\_\_\_
3. Is a nutrient management plan being implemented for the facility?  Yes  No
4. The date of the last review or revision of the nutrient management plan. Date: .....
5. If not land applying, describe alternative use(s) of manure, litter and or wastewater:

**Note: Permit application is not complete until a nutrient management plan is submitted to the Permitting Authority.**

**F. LAND APPLICATION BEST MANAGEMENT PRACTICES**

Please check any of the following best management practices that are being implemented at the facility to control runoff and protect water quality:

Buffers  Setbacks  Conservation tillage  Constructed wetlands  Infiltration field  Grass filter  Terrace

**III. CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY CHARACTERISTICS**

A. For each outfall give the maximum daily flow, maximum 30- day flow, and the long-term average flow.			B. Indicate the total number of ponds, raceways, and similar structures in your facility.		
1. Outfall No.	2. Flow (gallons per day)		1. Ponds	2. Raceways	3. Other
	a. Maximum Daily	b. Maximum 30 Day	c. Long Term Average	C. Provide the name of the receiving water and the source of water	
			1. Receiving Water	2. Water Source	
D. List the species of fish or aquatic animals held and fed at your facility. For each species, give the total weight produced by your facility per year in pounds of harvestable weight, and also give the maximum weight present at any one time.					

1. Cold Water Species			2. Warm Water Species		
a. Species	b. Harvestable Weight ( <i>pounds</i> )		a. Species	b. Harvestable Weight ( <i>pounds</i> )	
	(1) Total Yearly	(2) Maximum		(1) Total Yearly	(2) Maximum
E. Report the total pounds of food during the calendar month of maximum feeding.			1. Month	2. Pounds of Food	
<b>IV. CERTIFICATION</b> .....					
<p><i>I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.</i></p>					
A. Name and Official Title ( <i>print or type</i> )			B. Phone No. ( )		
C. Signature			D. Date Signed		

## INSTRUCTIONS

<b>GENERAL</b>	<b>Item II-D</b> <ol style="list-style-type: none"> <li>1. Provide information on the type of containment and the capacity of the containment structure (s).</li> <li>2. The number of acres that are drained and collected in the containment structure (s).</li> <li>3. Identify the type of storage for the manure, litter and/or wastewater. Give the capacity of this storage in days.</li> </ol>
<p>For aquatic animal production facilities, the size cutoffs are based on whether the species are warm water or cold water, on the production weight per year in harvestable pounds, and on the amount of feeding in pounds of food (<i>for cold water species</i>). Also, facilities which discharge less than 30 days per year, or only during periods of excess runoff (<i>for warm water fish</i>) are not required to have a permit.</p>	<b>Item II-E</b>
<p>Refer to the Form 1 instructions to determine where to file this form.</p>	
<b>Item I-A</b>	
<p>See the note above and the General Instructions which accompany Form 1 to be sure that your facility is a "concentrated animal feeding operation" (CAFO).</p>	<b>Item II-F</b>
<b>Item I-B</b>	<p>Provide information concerning the status of the development and implementation of a nutrient management plan for the facility. In those cases where the nutrient management plan has not been completed, provide an estimated date of development and implementation. If not land applying, describe the alternative uses of the manure, litter and wastewater (e.g., composting, pelletizing, energy generation, etc.).</p>
<p>Use this space to give owner/operator contact information.</p>	
<b>Item I-C</b>	
<p>Check "proposed" if your facility is not now in operation or is expanding to meet the definition of a CAFO in accordance with the information found in the General Instructions that accompany Form 1.</p>	<b>Item III</b>
<b>Item I-D</b>	<p>Supply all information in Item III if you checked (2) in Item I-A.</p>
<p>Use this space to give a complete legal description of your facility's location including name, address, and latitude/longitude. Also, the if a contract grower, the name and address of the integrator.</p>	<b>Item III-A</b>
<b>Item II</b>	<p>Outfalls should be numbered to correspond with the map submitted in Item XI of Form 1. Values given for flow should be representative of your normal operation. The maximum daily flow is the maximum measured flow occurring over a calendar day. The maximum 30-day flow is the average of measured daily flow over the calendar month of highest flow. The long-term average flow is the average of measure daily flows over a calendar year.</p>
<p>Supply all information in item II if you checked (1) in item I-A.</p>	<b>Item III-B</b>
<b>Item II-A</b>	<p>Give the total number of discrete ponds or raceways in your facility. Under "other," give a descriptive name of any structure which is not a pond or a raceway but which results in discharge to waters of the United States.</p>
<p>Give the maximum number of each type of animal in open confinement or housed under roof (either partially or totally) which are held at your facility for a total of 45 days or more in any 12 month period. Provide the total number of animals confined at the facility.</p>	<b>Item III-C</b>
<b>Item II-B</b>	<p>Use names for receiving water and source of water which correspond to the map submitted in Item XI of Form 1.</p>
<p>Provide the total amount of manure, litter and wastewater generated annually by the facility. Identify if manure, litter and wastewater generated by the facility is to be land applied and the number of acres, under the control of the CAFO operator, suitable for land application. If the answer to question 3 is yes, provide the estimated annual quantity of manure, litter and wastewater that the applicant plans to transfer off-site.</p>	<b>Item III-D</b>
<b>Item II-C</b>	<p>The names of fish species should be proper, common, or scientific names as given in special Publication No. 6 of the American Fisheries Society, "A List of Common and Scientific Names of Fishes from the United States and Canada." The values given for total weight produced by your facility per year and the maximum weight present at any one time should be representative of your normal operation.</p>
<p>Check this box if you have submitted a topographic map of the of the entire operation, including the production area and land under the operational control of the CAFO operator where manure, litter and/or wastewater are applied with Form 1.</p>	<b>Item III-E</b>
	<p>The value given for maximum monthly pounds of food should be representative of your normal operation.</p>
<b>Item IV</b>	<b>Item IV</b>
	<p>The Clean Water Act provides for severe penalties for submitting false information on this application form.</p>
	<p>Section 309(C)(2) of the Clean Water Act provides that "Any person who knowingly makes any false statement, representation, or certification in any application...shall upon conviction, be punished by a fine of no more than \$10,000 or by imprisonment for not more than six months, or both."</p>

	<p><b>Federal regulations require the certification to be signed as follows:</b></p> <p>A. For corporation, by a principal executive officer of at least the level of vice president.</p> <p>B. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or</p> <p>C. For a municipality, State, federal, or other public facility, by either a principal executive officer or ranking elected official.</p> <p><b>Paper Reduction Act Notice</b></p> <p>The public reporting burden for this collection of information estimated to average 6 hours per response. The estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information to the Chief, Information Strategies Branch (2822T), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washington, D.C. 20460, and the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503, Attention: Desk Officer for EPA. Please refer to EPA ICR No. 1989.04 for additional information.</p> <p>****DRAFT 6/15/2005****</p>
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**BILLING CODE 6560-50-C****OMB No. 2040-0250****List of Subjects****40 CFR Part 122**

Administrative practice and procedure, Hazardous substances, Reporting and recordkeeping requirements, Water pollution control.

**40 CFR Part 412**

Feedlots, Livestock, Waste treatment and disposal, Water pollution control.

Dated: June 22, 2006.

**Stephen L. Johnson,**  
Administrator.

For the reasons set out in the preamble, chapter I of title 40 of the Code of Federal Regulations is proposed to be amended as follows:

**PART 122—EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

1. The authority citation for part 122 continues to read as follows:

**Authority:** The Clean Water Act, 33 U.S.C. 1251 *et seq.*

2. Section 122.21 is amended by revising the last sentence in paragraph (a)(1), and revising paragraph (i)(1)(x), to read as follows:

**§ 122.21 Application for a permit (applicable to State programs, see § 123.25).**

(a) \* \* \*

(1) \* \* \* The requirements for concentrated animal feeding operations

to seek coverage under an NPDES permit are described in § 122.23(d).

\* \* \* \* \*

(i) \* \* \*  
(1) \* \* \*

(x) A nutrient management plan that at a minimum satisfies the requirements specified in § 122.42(e)(1). In addition, the nutrient management plan for all CAFOs subject to 40 CFR part 412, subpart C or subpart D, must satisfy the applicable requirements of 40 CFR 412.4(c).

\* \* \* \* \*

3. Section 122.23 is amended by revising paragraphs (a), (d)(1), (d)(2), (f), and (g) and by removing paragraph (h) to read as follows:

**§ 122.23 Concentrated animal feeding operations (applicable to State NPDES programs, see § 123.25).**

(a) **Permit requirement for CAFOs.** Concentrated animal feeding operations, as defined in paragraph (b) of this section, are point sources. Once an operation is defined as a CAFO, the NPDES requirements for CAFOs that discharge or propose to discharge pollutants apply with respect to all animals in confinement at the operation and all manure, litter and process wastewater generated by those animals or the production of those animals, regardless of the type of animal.

\* \* \* \* \*

(d) \* \* \*

(1) **All owners or operators of a CAFO that discharges or proposes to discharge pollutants must apply for a permit.** All owners or operators of a CAFO that discharges or proposes to discharge pollutants must seek coverage under an

NPDES permit. Specifically, the CAFO owner or operator must either apply for an individual NPDES permit or submit a notice of intent for coverage under an NPDES general permit. If the Director has not made a general permit available to the CAFO, the CAFO owner or operator must submit an application for an individual permit to the Director.

(2) **Information to submit with permit application.** A permit application for an individual permit must include the information specified in § 122.21. A notice of intent for a general permit must include the information specified in §§ 122.21 and 122.28.

\* \* \* \* \*

(f) **When must the owner or operator of a CAFO seek coverage under an NPDES permit?** (1) **Operations defined or designated as CAFOs as of [the effective date of the final rule].** The owner or operator of a CAFO that discharges or proposes to discharge pollutants must seek to obtain coverage under an NPDES permit by a date specified by the Director, but no later than July 31, 2007.

(2) **Operations that become defined as CAFOs after [the effective date of the final rule], but which are not new sources.** For newly constructed AFOs that discharge or propose to discharge pollutants and AFOs that make changes to their operations that result in becoming defined as CAFOs for the first time, after [the effective date of the final rule], but are not new sources and that discharge or propose to discharge pollutants, the owner or operator must seek to obtain coverage under an NPDES permit, as follows:

(i) For newly constructed operations not subject to effluent limitations guidelines, 180 days prior to the time CAFO commences operation; or

(ii) For other operations (e.g., resulting from an increase in the number of animals), as soon as possible, but no later than 90 days after becoming defined as a CAFO.

(3) *New sources.* The owner or operator of a new source that discharges or proposes to discharge pollutants must seek to obtain coverage under a permit at least 180 days prior to the time that the CAFO commences operation.

(4) *Operations that are designated as CAFOs after [the effective date of the final rule].* For operations designated as a CAFO in accordance with paragraph (c) of this section, the owner or operator must seek to obtain coverage under a permit no later than 90 days after receiving notice of the designation.

(g) *Duty to Maintain Permit Coverage.* No later than 180 days before the expiration of the permit, or as provided by the Director, the permittee must submit an application to renew its permit, in accordance with § 122.21(d), unless permit coverage has been terminated consistent with § 122.64(b).

4. Section 122.28 is amended by adding a sentence before the last sentence of paragraph (b)(2)(iv), and by adding paragraph (d), to read as follows:

**§ 122.28 General permits (applicable to State NPDES programs, see § 123.25).**

\* \* \* \* \*

(b) \* \* \*

(2) \* \* \*

(iv) \* \* \* Except that CAFO owner or operators seeking coverage under a general permit must undertake the process described in paragraph (d) of this section. \* \* \*

\* \* \* \* \*

(d) *Concentrated animal feeding operations.* (1) The Director must review notices of intent submitted by CAFO owners or operators to ensure that the information meets the requirements of §§ 122.21(i)(1) and 122.42(e)(1) and to identify the terms of the nutrient management plan to be incorporated into the permit. When additional information is necessary to complete the notice of intent or clarify, modify, or supplement previously submitted material, the Director may request such information from the owner or operator. If the Director tentatively decides that the notice of intent meets the requirements of §§ 122.21(i)(1) and 122.42(e)(1), the Director must notify the public of its receipt and make it available for public review and comment along with the identified terms of the nutrient management plan

to be incorporated into the permit. The Director must specify by regulation or in the permit an appropriate period of time for the public to comment and request a hearing on the information submitted and the terms of the facility's nutrient management plan to be incorporated into the permit. The hearing and public comment process must follow the procedures for draft permits set forth in 40 CFR 124.11 through 124.13. The Director must respond to all significant comments received during the comment period, and, as appropriate, require the CAFO owner or operator to revise the terms of the nutrient management plan to be incorporated into the permit.

When the Director grants permit coverage to the CAFO owner or operator, the draft terms of the nutrient management plan, as revised by the Director, shall become incorporated as terms and conditions of the permit. The Director must notify the owner or operator of the terms and conditions that are incorporated into the permit.

(2) *For EPA-issued permits only.* Upon incorporation of the terms of the nutrient management plan into the general permit, any person who submitted comments or participated in the public hearing and who objects to the incorporation of the terms of the nutrient management plan into the permit may appeal the permit decision in accordance with the procedures of 40 CFR 124.19.

(3) Nothing in this paragraph (d) shall affect the authority of the Director to require an individual permit under paragraph (b)(3) of this section.

5. Section 122.42 is amended by revising paragraphs (e) introductory text and (e)(1) introductory text, and by adding paragraph (e)(5), to read as follows:

**§ 122.42 Additional conditions applicable to specified categories of NPDES permits (applicable to State NPDES programs, see § 123.25).**

\* \* \* \* \*

(e) *Concentrated animal feeding operations (CAFOs).* Any permit issued to a CAFO must include the requirements in paragraphs (e)(1) through (e)(4) of this section:

(1) *Requirements of a nutrient management plan.* Any permit issued to a CAFO must include and require the CAFO owner or operator to implement the terms of the most current version of a facility-specific nutrient management plan submitted in accordance with 40 CFR 122.21(i) that meets the requirements of this paragraph and the applicable effluent limitations and standards of 40 CFR 412.4(c). At a minimum, a nutrient management plan

must include best management practices and procedures necessary to implement applicable effluent limitations and standards, including, for CAFOs subject to 40 CFR part 412, subpart C or subpart D, the limitations and standards specified in 40 CFR 412.4(c). The nutrient management plan must, to the extent applicable:

\* \* \* \* \*

(5) *Changes to a CAFO Nutrient Management Plan.* (i) When a CAFO owner or operator changes a CAFO's nutrient management plan, the CAFO owner or operator must provide the permitting authority with the most current version of the CAFO's nutrient management plan and identify changes from the previous version. The Director must review the submitted information to ensure that it meets the requirements of 40 CFR 122.42(e)(1) and 40 CFR 412.4(c) of this chapter and decide whether to allow any changes to the terms of the nutrient management plan that have been incorporated into a permit issued to the CAFO. If the Director determines that the changes to the nutrient management plan are not substantial, the Director must include the revised NMP in the permit record and make any necessary revisions to the terms of the nutrient management plan incorporated into the permit. If the Director determines that the changes to the nutrient management plan are substantial, the Director must modify the permit to incorporate such changes in accordance with the procedures identified in paragraph (e)(5)(ii) of this section. The Director must notify the public of any changes to the terms of the nutrient management plan that are incorporated into the permit.

(ii) If the Director determines that the changes to the nutrient management plan are substantial, the Director must notify the public of the substantial changes; identify those changes to the terms of the nutrient management plan proposed to be incorporated into the permit; and make the proposed changes and the information submitted by the CAFO owner or operator available for public review and comment. The Director must specify by regulation or in the permit an appropriate period of time for the public to comment and request a hearing on the information submitted and the revised terms of the facility's nutrient management plan to be incorporated into the permit. The hearing and public comment process must follow the procedures for draft permits set forth in 40 CFR 124.11 through 124.13. The Director must respond to all significant comments received during the comment period,

and, as appropriate, require the CAFO owner or operator to further revise the terms of the nutrient management plan to be incorporated into the permit. Once the Director incorporates the revised terms of the nutrient management plan into the permit, the Director must notify the owner or operator of the revised terms and conditions of the permit.

(iii) *For EPA-issued permits only.* Upon incorporation of the revised terms of the nutrient management plan into the permit, any person who submitted comments or participated in the public hearing and who objects to the incorporation of the revised terms of the nutrient management plan into the permit may appeal the permit decision in accordance with the procedures of 40 CFR 124.19.

(iv) Substantial changes to a nutrient management plan include, but are not limited to: changes that could result in an increase in runoff of manure, litter, or process wastewater from the facility that would otherwise not occur under the terms of the nutrient management plan that were incorporated into the permit; an increase in the rate of nutrients from manure, litter, or process wastewater applied to the land application area that is significant in relation to the technical standards established by the Director; a significant change in the nutrient balance at the CAFO caused by an increase in the ratio of animals or manure, litter, or process wastewater to the available land application acreage or storage capacity; changes in the CAFO's methods for handling, storage, treatment, or land application of manure, litter, or process wastewater; a significant increase in the number of animals; or a significant reduction of manure, litter, or process wastewater transferred to other persons when there is no equivalent decrease in the amount of manure, litter, or process wastewater produced; and the addition of land application areas not previously included in the nutrient management plan.

(v) Upon request by a CAFO owner or operator to implement substantial changes to the nutrient management plan, the Director may allow an owner or operator to implement such changes before completion of the public notification procedures identified in paragraph (e)(5)(ii) of this section for no more than 180 days if the Director determines that the changes to a nutrient management plan will not result in increased runoff of manure, litter, or process wastewater from the CAFO. The Director must append such changes to the CAFO's permit and make them publicly available so that other persons have access to such

information. Appropriate notice to the public of such expedited decisions must take place within 14 days of the effective date.

6. Section 122.62 is amended by adding paragraph (a)(17) to read as follows:

**§ 122.62 Modification or revocation and reissuance of permits (applicable to State programs, see § 122.25).**

\* \* \* \* \*

(a) \* \* \*

(17) *Nutrient Management Plans.* The incorporation of the terms of a CAFO nutrient management plan into the terms and conditions of a general permit when a CAFO obtains coverage under a general permit in accordance with § 122.28(d)(1) is not a cause for modification pursuant to the requirements of this section.

\* \* \* \* \*

7. Section 122.63 is amended by adding paragraph (h) to read as follows:

**§ 122.63 Minor modification of permits.**

\* \* \* \* \*

(h) Incorporate changes to the terms of a CAFO's nutrient management plan that have been revised in accordance with the requirements of § 122.42(e)(5).

**PART 412—CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFO) POINT SOURCE CATEGORY**

8. The authority citation for part 412 continues to read as follows:

**Authority:** 33 U.S.C. 1311, 1314, 1316, 1317, 1318, 1342, 1361.

9. Section 412.2 is amended by revising paragraph (i) to read as follows:

**§ 412.2 General definitions.**

\* \* \* \* \*

(i) *Ten (10)-year, 24-hour rainfall event and 25-year, 24-hour rainfall event* mean precipitation events with a probable recurrence interval of once in ten years, or twenty five years, respectively, as defined by the National Weather Service in Technical Paper No. 40, "Rainfall Frequency Atlas of the United States," May, 1961, or equivalent regional or State rainfall probability information developed from this source.

\* \* \* \* \*

10. Section 412.37 is amended by revising paragraph (a)(2) to read as follows:

**§ 412.37 Additional measures.**

(a) \* \* \*

(2) *Depth marker.* All open surface liquid impoundments must have a depth marker which clearly indicates the minimum capacity necessary to contain the runoff and direct

precipitation of the 25-year, 24-hour rainfall event.

\* \* \* \* \*

11. Section 412.46 is amended by revising paragraphs (a)(1), (a)(2) and (d) to read as follows:

**§ 412.46 New source performance standards (NSPS).**

\* \* \* \* \*

(a) \* \* \*

(1) Any CAFO subject to this subpart may request that the Director establish NPDES permit best management practice effluent limitations designed to ensure no discharge of manure, litter or process wastewater based upon a site-specific evaluation of the CAFO's open surface manure storage structure. In the case of any CAFO using an open surface manure storage structure for which the Director establishes such effluent limitations, "no discharge of manure, litter, or process wastewater pollutants," as used in this section, means that the storage structure is designed, operated and maintained in accordance with best management practices established by the Director on a site-specific basis after a technical evaluation of the storage structure. The technical evaluation must include the following elements:

(i) Information to be used in the design of an open manure storage structure including but not limited to minimum storage periods for rainy seasons, additional minimum capacity for chronic rainfalls, applicable technical standards that prohibit or otherwise limit land application to frozen, saturated, or snow-covered ground, planned emptying and dewatering schedules consistent with the CAFO's Nutrient Management Plan, adequate storage capacity for manure intended to be transferred to another recipient at a later time, and any other factors that would impact the sizing of the open manure storage structure.

(ii) The design of the open manure storage structure as determined by the most recent version of the National Resource Conservation Service's Animal Waste Management (AWM) software. CAFOs may use equivalent design software or procedures as approved by the Director.

(iii) All inputs used in the open manure storage structure design including actual climate data for the previous 30 years consisting of historical average monthly precipitation and evaporation values, the number and types of animals, anticipated animal sizes or weights, any added water and bedding, any other process wastewater, and the size and condition of outside areas exposed to rainfall and

contributing runoff to the open manure storage structure.

(iv) The planned minimum period of storage in months. Alternatively the CAFO may indicate months when the storage pond will be emptied consistent with the CAFO's Nutrient Management Plan.

(v) Site-specific predicted design specifications including dimensions of the storage facility, daily manure and wastewater additions, the size and characteristics of the land application areas, and the total calculated storage period in months.

(vi) An evaluation of the adequacy of the designed manure storage structure using the most recent version of the Soil Plant Air Water (SPAW) Hydrology Tool. The evaluation must include all inputs to SPAW including but not limited to daily precipitation,

temperature, and evaporation data for the previous 100 years, user-specified soil profiles representative of the CAFO's land application areas, planned crop rotations consistent with the CAFO's Nutrient Management Plan, and the final modeled result of no overflows from the designed open manure storage structure. CAFOs may use equivalent evaluation procedures as approved by the Director.

(vii) Waste management and storage facilities designed, constructed, operated, and maintained consistent with the site-specific analysis conducted in paragraphs (a)(1)(i) through (a)(1)(vi) of this section and operated in accordance with the additional measures and records required by § 412.47(a) and (b), will fulfill the requirements of this section.

(2) The production area must be operated in accordance with the additional measures required by § 412.47(a) and (b).

\* \* \* \* \*

(d) Any source subject to this subpart that commenced discharging after April 14, 1993, and prior to [X# days from effective date of the final rule], which was a new source subject to the standards specified in § 412.15, revised as of [X# days from effective date of the final rule], must continue to achieve those standards for the applicable time period specified in 40 CFR 122.29(d)(1). Thereafter, the source must achieve the standards specified in § 412.43(a) and (b).

\* \* \* \* \*

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