



STATE REGULATION OF ANIMAL FEEDING OPERATIONS

Seven State Summaries

January 2003

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INTRODUCTION

In recent years, large animal feeding operations have come under intense scrutiny. The rise in numbers has occurred in a time of increased awareness of the effects of non-point source pollution. Regional initiatives, such as the Chesapeake Bay Program, have focused in part on the non-point pollution caused by animal feeding operations (AFOs). Environmental catastrophes, such as the North Carolina hog farm spillage in the wake of Hurricane Floyd, have served to increase the spotlight on large concentrated animal feeding operations (CAFOs). The regulatory climate surrounding such operations has thus recently been in flux, as states, as well as the federal government, have sought to address the problems posed by this industry.

Since 1972, the federal Clean Water Act (CWA) has regulated large livestock operations as point sources. National Pollutant Discharge Elimination System (NPDES) permits are required for “concentrated animal feeding operations... from which pollutants are or may be discharged” into surface waters of the United States. 33 U.S.C. § 1362(14); § 1342(a)(1). States are free to impose additional requirements on CAFOs, and to regulate more conduct and more types of operations than those governed by the federal NPDES requirements. Many states regulate AFOs and CAFOs of various sizes and descriptions under state laws and programs, some of which operate independently of their NPDES program. EPA notes that over 45,000 state authorizations and permits of various kinds have been issued to AFOs and CAFOs through non-NPDES state programs. 66 Fed. Reg. 2969 (Jan. 12, 2001). State programs, both related to and independent of the NPDES program, are the subject of this report. All the states in this report have been delegated authority by the Environmental Protection Agency (EPA) to administer this CWA permitting program.

Seven states are analyzed in this report: Alabama, Arkansas, Illinois, Indiana, Maryland, Nebraska, and Oregon. The state summaries identify what facilities and operations are regulated, how they are regulated, what regulatory standards apply, and how compliance with standards is monitored and enforced. The summaries each have seven sections:

- Primary applicable laws and responsible governmental authority
- Permits and thresholds
- Permit overview
- Siting and design requirements
- Nutrient/manure management planning
- Liability and enforcement
- Other related provisions

Several of these sections are further divided into subsections.

This study does not examine how state AFO and CAFO laws operate in practice. Rather the state studies highlight relevant legal provisions as they exist “on paper.” The intent is to provide a reader-friendly breakdown of each state’s AFO and CAFO laws. This report should provide its readers a reasonably accurate look at each state’s regulatory approach and standards in a manner which promotes comparative assessments and increases general knowledge of state approaches to the regulation of animal feeding operations.

ALABAMA

I. PRIMARY APPLICABLE LAWS AND RESPONSIBLE GOVERNMENT AUTHORITY

The *Alabama Water Pollution Control Act*, Code of Alabama (COA) 22-22-1, et seq., is administered by the Alabama Department of Environmental Management (ADEM). The regulations for the general NPDES program (which includes concentrated animal feeding operations), as administered by ADEM, are found in Alabama Administrative Code (AAC) 335-6-6. However, the specific regulations that apply to all animal feeding operations, including concentrated animal feeding operations, are found in AAC 335-6-7. Portions of the laws pertaining to Soil and Water Conservation Districts, COA 9-8-20 to 9-8-32, and Watershed Conservation Districts, COA 9-8-50 to 9-8-67, also apply to animal feeding operations.

II. PERMITS AND THRESHOLDS

A “CAFO,” for the purposes of Alabama’s regulatory scheme, is an AFO subject to the 40 CFR 122.23 National Pollutant Discharge Elimination System (NPDES) permitting requirements that meets any of the following requirements: has 1000 animal units (AU); has 300AU and discharges or has had a discharge since April 1, 1999 into waters of the State “through a man-made ditch, flushing system, other similar man-made devices, or improper handling, storage, transport, distribution, or land application of wastes”; has at least 100AU and is located in formally designated priority watershed or stream segment; any AFO that has been designated by ADEM following an on-site inspection as a significant contributor or potential significant contributor of pollution or has caused or contributed to a violation of an applicable Water Quality Standard; any active or inactive AFO that has not been properly closed and has discharged into a water of the State; an AFO which has discharges into a water of the State due to bypass or upset conditions; or any AFO with a liquid waste management system which has not implemented and maintained a Waste Management System Plan (WMSP) and an associated land application plan which meets or exceeds NRCS technical standards and guidelines. AAC 335-6-7-.10(4).

All CAFOs must submit a “Notice of Registration” (NOR). AAC 335-6-7-.13(1)(b). No new or proposed CAFO (i.e. since April 1, 1999) may be constructed or operated unless the owner/operator has an approved NOR from ADEM. AAC 335-6-7-.10(1), 335-6-7-.13(1)(b). An AFO that intends to expand into a CAFO must also submit a new or modified NOR to ADEM at least 30 days prior to the initiating construction and at least 45 days prior to commencing operations. AAC 335-6-7-.13(1)(c). Construction or operation of CAFO facilities by owner/operators who have not submitted a Notice of Registration (NOR) for coverage under a valid NPDES Registration, or general or individual permit, is prohibited. AAC 335-6-7-.04(3).

The requirements of AAC 335-6-7 are also applicable to all AFOs, however, AFOs that are not CAFOs are not required to apply and obtain a Registration from ADEM (although ADEM may require any AFO to register or obtain an NPDES General or Individual permit). AAC 335-6-7-.03(2), 335-6-7-.03(3),(4). The standards of AAC 335-6-7 are also applicable to “the construction, operation, maintenance, repair, and closure of cattle, swine, poultry, fowl, dairy, stockyard, auction

or buyer yards, farms, facilities, or operations, and any other AFOs or facilities with wild or domesticated animals designated by the Director or his designee, and their associated waste management and land application systems located wholly or partially within the State of Alabama.” AAC 335-6-7-.03(1). An owner/operator of an AFO not registered under AAC 335-6-7 must obtain a NPDES construction notification, registration, or a general or individual permit prior to commencing any construction, land disturbance, etc. that affects at least 1 acre of land. AAC 335-6-7.07(3). As of September 2001, Alabama had registered approximately 298 operations, with another 35 operation whose registration approvals were pending.

Registrations expire after one year and must be renewed (along with the appropriate fee) annually. AAC 335-6-7-.09(3),(4). Registrants must notify ADEM in writing and submit a revised NOR whenever there is a change in “operational procedures.” AAC 335-6-7-.09(7)(a), 335-6-7-.10(3). For “major modifications,” the registrant must request in writing an ADEM modification of the registration and include the appropriate registration fee. AAC 335-6-7-.09(7)(b). Major modifications include an increase in the number of animals which would place the facility in a higher animal unit fee category or any significant change in waste treatment, handling or disposal. AAC 335-6-7-.09(7)(b). For “minor modifications,” the registrant must notify ADEM in writing and document within 30 days of the change that the WMSP has been properly updated. AAC 335-6-7-.09(7)(c). Minor modifications include: a change in approved land application sites; any non-significant change in waste treatment, handling or disposal; or entering or canceling a written contract with a Certified Animal Waste Vendor (CAWV). AAC 335-6-7-.09(7)(c). ADEM may require the owner/operator to provide construction plans and specifications, amend plans of operation, or provide any other required information. AAC 335-6-7-.09(7)(d). AFOs that become “inactive, idle, or closed, that have not registered and do not confine greater than 50 animal units during any 36 month period” will be considered an “expanding facility” (not an “existing facility”) when they resume operations with at least 50AU. AAC 335-6-7.20(27).

ADEM may deny an application or terminate a registration “for any relevant factors it deems appropriate.” AAC 335-6-7.07(4). Registration under AAC 335-6-7 constitutes NPDES permit coverage under AAC 335-6-6; and except as otherwise noted, registrants must comply with all provisions of both programs. AAC 335-6-7-.07(1). ADEM may require a modification of registration if it determines that it is necessary to assure maintenance of State Water Quality Standards or compliance with other provisions of the AAPCA, AWPCA, or the CWA. AAC 335-6-7.32(9)(c). ADEM may also require any registered CAFO to obtain an Individual NPDES permit [under AAC 335-6-6 and 40 CFR 122.28(b)(2)(i)]. AAC 335-6-7.07(1). ADEM may require an individual permit if it determines that a discharge under a registration “causes or contributes to a violation of State Water Quality Standard(s) or stream use classification.” AAC 335-6-7.32(9)(a). When an Individual NPDES permit or General permit is issued to an owner/operator subject to AAC 335-6-7, the applicability of AAC 335-6-7 to the registrant is automatically terminated. AAC 335-6-7.07(2). The Individual or General NPDES permit coverage of an AFO/CAFO must contain at least the same design and operational considerations as described in AAC 335-6-7. AAC 335-6-7.07(3).

Full implementation and regular maintenance of Best Management Practices (BMPs) is required for registration. AAC 335-6-7.21(2). All AFOs are required to implement and maintain BMPs; and all CAFOs must do so in accordance with an approved Waste Management System Plan (WMSP). AAC 335-6-7-.21(1). The BMPs must be acceptable to ADEM and meet the requirements of AAC 335-6-7, the NRCS technical standards and guidelines (including the NRCS

Comprehensive Nutrient Management Plan guidelines), the Alabama Water Pollution Control Act (AWPCA), and the Clean Water Act (CWA). AAC 335-6-7-.21(1), 335-6-7-.02(I).

III. PERMIT OVERVIEW

Public notice/review. There are no notice and comment provisions outside of those required by the NPDES program. However, except as otherwise provided, all records, reports, and information obtained under AAC 335-6-7 are available to the public through ADEM. AAC 335-6-7-.16(2).

Site, design, and construction requirements. “All AFOs, regardless of size or registration status... shall fully implement and regularly maintain comprehensive waste management system Best Management Practices (BMPs) to the maximum extent practicable which meet or exceed NRCS technical standards and guidelines to prevent and minimize discharges of pollution during construction and operation.” AAC 335-6-7-.04(1). An AFO waste management system may not be constructed, modified, repaired, or placed into operation after April 1, 1999 unless it meets or exceeds NRCS technical standards and guidelines as well as Alabama Water Pollution Control (AWPCA) and Clean Water Act (CWA) requirements. AAC 335-6-7.20(1).

AFO and CAFO activities pertaining to new well siting and construction, new or existing well operation and maintenance, and waste management activities must meet the requirements of AAC 355-6-7, the Alabama Air Pollution Control Act (AAPCA), the Alabama Water Pollution Control Act/WPCA, the Clean Water Act, the NRCS Field Office Technical Guidelines and standards, and “other approved technical publications and documents as amended...” AAC 335-6-7-.20(3). . Waste management Aactivities subjected to these requirementsstandards include, but are not limited to, “structural designs, system plans, waste storage, handling, and transport, nutrient management, land application, dead animal disposal including incinerator and freezer siting and operation, waste product disposal, construction erosion and sediment control BMPs, spill prevention control and countermeasures (SPCC) BMPs, other necessary BMPs required for good housekeeping, and implementation of waste management practices for AFOs and CAFOs.” AAC 335-6-7.20(3). If these standards, when implemented, are still inadequate in protecting water and air quality, then the AFO owner/operator should take appropriate and timely measures to “shall implement, within timeframes required by [ADEM], additional effective structural and nonstructural management practices necessary to adequately protect water quality and/or reduce the generation of odors to the maximum extent practicable.” AAC 335-6-7.20(4).

Manure management plan. All AFOs’ waste management system BMPs must meet or exceed NRCS technical standards and guidelines. AAC 335-6-7.20(20). All CAFO owner/operators must also implement and maintain an approved Waste Management System Plan (WMSP) and submit a formal certification/evaluation as required by AAC 335-6-7. AAC 335-6-7-.20(2). The WMSP must be prepared by a Qualified Credentialed Professional (QCP) with the NOR prior to the construction and operation of a new CAFO, or any additional facilities at an existing CAFO, or as otherwise required by ADEM. AAC 335-6-7.26(1). The WMSP must meet or exceed NRCS technical standards and guidelines. AAC 335-6-7.20(20). CAFOs may not “expand operations, either in size or numbers, change land application procedures or areas, or implement significant change in waste treatment, handling or disposal... unless the approved WMSP has been revised to meet or exceed NRCS technical standards and guidelines for the expanded/modified operations, and implementation of the approved, revised WMSP has been certified by the QCP.” AAC 335-6-

7.25(2)(o). In addition, such expansion may not occur until the waste handling and land application procedures and structures have been modified to accommodate the additional generated waste. AAC 335-6-7.25(2)(p). Alternative or innovative waste management technology or procedures not contained in NRCS technical standards and guidance documents may be used by AFOs if approved by ADEM, provided that it is specifically approved for the particular use by the NRCS (or other specified agency); and that it will not result in the pollution of State waters . AAC 335-6-7.22.

Financial assurance. Alabama does not have a financial assurance program.

Permit fee. CAFO registrants must determine and pay an annual registration fee according to 335-1-6 - Fee Schedule D (Water Permits/Registration, CAFO) and have the said fee approved by ADEM. AAC 335-6-7-.12(1). Registrants must also pay a modification fee according to Chapter 335-1-6 - Fee Schedule D (Water Permits/Registration, CAFO), which also must be approved by ADEM. Payment of the appropriate modification fee is due with submittal of the request to modify the existing NOR. A modification fee is required if there is: a change in the name of registrant; a change in the ownership or operational control of the facility; an increase in the number of animal units which would place the facility in a higher fee category; or “a significant change in waste treatment, handling or disposal.” AAC 335-6-7-.12(2).

IV. SITING AND DESIGN REQUIREMENTS

Setback requirements (including property lines, dwellings, waterways, etc). Waters of the state and “flowing surface waters” may not come into direct contact with animals or waste generated by a AFO facility, “except as provided by NRCS technical standards and guidelines, the requirements of [AAC 335-6-6], the requirements of the AWPCA, CWA, and regulations promulgated pursuant thereto.” AAC 335-6-7.25(1)(a). The location of all AFO confinement buildings and waste containment structures must also meet those same standards and requirements. AAC 335-6-7.20(10). Alternate or modified buffer distances must be approved by ADEM. AAC 335-6-7.20(26). New liquid waste containment structures may not be constructed within 100 feet of a stream; 500 feet from a potable water well; 200 feet from a perennial non-headwater watercourse, or PWS, ONRW, or OAW classified/designated waters; 1320 feet from an occupied dwelling, church, school, hospital, or park (660 feet if built at an existing AFO); and the following distances to a property line: 500 feet (if <100AU); 1320 feet (1000-2499AU); 2640 feet (2500-3999AU); 5280 feet (4000AU or more). AAC 335-6-7.20. New dry waste-only facilities must be 330 feet from a dwelling and 165 feet from a property line. AAC 335-6-7.20(5)(a),(6)(a). No well may be constructed within 100 feet of any confinement or waste structures (and a greater distance may be required by the NRCS standards or ADEM on a case-by-case basis). AAC 335-6-7.20(9).

The location buffer distances above do not apply to AFOs existing prior to April 1, 1999 or to AFOs existing as of April 1, 1999 when a registration modification is required due to a change in ownership. AAC 335-6-7.20(12). AFO operations existing as of April 1, 1999 that propose to construct/expand a waste containment structure are exempt from the buffer distances if ADEM determines that the structure is necessary to assure the protection of water quality and that there is not a feasible location alternative. AAC 335-6-7.20(11). Location buffer distances do not apply to properly constructed AFO structures after April 1, 1999, so long as they are “completed, replaced, repaired, modernized, reconstructed, and/or refurbished on the pre-existing site/location according to NRCS technical standards and guidelines to pre-existing size and operational status provided the

resultant [structure] is no closer to the nearest existing occupied dwelling, church, school, hospital, park, intermittent streams, ponds, lakes, springs, or sinkholes, or PWS, ONRW, or OAW classified/designated waters, wells, and water supplies, or property line than it was prior to the work.” AAC 335-6-7.20(14),(15). Location buffer distances from an occupied dwelling, church, school, hospital, park, or property line also do not apply if: the dwelling, et al. is owned by AFO owner/operator; the adjoining property owner consents in writing; the adjoining property has a deed restriction notifying the owner of the possibility of nearby AFOs; or “the area is specifically zoned for the construction and operation of CAFOs by the controlling elected governmental authority.” AAC 335-6-7.20(13).

Geophysical, land, and soil requirements. New, modified, or expanded AFO facilities “may not be built in or over a surface water of the State or in or over specific sites with direct hydrologic connection to groundwater.” AAC 335-6-7.25(2)(b). Confinement and waste containment facilities “may not be located in the 100-year flood plain unless the facility is constructed, maintained, and effectively protected from inundation and damage that may occur during that flood event.” AAC 335-6-7.25(2)(g). Prior to the construction of any earthen storage or containment structure, the owner/operator must perform a subsurface investigation “under the supervision of and certified by a QCP.” AAC 335-6-7.20(18). The investigation must extend at least two feet below the planned bottom grade and “may consist of auger holes, dozer pits, or backhoe pits at a depth to the extent necessary to determine adequacy of the specific site for waste storage.” AAC 335-6-7.20(18). “Subsurface investigation in soils underlain by the Demopolis or Mooreville Chalk formations of the Selma Chalk group in the Blackland Prairie major land resource area may terminate at a depth of 1 foot below the surface of the chalk.” AAC 335-6-7.20(18). Prior to the construction of any earthen storage or containment structure in karst topography, an owner/operator must complete “a detailed, comprehensive geologic investigation for suitability of the site that meets or exceeds NRCS technical standards and guidelines.” AAC 335-6-7.20(18). If the on-site subsurface investigation tests are inconclusive, “the owner/operator shall conduct additional subsurface investigations as necessary and provide documentation certified by a QCP to ensure conformance with NRCS technical standards and guidelines or other additional standards required by [ADEM] to ensure the protection of water quality.” AAC 335-6-7.20(18).

Government site review/appraisal. Owners/operators of CAFOs who intend to, are required to, or have obtained NPDES permit coverage must submit to ADEM a certification/evaluation from by a QCP assuring that the facility has been properly designed, constructed, or updated, and “can reasonably be operated in accordance with an approved WMSP that meets or exceeds NRCS technical standards and guidelines and as required” by AAC 335-6-7 and ADEM. AAC 335-6-7-.13(2). New and proposed CAFOs must submit the required certification at least 15 days prior to commencing operations. AAC 335-6-7-.13(2)(a).

Storage capacity limits/requirements. All AFOs must meet ADEM, NRCS, and ADPH standards for the proper collection, management, storage, treatment, transportation, and disposal of domestic sewage and wastewater. AAC 335-6-7.20(19),(23), 335-6-7.26(2)(h). All AFOs must “implement effective management procedures to the maximum extent practicable” to keep dry wastes under a roof or cover. AAC 335-6-7.20(21). All AFO lagoons and waste containment facilities must be designed, constructed, operated, and maintained to ensure sufficient storage volume to contain all wastes and wastewaters, contaminated rainfall from open lots and associated areas, and stormwater under a 25year/24hour storm event standard. AAC 335-6-7.20(22), 335-6-7.25(2)(a). All such facilities must also maintain at least 12 inches of freeboard. AAC 335-6-

7.20(22). “Storage/treatment of manure or wastewater in the 100-year flood plain is prohibited unless storage/treatment structure is constructed, maintained, and effectively protected in a manner that meets or exceeds NRCS technical standards and guidelines to prevent inundation, damage for that flood event, or discharge to waters of the State.” AAC 335-6-7.26(2)(f). The construction of new or expanded manure storage pits or ponds is prohibited unless ADEM approves the owner/operator’s written affirmative demonstration that it protect water quality. AAC 335-6-7.20(25). All new AFOs and CAFOs, and all AFOs and CAFOs as of January 1, 2003, in the NRCS-designated North Alabama Area must maintain a minimum 180 days storage capacity prior to commencing initial operation and/or expanded operations. AAC 335-6-7.20(24)(a). All AFOs and CAFOs (as of January 1, 2003) in the NRCS-designated South Alabama Area must maintain a minimum 120 days storage capacity prior to commencing initial operation and/or expanded operations. AAC 335-6-7.20(24)(a).

Technical Standards. Waste/wastewater operating levels in waste control facilities must be in accordance with an approved WMSP that meets or exceeds NRCS technical standards and guidelines. AAC 335-6-7.25(2)(c). Documentation that supports the requirements that apply to the operation and maintenance of waste control facilities must be included in the WMSP. AAC 335-6-7.25(2). Such documentation includes a Spill Prevention, Control, and Countermeasures Plan (SPCC Plan), which must be certified by a professional engineer registered in Alabama. AAC 335-6-7.25(2)(l), 335-6-7-.02(rr), 335-6-3.04. The plan includes measures to prevent, control, and clean up spills for fuel, oil, chemical and other potential pollutants of State waters. AAC 335-6-7-.25(2)(l); USDA NRCS SPCC Plan for AFOs, AL-ENG-51 (Nov. 2002). The net freeboard on any settling basin, lagoon, waste storage pond, sumps, or holding pond must also meet or exceed NRCS technical standards but in no case may it be less than 12 inches. AAC 335-6-7.25(2)(d). AFOs located in the drainage area of a municipal separate storm sewer system or a publicly/privately owned treatment works (POTW), must comply with the applicable municipal or POTW NPDES permit requirements. AAC 335-6-7.25(2)(m),(n).

Government approval of plans. All CAFOs must be operated under a NOR, or General or Individual Permit approved by ADEM. AAC 335-6-7-.13(1); 335-6-7-.04(3).

Monitoring requirements. While non-CAFO AFOs are not required to maintain or submit any additional records (unless required in writing by ADEM), all AFOs, regardless of size or registration status, must maintain adequate records, available to ADEM upon request, that document their compliance with 335-6-7, and ensure that the facility “has implemented best management practices that meet or exceed NRCS technical standards and guidelines, that has not discharged, or that is not otherwise required to register.” AAC 335-6-7-.04(1), 335-6-7-.14(13). All AFO owners/operators must therefore “regularly inspect and evaluate their facility(s) to ensure compliance with provisions of [AAC 335-6-7]”. AAC 335-6-7-.04(2). All records must be at the facility and immediately available for ADEM inspection; or at a readily available alternative site which provides for an ADEM inspection upon request. AAC 335-6-7-.14(2). Copies of all required records must be maintained for at least 3 years. AAC 335-6-7-.14(8). All registrants must designate in writing all individual(s) responsible for inspections and record keeping. AAC 335-6-7-.14(3). Except for confidential data, all required reports are available for public inspection at ADEM’s Montgomery offices or through other ADEM appropriate procedures. AAC 335-6-7-.14(9). All CAFO owners/operators and registrants must also develop, maintain and implement an appropriate schedule for routine preventive maintenance program with a corresponding maintenance log. AAC 335-6-7.29. The preventive maintenance program must involve the “inspection and maintenance of

all runoff management devices (cleaning separators, catch basins, etc.) as well as inspecting and testing facility equipment and containment structures to uncover conditions that could cause breakdowns or failures which may result in the discharge of pollutants to waters of the State.” AAC 335-6-7.29.

V. NUTRIENT/MANURE MANAGEMENT PLAN

Filing and maintenance of plans. All CAFO owner/operators must implement and maintain an approved “Waste Management System Plan” (WMSP) and submit formal certification/evaluation” under AAC 335-6-7. AAC 335-6-7-.04(2). A WMSP must be prepared by a QCP, approved by ADEM, and must meet or exceed AAC 335-6-7 requirements; USDA Natural Resources Conservation Service (NRCS) technical standards and guidelines; NRCS Comprehensive Nutrient Management Plan (CNMP) guidelines; and applicable CWA requirements. AAC 335-6-7-.02(ddd). Copies of all documentation signed by a CAFO owner/operator submitted to ADEM, including but not limited to WMSPs, construction plans and specifications, Notice of Registration, and any other required documents shall be kept at the facility and will constitute the equivalent of a Pollution Prevention Plans (PPP) required under the EPA Storm Water Rules (FR 48062) and subsequent EPA Rule requirements. AAC 335-6-7.28(8).

Nutrient standards addressed. All AFOs are required to implement and maintain BMPs which must meet or exceed the standards found in the NRCS Comprehensive Nutrient Management Plan guidelines. AAC 335-6-7-.21(1), 335-6-7-.02(I). All “Waste Management System Plans” (WMSP) must meet or exceed NRCS technical standards and guidelines and address “the location, amount, and timing of land application of wastes with respect to the nutrient uptake cycle of the vegetation on the land application site(s).” AAC 335-6-7.20(19). WSMPs must have a nutrient management section that includes a “nutrient budget” that includes “soil test results, sources of nutrients, and application rates” and accounts for “all available nutrients applied on the site.” AAC 335-6-7-.02(ddd).

Land application rates can be based on a laboratory analysis of a representative waste/wastewater sample or on the average nutrient values according to applicable NRCS technical standards (in which case a representative sample of waste and/or wastewater to be land applied need only be collected as often as is determined necessary by the QCP to ensure consistency with NRCS approved average nutrient/component values). AAC 335-6-7.26(4). If the rate is based on actual sampling, a sample must be collected at least annually, and analyzed using an analytical methodology accepted by ADEM for the following parameters: pH, total nitrogen, ammonium nitrogen, total phosphorus, total potassium, percent solids, selected metals (e.g. zinc, copper, arsenic, etc.), and any additional parameters required ADEM. AAC 335-6-7.26(4).

The surface soils of each field where waste/wastewater has been or will be applied must be sampled. AAC 335-6-7.26(5). The method, timing, and analysis of soil sampling must meet or exceed NRCS technical standards and guidelines and take place “as often as is necessary to ensure protection of groundwater and surface water quality.” AAC 335-6-7.26(5)(b),(7). Soils must be evaluated and analyzed using an analytical methodology approved by ADEM, and ADEM may require more frequent testing if it deems it necessary to protect waters of the State. AAC 335-6-7.26(5),(6). In addition to any other parameters required by ADEM, the soil analyses must include: soil pH and lime requirement for the soil and crop to be grown; extractable phosphorus; and extractable zinc, copper, arsenic, and other selected metals, if it is determined by the QCP that it is

probable that one or more metals are present in sufficiently high concentrations that further soil accumulation could become toxic to plants or animals or potentially impact groundwater or surface water quality. AAC 335-6-7.26(5)(b).

Annual reports for the previous year must be submitted with the NOR and must include: any waste/wastewater and soil analyses conducted; locations, volumes, and nutrient application rates; methods of land application; “types and uses of crops or vegetation grown on each land application site and plans/procedures for protective storage and/or removal of harvested crops or vegetation from the field; documentation of any point source or nonpoint source discharges resulting from improper land application, spills, bypasses, etc., including actions taken by the owner/operator to correct any deficiencies as required by [AAC 335-6-7].” AAC 335-6-7.26(8).

Limits on manure application. All AFOs must ensure that “the land application of waste/wastewater shall be conducted in accordance with NRCS technical standards and guidelines, the approved WMSP, the requirements of this Chapter, the requirements of the AWPCA, CWA, and regulations promulgated pursuant thereto.” AAC 335-6-7.26(2)(A). “Solids, sludges, manure, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed or land applied... in a manner so as to prevent pollutants from being discharged to waters of the State.” AAC 335-6-7.25(2)(e).

Unless a CAWV has assumed, in writing, responsibility for the wastes, the owner/operator remains responsible for “the proper disposition of the waste.” AAC 335-6-7.26(3). Thus, unless properly assumed by a CAWV, the owner/operator must ensure that the land owner of any offsite land application site (not owned or controlled by the registrant), follows all applicable legal requirements. AAC 335-6-7.26(2)(d). Only areas identified in the WMSP may be used “for the disposal of animal liquid wastes, manure, litter, and mortality compost.” AAC 335-6-7.26(1). “Unless waste disposal and land application responsibilities are contracted in writing to a valid CAWV, all new sites not identified in the approved WMSP at the time of registration... must be accepted by [ADEM] prior to its use as a land application site.” AAC 335-6-7.26(1). AFO comprehensive waste management system BMPs must include written agreements for the use of all land application sites (including documentation that adequate land application area is readily available) unless the owner/operator contracts in writing with a valid CAWV for all waste generated, or “properly sells or gives away in good faith the waste to another person” (with a detailed records of the transaction). AAC 335-6-7.20(20), 335-6-7.26(3). The records must be in sufficient enough detail to determine application rate; will include a detailed log with the date, weight and/or volume, location, and acreage of the application; and be kept at the AFO and provided to ADEM upon request. AAC 335-6-7.26(3). All WMSPs must include “an assessment of the land application site; a description of the land use, cropping sequence, and management of crops; nutrient budget which accounts for nitrogen and phosphorus use; timing of applications, buffer requirements, erosion, and runoff control practices; and if the site is not owned by the registrant, a signed lease to use the land, a detailed bill of sale for the waste, a valid contract with a CAWV, or a signed written land use agreement.” AAC 335-6-7-.02(ddd). “The site assessment shall include a soil map, hydrologic soil group(s), permeability of the upper ten inches of soil, and location of streams, sinkholes, and wells... [as well as a] detailed map of the application site showing location of fields, buffer zones, streams, wells, sinkholes, and other pertinent information will be part of the plan.” AAC 335-6-7-.02(ddd). Alternative or innovative land application technology or procedures not contained in NRCS technical standards and guidance documents may be used by AFOs if approved by ADEM, provided

that it is specifically approved for the particular use the NRCS (and other specified agencies); and pollution to waters of the State will not result from its use. AAC 335-6-7.22.

Waste/wastewater may not be land applied within 50 feet of surface waters of the State; within 100 feet of non-potable water wells and water supplies; or within 200 feet of PWS, ONRW, or OAW classified/designated waters, or potable water wells and water supplies; however additional buffer distances may be required by the NRCS or ADEM on a case-by-case basis. AAC 335-6-7.26(2)(c). “Surface and subsurface (plowing, injection into topsoil, etc.) application of waste/wastewater shall be done in a manner... to ensure the protection of groundwater and surface water quality in nearby streams including, but not limited to, perennial streams, intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies, wetlands, or PWS, ONRW, and OAW classified/designated waters.” AAC 335-6-7.26(2)(m). Aerial irrigation, spray irrigation, or any other type of pumped or pressurized surface land application of wastewater must be at least 500 feet from the nearest existing occupied dwelling, church, school, hospital, or park. AAC 335-6-7.26(2)(p). Non-pumped surface application, or soil subsurface injection/application of wastewater must be at least 200 feet from such buildings. AAC 335-6-7.26(2)(p).

Application of waste may not be closer than 100 feet from “the nearest existing occupied dwelling, church, school, hospital, or park”; and additional buffer distances may be required according to the NRCS guidelines, site specific conditions, or as otherwise required by ADEM on a case-by-case basis. AAC 335-6-7.26(2)(o),(q). Such applications must also be done in a manner that “prevent(s) overland flow and significant aerial drift, from crossing any property line.” AAC 335-6-7.26(2)(n). The property line restrictions do not apply if the adjoining property is also an approved land application site or if the adjoining property owner consents in writing. AAC 335-6-7.26(2)(q). Application of waste/wastewater on public roads is prohibited; and application near public roads must be done in a manner that “protects vehicles and the general public [and] effectively prevents waste/wastewater from entering roadside drainage conveyance structures.” AAC 335-6-7.26(2)(n).

Waste/wastewater may only be applied on days of the year and during times consistent with NRCS technical standards and guidelines and the WMSP. AAC 335-6-7.26(2)(k). Waste/wastewater may not be land applied when, as defined in NRCS technical standards and guidelines, the soil is saturated, frozen, covered with ice or snow, during precipitation, or when significant precipitation is reasonably expected within the next 72 hours. AAC 335-6-7.26(2)(k). All land application practices must be managed “to minimize to the maximum extent practicable ponding or puddling of wastewater on the site.” AAC 335-6-7.26(2)(s). Waste/wastewater may not be applied on slopes with a steep grade and “in any manner that will allow waste/wastewater to enter drainage conveyance structures, enter waters of the State or to run onto adjacent property without the written consent of the affected adjacent property owner.” AAC 335-6-7.26(2)(l). Land application may only occur up to 30 days prior to planting a crop or when vegetation on the site is actively growing. AAC 335-6-7.26(2)(k). The waste/wastewater must be incorporated immediately after application when applied to conventional tillage (practices resulting in complete surface disturbance, soil inversion, or minimal surface residues), cropland, or pasture or hay land that is being renovated or established. AAC 335-6-7.26(2)(k). Waste/wastewater does not have to be incorporated when applied to conservation tillage (practices that manage and maintain plant residues on the soil surface) crop, hay, or pastureland. AAC 335-6-7.26(2)(k). Vegetative filters that meet NRCS and ADEM standards must be maintained between application sites and waters of the State. AAC 335-6-7.26(2)(l).

Groundwater monitoring. If there is a threat of groundwater contamination, ADEM may require a AFO/CAFO to undertake groundwater evaluation and/or monitoring to properly assess the degree of the problem. AAC 335-6-7.32(6). ADEM may require any AFO/CAFO operator/owner to “undertake measures to mitigate, remediate, and/or abate any such discharge and/or contamination.” AAC 335-6-7.32(6). All “[g]roundwater investigation/evaluation, monitoring, mitigation, remediation, and other activities,” whether required by ADEM or performed voluntarily, must be conducted in accordance with a plan prepared and certified by a Professional Engineer or Geologist and accepted by ADEM. AAC 335-6-7.32(6).

Odor and air standards. “In order to minimize odor and nuisance pests, owner/operators are encouraged to adopt a good neighbor policy, and are required to implement odor and nuisance pest minimization BMPs in the operation of animal waste management systems.” AAC 335-6-7-.01(4). All WMSPs must meet or exceed NRCS technical standards and guidelines and address “minimization of odors to the maximum extent practicable.” AAC 335-6-7.20(19). The stockpiling or storage of waste/manure and all land application practices must also be done in a manner that minimizes odors “to the maximum extent practicable.” AAC 335-6-7.26(2)(h),(2)(s). The construction of new or expanded manure storage pits or ponds is prohibited unless ADEM approves the owner/operator’s written affirmative demonstration that it provide for the minimization of odors to the maximum extent practicable. AAC 335-6-7.20(25). Failure to implement and maintain BMPs for the minimization of odors may subject the owner/operator to an enforcement action. AAC 335-6-7-.04(1).

Discharges and emergency planning and reporting. Except as otherwise by AAC 335-6-7, the “discharge of any wastewater from an AFO to waters of the State at any time is prohibited, except as a direct result of periods of chronic or catastrophic precipitation or weather conditions [as determined by ADEM], including precipitation equivalent to or in excess of the 25-year, 24-hour storm event.” AAC 335-6-7.25(1)(a). In such instances, ADEM must be notified and all discharges must be properly sampled under AAC 335-6-7-.31. AAC 335-6-7.25(1)(a). In addition, it must be shown that the waste management and land application practices met NRCS technical standards and guidelines prior to the causative precipitation event; and that the discharge was unavoidable despite the AFO owner/operator having taken “action to the maximum extent possible to prevent discharge(s)... to terminate discharge(s) as soon as possible... [and] to mitigate any impacts caused by the discharge(s) as soon as possible.” AAC 335-6-7.25(1)(a).

An AFO owner/operator must post information (including the name, address, and phone number of facility officials and agencies to be notified, safety precautions, and immediate actions to abate the occurrence, etc.) for responding to any emergency situation, spill, or discharge in a location easily accessible to all employees. AAC 335-6-7.21(4), 335-6-7.25(2)(i). If there is any discharge from an AFO, the owner/operator is required to visually monitor and notify ADEM as soon as possible, but no later than 24 hours after becoming aware of the discharge. AAC 335-6-7.25(2)(f), 335-6-7.31(1). The owner/operator must document the reason for not notifying ADEM sooner if elapsed time between awareness of the discharge and notification to ADEM exceeds 4 hours. AAC 335-6-7.31(1). Additionally, the registrant must submit a report to ADEM within 5 days of becoming aware of such discharge, and include the following information: a description and cause of the discharge (including an estimate of the flow, volume, and any analytical data); the period of discharge (including exact begin and end times); steps taken (or to be taken) to reduce, eliminate, and prevent the recurrence of the discharge; whether the the discharge was caused by a precipitation event (including information from the on-site rain gauge or a weather station); sample and analysis

of the discharge (if from a waste containment facility and into a water of the State). AAC 335-6-7.31(2).

Grab samples must be taken from the overflow or discharge, including a sample no later than 60 minutes after the registrant has become aware of the discharge or the potential for discharge and additional sampled at least once every 6 hours if the discharge continues. AAC 335-6-7.31(3). The sample must be obtained, stored, transported, and analyzed in accordance with EPA approved methods for water analysis listed in 40 CFR Part 136) and the sample analysis, at a minimum, must include the following: “Fecal Coliform Bacteria (col./100 ml); 5-Day Biochemical Oxygen Demand (mg/l); Total Suspended Solids (mg/l); Ammonia Nitrogen (mg/l); Total Phosphorus (mg/l); [a]ny pesticide, hydrocarbon, or other pollutant which the owner/operator has reason to believe might be present in the discharge; [s]elected metals (e.g. zinc, copper, arsenic, etc.) which could become concentrated in animal wastes and in some cases are added to the animal feed producing the waste being tested; [a]ny parameter(s) as may be required by the Director or his designee.” AAC 335-6-7.31(4). Proper equipment and sample containers used “to obtain, store, handle, and transport any samples resulting from sampling” must be readily available onsite. AAC 335-6-7.31(5). “If required sampling is not conducted for any reason, the registrant must document the reasons why discharge samples could not be collected or why the discharger was unable to conduct sampling due to climatic conditions which prohibit the collection of samples, including weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storm, etc.)” AAC 335-6-7.31(6). “Once dangerous conditions have passed, the registrant shall collect a sample of the discharge, if ongoing, or from the retention structure, storage pond/sump, or lagoon if the discharge has ceased.” AAC 335-6-7.31(6).

VI. LIABILITY AND ENFORCEMENT

All AFO owners must allow ADEM, at all reasonable times, to enter, inspect, copy records, and conduct monitoring and sampling of the facility properties and buildings. AAC 335-6-7-.17(1). “[I]f any discharge(s) from the facility or regulated activity cause or contribute to a condition in contravention of State Water Quality Standards, the Department may require that the AFO owner/operator to take abatement action in an emergency situation, may modify any registration pursuant to the Department’s Rules, may require the AFO owner/operator to take timely non-emergency abatement action, may require the owner/operator to apply for an Individual permit pursuant to the Department’s Rules, or may require any combination of the actions specified above.” AAC 335-6-7.32(9)(b).

Civil. ADEM, the Attorney General, and any district attorney “may commence a civil action for damages for pollution of the waters of the state including, but not limited to, any reasonable costs to prevent, minimize or clean up any damage resulting from pollution resulting from the wrongful act, omission or negligence of a person.” COA 22-22-9(m). Punitive and compensatory damages may be recovered in cases involving willful or wanton conduct, whereas only compensatory damages may be recovered in cases involving a negligent act or omission. COA 22-22-9(m). Guilty parties are also liable for reasonable costs incurred by the investigating agency. COA 22-22-9(m).

Criminal. Willful and grossly negligent violations of these laws, regulatory standards, and permit conditions are punishable by a fine of \$2,500 to \$25,000 per day and/or not more than a year of imprisonment. COA 22-22-14(a). For a second contravention, the fine is \$5,000 to \$50,000 per day and/or between one and two years of imprisonment. COA 22-22-14(a). “Any person who

knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed, or required to be maintained, under this chapter or who falsifies, tampers with or knowingly renders inaccurate any monitoring device or method required to be maintained under this chapter shall, upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than six months, or by both.” COA 22-22-14(b).

Fish Kill Law. Any person who violates a statutory provision, rule, order or permit condition “and causes the death of fish or other wildlife shall, in addition to the penalties and remedies provided [above], be liable to pay to the state an additional amount equal to the sum of money reasonably necessary to restock such waters or replenish such wildlife.” COA 22-22-9(n). If fish and wildlife damages are for an amount greater than \$5,000, “the damage shall be presumed to have been the direct and proximate result of negligence of the person shown to be responsible for such pollution, and the burden shall then be upon such person to prove freedom of negligence in causing the pollution in such cases.” COA 22-22-9(m).

Right to farm. Agricultural “plants” and “establishments”, as well as all “farming operation facilities” their “appurtenances,” and the “operation thereof,” are not considered to be a public or private nuisance through any changed conditions near its location so long as it was not a nuisance when it began its operations and has been in operation for at least one year. COA 6-5-127(a). Similarly, municipal ordinances that seek to make the operation of any farming operation facility or its appurtenances a nuisance or that provide for their abatement as a nuisance in the circumstances set forth in this section are null and void. COA 6-5-127(c). However, these provisions do not apply to a nuisances resulting from the “negligent or improper operation” of any farming operation facility or its appurtenances. COA 6-5-127(a),(c). Additionally, the provisions do not affect the right of any “person, firm or corporation to recover damages for any injuries or damage sustained by them on account of any pollution of, or change in the condition of, the waters of any stream or on account of any overflow of the lands of any person, firm, or corporation.” COA 6-5-127(b).

VII. OTHER RELEVANT PROVISIONS

Incentives/Cost-shares. Alabama has a state cost-share program that applies to all farm owners within a soil and conservation district who have at least 20 acres of land or sell at least \$1000 worth of agricultural products per year. COA 9-8A-1,8. Eligible practices include animal waste control facilities and grass strips, although the local Soil and Water Conservation District (with approval from the Alabama Agricultural and Conservation Development Commission) may narrow or expand the list to include other practices that would increase water quality. COA 9-8A-5 - 9-8A-7. Recipients must agree to maintain the eligible practice for the life of the operation in accordance with a conservation plan. COA 9-8A-11. Cost shares are exempt from the state income tax. COA 9-8A-14. Federal cost share monies for agricultural non-point pollution are administered by the Alabama Soil and Water Conservation committee and the local Soil and Water Conservation Districts under the *Alabama Agricultural Nonpoint Source Financial Assistance Act of 1988*.

Education & Training Program. All existing and proposed CAFO managing owners/operators and onsite supervisors must obtain certification for “satisfactory completion of formal education or training in the areas of general BMPs, comprehensive waste/wastewater management, land application, nutrient budgeting, dead animal disposal, and other appropriate areas.” AAC 335-6-7-.18(1). Such persons must also attend an annual refresher course on the appropriate subject matters. AAC 335-6-7-.18(2). As an alternative to the educational courses,

CAFO owner/operators may pay a “Greenfield” fee with the initial registration and each annual registration, which would allow ADEM to perform a comprehensive facility evaluation prior to approval of the registration request. AAC 335-6-7-.18(3). Finally, all employees responsible for activities which relate to Rule compliance must be regularly trained or informed of any information pertinent to the proper operation and maintenance of the facility and waste/wastewater disposal. AAC 335-6-7-.18(5).

Certification of Animal Waste Vendors (CAWV). A CAWV is a person certified by ADEM “to accept liability and responsibility for AFO waste, obtain required continuing education, keep required records, and effectively manage, handle, transport, store, and properly land apply AFO waste in a manner that meets or exceeds NRCS technical standards and guidelines, manage animal mortality in a manner that meets or exceeds ADAI requirements, prevents discharges, and ensures protection of groundwater and surface water quality in accordance with the requirements of this Chapter, and the requirements of the AWPCA, CWA, and regulations promulgated pursuant thereto.” AAC 335-6-7.02(o). The CAWV, in conjunction with the waste/wastewater generator or recipient, is responsible for verifying the suitability of a site before application of the waste/wastewater. This process includes ensuring the “proper timing of waste/wastewater application, proper calibration of equipment, ensuring that required waste/wastewater characterization and soil testing have been properly performed, ensuring that required inspections are properly performed, ensuring that required sampling of any discharges are properly performed, and ensuring that the land owner(s) or others receiving the waste/wastewater are informed of the requirements of this Chapter.” AAC 335-6-7.02(o).

Facility Closure. A CAFO or registrant must submit to ADEM a closure/rehabilitation plan for any waste system storage or treatment structures thirty days before ceasing operations. AAC 335-6-7-.24(1). A QCP must prepare this plan to meet NRCS technical standards and guidelines, AAC 335-6-7, the AWPCA, the CWA, and any additional conditions required by the Director for the protection of water quality. AAC 335-6-7-.24(1). The plan must include provisions for facility maintenance until a QCP certifies full closure. AAC 335-6-7-.24(1). It should also contain a schedule for closure, which should last longer than 180 days unless an extension is granted by the Director. AAC 335-6-7-.24(1). Until ADEM approves the closure plan, the facility must continue operating under the conditions specified in AAC 335-6-7, 335-6-7-.24(2). Once closure is approved, the facility must follow the schedule for closure unless the Director designates alternate dates for the termination process. AAC 335-6-7-.24(3). Upon full closure, the owner/operator should submit to ADEM the QCP certification verifying that the closing of the facility has followed the approved plan and Chapter requirements. AAC 335-6-7-.24(4). Failure to “fully implement” the approved closure plan may result in enforcement actions including, but not limited to, the “termination of existing registrations and denial of future requests for registration.” AAC 335-6-7-.24(5). If the “owner/operator or registrant of the facility is unable to ensure proper closure or environmental remediation of the facility as required by this Rule due to owner/operator death, liquidation bankruptcy, natural disaster, animal disease outbreak, etc., each landowner of the property where the facility is located and each person or entity (if different from the owner/operator) who owns or has an ownership interest in the facility, shall submit and implement the Closure Plan required by this Rule or shall submit and implement an effective environmental remediation plan prepared by a QCP to meet or exceed NRCS technical standards and guidelines, the requirements of this Chapter, and the requirements of the AWPCA, CWA, and regulations promulgated pursuant thereto, and additional conditions required by the Director or his designee to ensure the protection

of water quality, and shall be submitted to the Department in a format acceptable to Director or his designee.” AAC 335-6-7-.24(6).

Management of dead and diseased animals. Dead and diseased animals must be managed and disposed of in accordance with NRCS technical standards and guidelines as approved by the State Veterinarian, ADAI. AAC 335-6-7.26(2)(i).

Coastal Zone Management. An AFO/CAFO owner/operator may have to apply for Coastal Use Permits and certification as specified under Chapter 335-8, particularly if the facility is five acres or more. AAC 335-6-7.32(7).

ARKANSAS

I. PRIMARY APPLICABLE LAWS AND RESPONSIBLE GOVERNMENT AUTHORITY

Provisions of the *Arkansas Water and Air Pollution Control Act* (codified at A.C.A. § 8-4-101 et seq.), and the corresponding rules known as *Regulation No. 5 - Liquid Animal Waste Management Systems*, apply to hog, poultry, dairy farms, or other confined animal operations that use liquid animal waste management systems. Ark. Reg. 5.103. Both are administered by the Arkansas Department of Environmental Quality (ADEQ) Water Division.

II. PERMITS AND THRESHOLDS

“Confined Animal Operation” is defined as any lot or facility where livestock, fowl, or other animals have been, are or will be stabled, confined and fed, or maintained, and also where crops, vegetation, forage growth or post-harvest residues are not sustained in the normal growing season over significant portions of the lot or facility. Ark. Reg. 5.201. Alternate livestock, including animals from the ratite, cervidae, and camelidae families, are considered farm animals and are also subject to these regulations. Ark. Code Ann. 2-32-101. A confined animal operation using a liquid waste disposal system, regardless of the operation's size, cannot be constructed or operated unless the owner has first obtained a permit from ADEQ. Ark. Reg. 5.301. Confined animal operations that use a dry waste management system are not required to obtain a permit but are subject to enforcement actions for improper waste handling, storage, or disposal.

Arkansas has three different permits for confined animal operations: the Federal General Permit, the State General Permit, and the Individual State Permit. The Federal General Permit (Permit # ARG010000), which is a National Pollutant Discharge Elimination System (NPDES) permit, is required for concentrated animal feeding operations (CAFOs) and confined animal operations with at least 700 mature dairy cattle, 2500 swine (25kg each), 30,000 laying hens or broilers, or 1000 animal units (AU), as defined in 40 CFR 122, Appendix B. State General Permits (Permit #0000-WG-AW) are required for confined animal operations that do not meet the CAFO classification (e.g. with <1000AU) and opt to be covered by a general permit which has conditions and requirements similar to an NPDES permit. Individual State Permits are also available and may be issued by ADEQ under special circumstances, however, they often resemble the general permit requirements and are not recommended by ADEQ. Application Procedures For a Confined Animal Facilities With Liquid Waste Permit (Revised July 1, 2001), p.3 [hereinafter “CAF Application”]; Ark. Code Ann. 8-4-206-208. ADEQ may revoke, modify, or deny permits under the conditions it prescribes. Ark. Code Ann. 8-4-203(a). Any change in the waste handling system requires a permit modification. As of September 2001, Arkansas had issued 116 NPDES federal general permits and 404 State permits.

III. PERMIT OVERVIEW

Public notice/review. Prior to submitting an application for the construction or modification of a hog, poultry, or dairy farm or other facility involving liquid animal waste handling, the applicant must open up his/her petition for public comment and questioning by publishing a notice

in a local newspaper (that has general circulation) for two consecutive weeks. Ark. Reg. 5.302(A); CAF Application. All notices, which should direct questions and objections to the ADEQ in writing, are made at the applicant's expense and must include the type of facility; type of waste; the waste treatment, handling or disposal processes; and a legal and road and street description of the location of all treatment, handling and disposal properties. Ark. Reg. 5.302(A); CAF Application; Ark. Reg. 5.302(A). An affidavit of publication and proof of payment must be submitted to the ADEQ. The ADEQ passes the notice on to the county quorum court or, if located within a city zone, the city zoning authority. Ark. Reg. 5.302(A). At the time of application, applicants for a new liquid animal waste disposal permit or modification of an existing one must also make a reasonable effort to notify all adjacent land owners that a complete application for a liquid animal waste disposal permit is on file with the Department. This notice must contain the applicant's name and mailing address; the type of permit action; and the location, type, and size of facility. The applicant must provide a copy of the letter sent to each adjacent landowner with the application. Ark. Reg. 5.302(B). The ADEQ publishes a subsequent notice regarding its preliminary decision to accept or reject the permit with a 30 day comment period. CAF Application, p.2,4. If the ADEQ desires a public hearing, it shall notify the applicant and all persons who have submitted comments of the date, time, and place thereof. Ark. Reg. 5.302(C).

Site, design, and construction requirements. No liquid animal waste management system may be constructed, modified, or placed into operation except in accordance with final design plans and specifications approved by ADEQ. Ark. Reg. 5.401. The applicant must provide ADEQ with construction plans and specifications, design calculations, and any other information required by the regulation for waste disposal systems. Ark. Reg. 5.305(D); CAF Application, p.6. In addition to applicable regulations, all facility designs must follow the USDA Natural Resource Conservation Service technical publications (Technical Note 716, Field Office Technical Guide, and Animal Waste Management Field Handbook, as amended). Ark. Reg. 5.402; CAF Application, p.6. Permit applicants must provide ADEQ with area maps, including a US Geological Survey topographical map and a county map, showing the location of the animal waste system, land application area, and their relationship; potentially affected streams; land-use designations for adjacent properties and nearby lands; and the distance to the nearest state highway intersection or community. CAF Application, p.6. All area features such as buildings and ponds and a legal description of the facility and land application sites must also be provided to ADEQ. CAF Application, p.6.

Operators must notify ADEQ prior to any change in operational procedures of the permitted facility, including, but not limited to: 1) a 10% increase in the volume of animal waste over the amount allotted by the previous permit; 2) a change in land application sites; or 3) a change in waste treatment, handling or disposal. Ark. Reg. 5.305(A). Any changes with 1) or 2) above require a permit modification, while a modification for 3) is at the discretion of ADEQ. Ark. Reg. 5.305(B). In addition to applicable regulations, all waste management plans must follow the USDA Natural Resource Conservation Service technical publications [Field Office Technical Guide and Animal Waste Management Field Handbook, as amended]. Ark. Reg. 5.402.

Manure management plan. All permitted facilities must have a waste management plan prepared by a professional engineer registered in the state of Arkansas, the USDA Natural Resource Conservation Service, the University of Arkansas Cooperative Extension Service or a water quality technician of the Arkansas Soil and Water Conservation District who is approved by ADEQ. Ark. Reg. 5.405(B). All waste management plans must comply with the APC&EC Regulation No. 5 and the USDA Natural Resource Conservation Service technical publications (Technical Note 716, Field

Office Technical Guide, and Animal Waste Management Field Handbook, as amended). CAF Application, p.6. The plan must also address the timing of land application of wastes with respect to the nutrient uptake cycle of the vegetation found on the land application sites. Ark. Reg. 5.405(A).

Financial assurance. Arkansas does not have a financial assurance program.

Permit fee. The ADEQ has an extensive permit fee scheme set out in Regulation No. 9. Construction permits issued under the Water and Air Pollution Control Act for the “construction, alteration, or modification” of a treatment system cannot exceed \$500. Ark. Reg. 9.401. General NPDES ARG010000 Permits carry an annual fee of \$400. Ark. Reg. 9.404(A). Confined animal non-NPDES permits have an initial, annual, and modification fee of \$200. Ark. Reg. 9.405(B). Construction and modification permits for liquid waste management systems have a \$200 fee. Ark. Reg. 9.402. A late payment charge of 10% of the annual fee applies to facilities which do not submit their fee within 45 days of the billing date. Ark. Reg. 9.301(F).

IV. SITING AND DESIGN REQUIREMENTS

Setback requirements. Confinement buildings, settling basins, holding ponds, and other liquid animal waste containment structures at a confined animal operation with more than 600 beef cattle, 430 dairy cows, 1500 finishing hogs, 600 sows, 6000 nursery pigs, 33,000 turkeys, or 130,000 chickens may not be constructed within 1,320 feet of the nearest existing occupied dwelling. Ark. Reg. 5.403. A buffer distance of 500 feet applies to all other facilities. Ark. Reg. 5.403. These buffer distances do not apply if the existing dwelling is owned by owner/operators of the waste management system or if the adjoining property owner consents in writing. Ark. Reg. 5.403. The buffer distances do not apply to confinement buildings, settling basins, holding ponds or other liquid animal waste containment structures that existed prior to March 23, 2000. Confined animal operations that existed prior to March 23, 2000, proposing to construct a liquid animal waste containment structure in order to reduce waste run-off to waters of the State, are exempt from these buffer distances, as are existing structures when a liquid animal waste permit modification is required due to a change in ownership. Ark. Reg. 5.403.

Geophysical, land, and soil requirements. Waste storage structures may not be located in a Federal Emergency Management Agency (FEMA) 100-year flood plain unless protected by adequate berms or structures. If the proposed site is located near a 100-year flood plain, the design must indicate the 100-year flood elevation and the top elevation of the berms. CAF Application, p.6. A subsurface investigation (consisting of auger holes, dozer pits, or backhoe pits extending at least two feet below the planned excavation bottom) must be conducted for earthen holding ponds, treatment lagoon suitability, and liner requirements. Ark. Reg. 5.404.

Government site review/appraisal. Construction of facilities must be in accordance with plans and specifications approved by ADEQ, and a post-construction certification must be provided. However, the Department does not otherwise review site selection.

Storage capacity limits/requirements. The waste management plan must include a description of the waste-generating process (including daily and yearly volume production) and the waste storage facility’s design details, including location, volume, and construction drawings. Application Procedures for a No-Discharge Water Pollution Control Permit: Waste Storage and/or Land Application, p.5 [hereinafter “Waste Storage & Land Application” Form]. An emergency

containment structure lined in accordance with the “Ten States Standards” and able to contain 1.5 times the capacity of the largest above ground waste storage tank, is required for all facilities utilizing above ground waste storage facilities. Waste Storage & Land Application Form, p.8. The top elevation of waste storage and emergency containment structures “must be 12 inches above the Federal Emergency Management Agency (FEMA) designated 100-year flood elevation,” and sites proposed to be in or near the flood plain must identify its elevation and the top elevation of the berms with respect to sea level. Waste Storage & Land Application Form, p.8.

Technical Standards. Designs and waste management plans must be in accordance with the USDA NRCS Field Office Technical Guide and Animal Waste Management Field Handbook. The waste management plan must be developed by a registered professional engineer, NRCS, Cooperative Extension, or water quality technician of the Arkansas Soil & Water Conservation District. Ark. Reg. 5.405. An emergency containment structure is required for above ground waste storage facilities. Waste Storage & Land Application Form, p.8.

Government approval of plans. All confined animal operations must be constructed in accordance with plans and specifications approved by the ADEQ. Ark. Reg. 5.501. A person may not begin constructing or operating a liquid waste management facility unless ADEQ has given them authorization to do so. CAF Application, p.4. Following completion of construction and prior to operation, the applicant must submit to ADEQ a “Construction Certification” prepared by the USDA Natural Resource Conservation Service, a Soil and Water Conservation District water quality technician, the University of Arkansas Cooperative Extension Service, or a Professional Engineer registered in the State of Arkansas. Ark. Reg. 5.501. The certification must assure that the facility was constructed in accordance with the approved plans and specifications. Ark. Reg. 5.501. Authorization to operate the facility will not be issued until the certification is received by the Department. Ark. Reg. 5.501; CAF Application, p.4.

Monitoring requirements. Arkansas has no general monitoring provisions.

V. NUTRIENT/MANURE MANAGEMENT PLAN

Filing and maintenance of plans. All records and logs must be kept at the facility and provided to ADEQ upon request. Ark. Reg. 5.407(A); CAF Application, p.1. Prior to the operation of a facility, applicants for permits and all managing owners/operators must provide certification that they have satisfactorily completed a minimum of four hours of formal individualized training in the area of waste management. Ark. Reg. 5.304(A). In addition, all managing owner/operators of permitted liquid animal waste disposal systems must provide certification of annual refresher training in the area. Ark. Reg. 5.304(B).

Nutrient standards addressed. The waste management plan must include a description of the waste’s physical and nutrient properties, including the following waste parameters: total and volatile solids percentages, weight lost on ignition percentage, pH, BOD, oil and grease percentage, total organic carbon (TOC), and the amount of nitrogen (nitrate, nitrite, ammonia, and kjeldahl), phosphorus, cadmium, copper, mercury, selenium, aluminum, potassium, arsenic, chromium, lead, nickel, zinc, and iron. Waste Storage & Land Application Form, p.5. The site management plan must include a soil analysis based on the required soil sample taken for every 30 acres of application area. The analysis parameters include: pH, cation exchange capacity, salt content, and the amount of nitrite nitrogen, phosphorus, cadmium, copper, mercury, nickel, selenium, magnesium,

molybdenum, aluminum, potassium, arsenic, chromium, lead, nickel, zinc, and iron. Waste Storage & Land Application Form, p.6.

Limits on manure application. All permitted facilities must have a waste management plan for the farm and a site management plan for each land application site prepared by a professional engineer registered in the state of Arkansas, the USDA Natural Resource Conservation Service, the University of Arkansas Cooperative Extension Service, or a water quality technician of the Arkansas Soil and Water Conservation District. Ark. Reg. 5.405(B). These plans must be approved by ADEQ. Ark. Reg. 5.405(B). The waste management plan must address the timing of the application of wastes with respect to the nutrient uptake cycle of the vegetation found on the land application sites. Ark. Reg. 5.405(A). Proof of land ownership or contractual agreements for land application sites must also be submitted to ADEQ. Ark. Reg. 5.405(B). New facility and permit modification applicants wishing to add land application sites must notify the AR Department of Health, Division of Engineering of their application. CAF Application, p.7.

A site management plan must be developed for each waste application site and include waste application rate calculations based on nutrient and elemental loadings, and soil conditions. Waste Storage & Land Application Form, p.6. A separate permit may be issued for a land application site if the owner submits an application which includes a site management plan for the land application site and a plan detailing nutrient application rates; the timing of waste application with respect to the nutrient uptake cycle of the vegetation found on the land application site; as well as a waste storage and distribution method in accordance with the regulations. Ark. Reg. 5.601. The applicant for such a permit must include any contractual agreement for the use of the land as a land application site. Ark. Reg. 5.601. Sampling, analysis and annual reporting [under Ark. Reg. 5.407] are required; as is the record-keeping of waste application (including information regarding the source of the waste). Ark. Reg. 5.601.

Waste must be evenly distributed over application sites at the rates specified in site management plans. Ark. Reg. 5.406(A). Application may not be undertaken when soil is saturated, frozen, covered with ice or snow, or when significant precipitation is reasonably anticipated in the next 24 hours. Ark. Reg. 5.406(B). In addition, waste may not be applied under the following circumstances: on slopes with a grade of more than 15 percent or in any manner that will allow waste to enter State waters or to run onto adjacent property without the written consent of the affected adjacent property owner; within 100 feet of streams (including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies), or 300 feet of extraordinary resource waters; within 50 feet of property lines or 500 feet of neighboring occupied buildings existing as of the date of the permit (unless the adjoining property is also an approved land application site or the adjoining property owner consents in writing); or where the application of waste is prohibited by the AR Department of Health for the protection of public water supplies. Ark. Reg. 5.406(B)-(F). Buffer distances for streams, ponds and lakes shall be measured from the ordinary high water mark, and ADEQ may require additional buffer distances deemed necessary to protect the waters of the state. Ark. Reg. 5.406(D).

Records must be kept of all waste applications and be in sufficient detail to determine the application rate. Ark. Reg. 5.407(A). A log must also be kept of all land applied waste and include the date, weight and/or volume, destination and acreage over which the load was spread. Ark. Reg. 5.407(A). Permitted confined animal operations must submit an "Annual Report Form" which includes: a waste/wastewater analysis of each wastewater sample provided to a "cooperative extension

service or private lab”; a soil analysis for each 30 acre land application track; locations, volumes, and nitrogen application rates for the previous year; methods of application; and types of crops grown on each land application site. Ark. Reg. 5.407(E). A representative sample of waste to be land applied must be collected at least once a year (more when deemed necessary to protect waters of the state) and analyzed for the following parameters: pH, Total Nitrogen, Ammonium, Potassium, Phosphorous and percent solids. Ark. Reg. 5.407(A). Soils of each field where liquid animal waste has been land applied must be sampled and analyzed annually prior to the application of wastes for the following parameters: pH, Potassium, Phosphorous and Nitrates. Ark. Reg. 5.407(C). The methods and timing of sampling and analysis must be in accordance with the University of Arkansas Cooperative Extension Service guidelines. Ark. Reg. 5.407(D).

Groundwater monitoring. Arkansas does not require groundwater monitoring, but does require sampling of wastewater and soils (see above).

Odor and air standards. The Act’s air pollution standards specifically exempt animal feeding operations. Ark. Code Ann. 8-4-305. However, prior to the operation of a facility, permit applicants and all managing owners or operators must provide certification of satisfactory completion of a minimum four hours of formal individualized training and education in the area of odor control. Ark. Reg. 5.304(A). All managing owner/operators of permitted liquid animal waste disposal systems must provide certification of satisfactory completion of annual refresher training in the area. Ark. Reg. 5.304(B). Finally, waste management plans must include, to the maximum extent practicable, measures to minimize off-site obnoxious and offensive odors. Ark. Reg. 5.405(A).

Discharges and emergency planning and reporting. Operators of confined animal operations constructed and operated as authorized by permit in accordance with Regulation 5 may not allow or cause a point source discharge from any part of the liquid animal waste management system. Ark. Reg. 5.303. Arkansas has no specific emergency planning requirements.

VI. LIABILITY AND ENFORCEMENT

ADEQ is authorized to conduct investigations to determine the existence of violations of the Water and Air Pollution Control Act. Ark. Code Ann. 8-4-210. When ADEQ has reasonable grounds to believe a violation of the Act has occurred, it may give notice to the alleged violator which shall specify the causes of the complaint and afford a time within which it must be corrected, or ADEQ will initiate enforcement procedures. Ark. Code Ann. 8-4-218. ADEQ may conduct administrative proceedings and institute civil enforcement actions in the proper court. Ark. Code Ann. 8-4-210. Except in emergencies, no administrative penalty may be assessed without an opportunity for a hearing, and parties may appeal a decision to a court without a jury. Ark. Code Ann. 8-4-103(d). Administrative penalties may be no greater than \$10,000 per day of violation; civil actions may result in penalties no greater than \$10,000 per day of violation, an order to enjoin violations and/or compel compliance, or an order for remedial measures, and recovery of all costs, expenses, and damages. Ark. Code Ann. 8-4-103(b)-(f).

Any violation of the Act is also a criminal misdemeanor, punishable by imprisonment for not more than one year, a fine of not more than \$25,000, or both. Ark. Code Ann. 8-4-103(a)(1). A purposeful, knowing, or reckless violation that “creates a substantial likelihood of adversely affecting” human health or the environment is a felony, punishable by imprisonment for not more than five years, a fine of not more than \$50,000, or both. Ark. Code Ann. 8-4-103(a)(3),(4). Placing

someone in “imminent danger of death or serious bodily injury” can result in up to 20 years imprisonment, a fine of \$250,000, or both. Ark. Code Ann. 8-4-103(a)(3),(4). Also, if pecuniary gains are made from the commission of the offense, the state may seek an additional fine of double the amount of gain. Ark. Code Ann. 8-4-103(a)(4). ADEQ is also authorized under the Act to pursue legal actions for public nuisances. Ark. Code Ann. 8-4-107.

Right to farm. A right to farm provision shields agricultural facilities from public and private nuisance actions as well as all local nuisance ordinances so long as the operation was not a nuisance when it began, has been in operation for at least one year, and has not materially changed in character or size. Ark. Code Ann. 2-4-104 to 2-4-107.

Table 1.1 includes statistics for the number of inspections performed, and the number of formal enforcement actions taken by ADEQ:

Table 1.1. ADEQ Inspections & Enforcement Actions by Year		
Year	Inspections	Enforcement Actions
2001 (through Sept.)	246	39
2000	291	34
1999	305	56
1998	336	29
1997	211	19

VII. OTHER RELEVANT PROVISIONS

Facility Closure. All new applications for a liquid animal waste disposal permit must include a closure plan that provides an estimated cost for closure of the waste disposal system. Ark. Reg. 5.701(B). Permitted confined animal operations using a liquid waste management system which plan on closing must submit a closure plan for Department review and approval within 60 days of the final day of operation. Ark. Reg. 5.701(A). Within 10 days of completion of closure activities, the permittee must submit certification that the facility was closed in accordance with the approved plan. Ark. Reg. 5.701(A). The closure plan and closure certification must be prepared by the USDA Natural Resource Conservation Service, an Arkansas Soil and Water Conservation District water quality technician, the University of Arkansas Cooperative Extension Service, or a professional engineer registered in the State of Arkansas. Ark. Reg. 5.701(A).

Composting. As an alternative to land application of liquid waste, composting at a permitted composting facility or in an alternative manner that does not result in any point or nonpoint source pollution to State waters may be approved by ADEQ (as submitted and recorded in a waste management plan). Ark. Reg. 5.602.

ILLINOIS

I. PRIMARY APPLICABLE LAWS AND RESPONSIBLE GOVERNMENT AUTHORITY

The Illinois *Livestock Management Facilities Act* (LMFA), 510 ILCA 77, and the corresponding regulations in the Illinois Administrative Code (IAC), 8 IAC Part 900, are administered by the Illinois Department of Agriculture (IDOA). The *Environmental Protection Act*, 415 ILCS 5 et seq, and the corresponding “Title 35” Agriculture Related Water Pollution rules and regulations, 35 IAC Part 501-580 (adopted by the Illinois Pollution Control Board), are generally administered by the Illinois Environmental Protection Agency (IEPA); although some provisions, such as the Livestock Waste Regulations in Part 506, are also administered by IDOA. While LMFA states that “[n]othing in this Act shall be construed as a limitation or preemption of any statutory or regulatory authority under the Illinois Environmental Protection Act,” regulatory inconsistencies and conflicts between the two Acts (e.g. with setback distances, structural requirements, etc) have primarily been resolved in favor of the stricter LMFA instead of the largely “recommended” Environmental Protection Act provisions. Thus, IDOA administers most of the state’s pre-release regulatory programs (e.g. construction) and IEPA deals almost exclusively with the National Pollutant Discharge Elimination System (NPDES) permitting program (which it administers) and post-release programs, such as responses to AFO-related complaints. 510 ILCS 77/100.

II. PERMITS AND THRESHOLDS

Illinois requires NPDES permits for confined animal feeding operations (AFOs) it defines as “Very Large Operators” or “Large Operators,” as well as on a case by case basis. Very large operators are confined AFOs with more than 1000 animal units (AU). 35 IAC 502.103. Large operators are confined AFOs with at least 300 AU that either discharge pollutants “into navigable waters through a man-made ditch, flushing system or other similar man-made device” or discharge pollutants “into navigable waters which originate outside of and pass over, across, through or otherwise come into direct contact with the animals confined in the operation.” 35 IAC 502.104. After an onsite inspection, IEPA may require an AFO operation to obtain a NPDES permit on a case-by-case basis even if it doesn’t fit the above definitions if it poses a threat to state waters. 35 IAC 502.106(a). However, IEPA may not require AFOs with less than 300AU to obtain an NPDES permit unless they either discharge pollutants “into navigable waters through a man-made ditch, flushing system or other similar man-made device” or discharge pollutants “into navigable waters which originate outside of and pass over, across, through or otherwise come into direct contact with the animals confined in the operation.” 35 IAC 502.106. In addition, no AFO is required to obtain an NPDES permit if it only discharges in the event of a 25year/24hour storm event. 35 IAC 502.102.

NPDES permits are issued for a fixed term not exceeding 5 years. 35 IAC 502.302. Illinois defines an “Animal Feeding Operation” 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 that are grown in place are not sustained in the normal growing season over any portion of the lot or facility.” 35 IAC 501.225. As of October 2001, out of approximately 35,000 total AFOs in Illinois, IEPA has issued slightly over 40 NPDES permits.

An owner or operator must file a “notice of intent to construct” with IDOA for a determination of setbacks prior to constructing a livestock management facility or a waste handling facility. 510 ILCS 77/11(a). The notice is valid for one year. 510 ILCS 77/11(a). A “livestock management facility” is defined as “any animal feeding operation, livestock shelter, or on-farm milking and accompanying milk-handling area.” 510 ILCS 77/10.30. Livestock management facilities at educational institutions, livestock pasture operations, livestock shows, race tracks, horse breeding and foaling farms, market holding facilities, and areas where animals are temporarily housed (such as county and state fairs), are not subject to the LMFA. 510 ILCS 77/10.30. A “livestock waste handling facility” is defined as “the immovable constructions or devices, except sewers, used for collecting, pumping, treating, or disposing of livestock waste or for the recovery of by-products from the livestock waste.” 510 ILCS 77/10.40.

Livestock management or waste handling facilities that plan on utilizing a lagoon and new livestock management or waste handling facilities with at least 1000AU that do not plan on using a lagoon must file a completed “registration” with IDOA at least 37 days prior to the anticipated dates of construction. 510 ILCS 77/11(c). The registration must include a construction plan of the waste handling structure with design specifications. 510 ILCS 77/11(c). Within 15 days of receiving the notice of registration or the notice of intent, IDOA shall notify the owner/operator that construction may begin or that clarification is needed. 510 ILCS 77/11(b),(c). Once construction is complete, facility owners must certify that the construction meets design standards, subject to final site visit by IDOA. 510 ILCS 77/13(f),(g). Livestock waste handling facilities that are not required to submit a “registration” must file a construction plan with design specifications with IDOA at least ten calendar days prior to the anticipated dates of construction. 510 ILCS 77/11(b).

A livestock waste handling facility that serves at least 300AU can only be operated under the supervision of a certified livestock manager. 510 ILCS 77/30(a). Certifications are valid for three years and are subject to three-year renewals. 510 ILCS 77/30(c). IDOA may require anyone certified to be recertified in less than three years for just cause. 510 ILCS 77/30(c). Owner/operators of a livestock waste handling facility serving 300-999AU must become a certified livestock manager by attending a training session or successfully completing a written competency examination. 510 ILCS 77/30(d)(1). Owner/operators of a livestock waste handling facility serving at least 1000AU must attend the training session and pass the examination. 510 ILCS 77/30(d)(2). In addition, IDOA shall consult and advise owners and operators of livestock management facilities serving at least 7,000AU of applicable laws and rules, including the Water Use Act of 1983, and local road standards. 510 ILCS 77/50.

The LMFA became effective on May 21, 1996, with amendments effective July 13, 1999, and the Environmental Protection Act became effective on January 1, 1978. While their respective regulatory citations to “new” and “existing” facilities are defined in relation to those dates, the Title 35 Part 506 Waste Regulations define “new” facilities as those built or expanded after May 21, 1996, excepting facilities where “the fixed capital cost of the new components constructed within a 2 year period does not exceed 50% of the fixed capital cost of a comparable entirely new facility.” 8 IAC 900.103; 35 IAC 501.330, 506.103. Additionally, some of the Title 35 Part 506 Waste Regulations, including Subpart B [35 IAC 201-210], and certain sections of Subpart C [35 IAC 506.301-312], only apply to facilities which have not been approved prior to November 15, 2001.

The following table illustrates the number of notices that were submitted for size and type of facility as of October 22, 2001:

	< 300AU	300-999AU	1000-6999AU	>7000AU
Swine	20	104	109	0
Beef	1	1	1	0
Dairy	14	10	4	0
Poultry	0	3	1	4

As of October 2001, a total of 268 facilities have been constructed and 33 others have had their NOI approved and are awaiting initiation of construction.

Table 2.2 illustrates the number of lagoons registered by type and size of facility and Table 2.3 shows the number of lagoons have been registered and certified by type and size of facility (as of October 22, 2001).

	< 300AU	300-999AU	1000-7999AU	>7000AU
Swine	0	1	3	0
Beef	0	0	0	0
Dairy	2	0	1	0
Poultry	3			

	< 300AU	300-999AU	1000-7999AU	>7000AU
Swine	6	7	17	0
Beef	0	0	0	0
Dairy	3	9	1	0
Poultry	13			

As of October 22, 2001, there were 7 registered lagoons, 43 registered and certified lagoons, and 8 lagoons for which additional information was requested.

III. PERMIT OVERVIEW

Public notice/review. Upon receiving a “notice of intent to construct” from a new livestock management or waste handling facility serving 1,000 or more animal units that does not propose to utilize a lagoon or a livestock management or waste handling facility that proposes to utilize a lagoon, IDOA must send a copy of the notice form to the local county board and publish a public notice in a local newspaper (of general circulation). 510 ILCS 77/12(a). Within 30 days of receiving the notice, the county board may request that IDOA conduct an informational meeting concerning the proposed construction. 510 ILCS 77/12(a). The county board shall request that IDOA conduct an informational meeting when petitioned by at least 75% of the county's registered voters. 510 ILCS 77/12(a). IDOA shall conduct the informational meeting within 15 days of the county board's request. 510 ILCS 77/12(a). If IDOA conducts such a meeting, it shall publish notice of the meeting in a generally circulating local newspaper (of general circulation) and send a copy of the notice to the county board. 510 ILCS 77/12(a). Upon receiving the notice, the county board shall post it on the public informational board at the county courthouse at least ten days before the meeting. 510 ILCS 77/12(a). The owner/operator who submitted the notice of intent to construct shall appear at the meeting. 510 ILCS 77/12(a). Construction shall not begin until after the informational meeting has been held; and within 30 days of the meeting the county board must submit an advisory, non-binding recommendation to IDOA regarding the proposed structure. 510 ILCS 77/12(b),(c).

Within 15 days of the close of the comment period, IDOA shall send notice to the applicant prohibiting construction if it finds that, “more likely than not,” the provisions of the Act have not been met. 510 ILCS 77/12.1(a). IDOA may request additional information or specific changes from the owner/operator if needed in order to make a determination. 510 ILCS 77/12.1(a-5). If the owner/operator amends the facility plans during IDOA's review, the Department must notify the county board, which may again exercise its option of a public informational meeting. 510 ILCS 77/12.1(c). If the owner/operator amends the facility plans during IDOA's review process by increasing the animal unit capacity of the facility such that the required setback distances will be increased, the owner or operator shall submit a revised notice of intent to construct and comply with applicable provisions of this Act. 510 ILCS 77/12.1(d).

Site, design, and construction requirements. Illinois has site, design, and construction requirements for livestock management and waste handling facilities, as well as lagoons and other structures. Additional requirements apply to new facilities and structures. These requirements are explained in more detail below.

Manure management plan. Illinois requires preparation of manure management plans for facilities with at least 1000AU. 510 ILCS 77/20. Manure management plans must be prepared and submitted to IDOA for approval for any facility with 5,000 or more animal units. 510 ILCS 77/20(d). The owner/operator of an existing livestock management facility that, through growth, meets or exceeds 5,000 animal units must file its waste management plan with IDOA within 60 working days of reaching the stated animal units. 510 ILCS 77/20(d). Owner/operators of a livestock management facility with 5,000AU or more must file a revised waste management plan with IDOA within 60 working days when there is a change that will materially affect compliance with the waste management plan. 510 ILCS 77/20(d). The waste management plan must include an estimate of the volume of waste to be disposed of annually, the method of disposal, the number of

acres available for the disposal of waste (including a contract for this with another persons), and an estimate of the nutrient value of the waste. 510 ILCS 77/20(f)(1)-(3),(10).

Financial assurance. Illinois has a financial assurance program for new or modified waste management lagoons. Financial responsibility must be evidenced by commercial or private insurance, guarantee, surety bond, letter of credit, certificate of deposit or designated savings account, or participation in a livestock waste lagoon closure fund managed by the Illinois Farm Development Authority. 8 IAC 900.702(a). Lagoon owners must provide continuous coverage from the initiation of operations to closure of the facility. 8 IAC 900.702(b). The level of surety is determined by the following formula: Level of Surety = (V x CF) + EC; where V= lagoon volume; CF= cost factor; and EC= engineering contingency. 8 IAC 900.703.

Permit fee. Certification of compliance for a waste management facility issued after completing construction must be accompanied by a \$250 filing fee. 510 ILCS 77/13(f). Livestock waste lagoons must pay a registration fee of \$250, and new or modified earthen livestock waste lagoons must pay a \$50 registration fee. 510 ILCS 77/15(d). There is a \$10 fee for the issuance or renewal of a certified livestock manager certificate, and IDOA may, by rule, establish fees to cover the cost of the training sessions and examinations. 510 ILCS 77/30(f). All fees and fines collected under the Act shall be deposited into the Livestock Management Facilities Fund, which shall be appropriated to IDOA for the purposes of the Act. 510 ILCS 77/60.

IV. SITING AND DESIGN REQUIREMENTS

Setback requirements. Livestock management and waste handling facilities in existence prior to July 15, 1991 must comply with setbacks in place prior to July 15, 1991, as set forth in the Illinois Environmental Protection Act and rules promulgated under that Act. 510 ILCS 77/35(a). Facilities in existence beginning July 15, 1991 up to through May 21, 1996 must comply with the setbacks in existence prior to the LMFA, as set forth in the Illinois Environmental Protection Act and rules promulgated under that Act. 510 ILCS 77/35(b). Such setback requirements include: the prohibition against any stream or surface water within the boundary of any facility; a minimum distance of ½ mile from a populated area and ¼ mile from a non-farm residence. 35 IAC 501.402.

New facilities serving less than 50AU are exempt from LMFA's setback distances, but are subject to any applicable rules promulgated under the Illinois Environmental Protection Act. 510 ILCS 77/35(c)(2). For facilities with 50-999AU, the minimum setback distance is 1/4 mile from the nearest occupied residence and 1/2 mile from the nearest populated area. 510 ILCS 77/35(c)(3). For facilities with 1000-6999AU, the setback is at least 440 feet over the minimum setback of 1/2 mile for each additional 1,000 animal units over 1,000 animal units for a populated area and at least 220 feet over the minimum setback of 1/4 mile for each additional 1,000 animal units over 1,000 animal units for any occupied residence. 510 ILCS 77/35(c)(4). For facilities with at least 7000AU, the minimum setback is one mile for a populated area and 1/2 mile for any occupied residence. 510 ILCS 77/35(c)(5). Setback categories are determined by the design capacity in animal units of the livestock management facility. 510 ILCS 77/35(e). Setbacks may be decreased when innovative designs approved by IDOA are incorporated into the facility. 510 ILCS 77/35(f). A setback may be decreased when waivers are obtained from owners of residences that are occupied and located in the setback area. 510 ILCS 77/35(g).

The planning and zoning laws of local and county governments may also affect AFOs. 55 ILCS 5/5-12001. AFOs on parcels less than five acres are subject to such laws if they are located in counties with at least 400,000 residents *or* in counties with 300,000-400,000 residents if the AFO has also sold less than \$1000 in agricultural products that calendar year. 55 ILCS 5/5-12001.

Geophysical, land, and soil requirements. New livestock management and waste handling facilities are subject to the additional construction requirements and siting prohibitions. 510 ILCS 77/13(b). No new non-lagoon livestock management or waste handling facility or new earthen livestock waste lagoon may be constructed within the floodway of a 100-year floodplain. 510 ILCS 77/13(b)(1), 77/15(a-5)(1). However, such a facility may be constructed within the portion of a 100-year floodplain that is within the flood fringe and outside the floodway, provided that the facility is designed and constructed to be protected from flooding and meets the requirements set forth in 35 IAC 506.108, the Rivers, Lakes, and Streams Act, the Counties Code Section 5-40001 and Executive Order Number 4 (1979). 510 ILCS 77/13(b)(1), 77/15(a-5)(1); 35 IAC 506.208. For non-lagoon facilities, protection from flooding must be consistent with the National Flood Insurance Program and be designed so that stored livestock waste is not readily removed. 510 ILCS 77/13(b)(1). New non-lagoon livestock management or waste handling facilities or new earthen livestock waste lagoons constructed in a karst area must be designed to prevent seepage of the stored material into groundwater and must be accordance with 35 IAC 206.507 and ASAE 393.2. 510 ILCS 77/13(b)(2), 77/15(a-5)(2); 35 IAC 206.507. Owner/operators of proposed facilities should consult with the local soil and water conservation district, the University of Illinois Cooperative Extension Service, or other local, county, or State resources in order to determine the presence or absence of karst areas. 510 ILCS 77/13(b)(2), 77/15(a-5)(2); 35 IAC 206.507(a). No such facility may be constructed within 400 feet of any natural depression in a karst area formed as a result of subsurface removal of soil or rock materials that has formed a collapse feature which exhibits internal drainage. 510 ILCS 77/13(b)(2), 77/15(a-5)(2). A new livestock waste handling facility constructed in an area where aquifer material is present within five feet of the bottom of the facility must be designed to ensure the structural integrity of the containment structure and to prevent seepage of the stored material to groundwater. 510 ILCS 77/13(b)(3). Footings and underlying structure support must be incorporated into the design standards of the non-lagoon storage structure in accordance with the requirements of Section 4.1 of the American Society of Agricultural Engineers (ASAE) EP 393.2. 510 ILCS 77/13(b)(3). However, the standards in 510 ILCS 77/13(a)&(b) are interim construction standards and only valid until replaced by permanent rules. 510 ILCS 77/13(d).

Government site review/appraisal. IDOA inspects the construction site of a livestock management or waste handling facility or an earthen lagoon prior to construction, during construction, and after construction is completed, in order to determine its compliance with the construction standards. 510 ILCS 77/13(g), 77/15(b). In addition, for planned new or modified lagoons, a site investigation must be made by a licensed professional engineer or geologist, and soil borings (or an approved alternative) must be taken to determine whether aquifer material is present within 50 feet and whether the proposed location is within a floodway, flood fringe of a 100 year floodplain, karst area, or 100 feet of a natural depression in a karst area. 35 IAC 506.202.

Storage capacity limits/requirements. Livestock waste handling facilities constructed of concrete or those which hold semi-solid or solid livestock waste, as well as holding ponds used for the temporary storage of livestock feedlot run-off, must meet the strength and load factors in the Midwest Plan Service's Concrete Manure Storage Handbook (MWPS) and future updates. 510 ILCS 77/13(a)(1),(3)-(5). Alternatively, these facilities (except those made out of concrete) may opt

to meet similar standards used by the Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture. 510 ILCS 77/13(a)(3)-(5). Livestock waste handling facilities constructed of concrete must have waterstops incorporated into their design (when applicable). 510 ILCS 77/13(a)(1)(A). When such storage structures handle liquid waste they must be designed to contain a volume of not less than the amount of waste generated during 150 days of facility operation. 510 ILCS 77/13(a)(1)(B). If such storage structures are not covered or otherwise protected from precipitation, they must include a two-foot freeboard. 510 ILCS 77/13(a)(1)(C). Finally, a prefabricated livestock waste handling facility must meet the strength, load, and compatibility factors for its intended use, as verified by the manufacturer's specifications. 510 ILCS 77/13(a)(1)(D).

Technical Standards. Any earthen livestock waste lagoon subject to registration must be constructed or modified in accordance with "Design of Anaerobic Lagoons for Animal Waste Management" promulgated by the American Society of Agricultural Engineers or the national guidelines as published by the United States Department of Agriculture Natural Resource Conservation Service in Illinois and titled Waste Treatment Lagoon, however, the owner/operator may, with IDOA approval, modify or exceed these standards in order to meet site specific objectives. 510 ILCS 77/15(a). Every earthen livestock waste lagoon must include a secondary berm, filter strip, grass waterway, terrace, or any combination of those, outside the perimeter of the primary berm if a licensed professional engineer and IDOA determine that construction of such a feature is necessary to ensure against a release of livestock waste from the lagoon. 510 ILCS 77/15(a). IDOA may also require changes in design or additional requirements to protect groundwater, such as extra liner depth or synthetic liners if it appears that groundwater could be impacted. 510 ILCS 77/15(a). Owner/operators of a livestock management facility must also comply with the requirements for waste handling, storage, and disposal as set forth in the rules adopted pursuant to the Illinois Environmental Protection Act concerning agriculture related pollution. 510 ILCS 77/20(a); 35 IAC 506.201-312. Under these regulations, lagoons must have a liner if the uppermost aquifer material is located between 20 to 50 feet from the lowest point of the planned lagoon as measured from the top of any proposed liner. 35 IAC 506.204(d)(2).

Government approval of plans. Prior to construction, new or modified earthen livestock waste lagoons must be registered with IDOA. 510 ILCS 77/15(b). Construction may not begin until 30 days after submittal of a registration, however, if an informational meeting is requested by the county, construction may not begin until after the informational meeting has been held. 510 ILCS 77/15(b). If the IEPA finds that groundwater has been negatively impacted because of structural problems with the earthen lagoon, it shall notify IDOA that modification of the lagoon is necessary. 510 ILCS 77/15(c). Existing earthen livestock waste lagoons are not subject to registration but are subject to the complaint procedures and any such lagoon found impacting groundwater will be required to be repaired, modified, to ensure that groundwater is not negatively impacted. 510 ILCS 77/15(c). If an investigation reveals groundwater has been negatively impacted, IDOA and IEPA shall cooperate with the owner/operator to provide a reasonable solution to protect the groundwater. 510 ILCS 77/15(c).

Between the completion of construction and start of operations, the owner/operator of a livestock management or waste handling facility or an earthen lagoon must provide IDOA with a "certification of compliance" along with copies of verification documents that shows that the facility has been constructed or modified in accordance with the applicable standards. 510 ILCS 77/13(f), 77/15(b). For structures constructed to NRCS design standards, copies of the design standards and

a statement of verification signed by a USDA representative must accompany the owner/operator's certification of compliance. 510 ILCS 77/13(f). Within 10 days of receiving the certification of compliance, IDOA must inspect the facility to determine its compliance. 510 ILCS 77/13(g), 77/15(b). IDOA will require modifications when necessary to bring the construction into compliance with the standards. 510 ILCS 77/13(h), 77/15(b). The inspector shall discuss with the owner/operator or certified livestock manager an evaluation of the facility's construction and provide on-site recommendations of what modifications are necessary or inform them that the facility meets the applicable standards. 510 ILCS 77/13(h), 77/15(b). On the day of the inspection, the inspector shall give the owner/operator or certified livestock manager a written report of findings with an explanation of remedial measures necessary to enable the livestock waste handling facility to meet the applicable standards. 510 ILCS 77/13(h), 77/15(b). IDOA shall send an official written notice to the owner/operator indicating that the facility meets the applicable standards or identifying the remedial measures necessary to enable it to meet the standards. 510 ILCS 77/13(h), 77/15(b). Upon receiving the notice, the owner/operator must contact IDOA to develop an "agreement of compliance," which shall specify the changes to be made to bring the construction into compliance with the applicable standards. 510 ILCS 77/13(h), 77/15(b). If an agreement of compliance cannot be achieved, IDOA shall issue a compliance order outlining the specific changes to be made to bring the construction into compliance. 510 ILCS 77/13(h), 77/15(b). The owner/operator may request an administrative hearing to contest IDOA's compliance order. 510 ILCS 77/13(h), 77/15(b).

Monitoring requirements. Illinois has no general monitoring requirements.

V. NUTRIENT/MANURE MANAGEMENT PLAN

Filing and maintenance of plans Owner/operators of a livestock management facility with less than 1000AU are not required to prepare and maintain a waste management plan. 510 ILCS 77/20(b). Owner/operators of a livestock management facility with 1000-4999AU must prepare and maintain a general waste management plan. 510 ILCS 77/20(c). Owner/operators of a livestock management facility with 5000AU or more must prepare, maintain, and submit a waste management plan, as well as any other plan(s) required by the Environmental Protection Act, to IDOA for approval. 510 ILCS 77/20(d). The plan and records of livestock waste disposal must be filed for three years and be made available to IDOA for inspection during normal business hours. 510 ILCS 77/20(c),(e).

Nutrient standards addressed. Waste management plans may generally be based on nitrogen rates but must also include the results from a Bray P1 or Mehlich test for soil phosphorus reported in pounds of elemental phosphorus per acre. 510 ILCS 77/20(f). Every three years, soil samples must be obtained and analyzed from the livestock waste application fields, and sampling procedures must be followed as outlined in the current edition of the Illinois Agronomy Handbook. 510 ILCS 77/20(f)(3.5). If the average Bray P1 or Mehlich test result for soil phosphorus is 300 pounds or less of elemental phosphorus per acre, livestock waste may continue to be applied to that field in accordance with subsection (f) of this Section. 510 ILCS 77/20(f)(3.6). If the average is greater than 300 pounds per acre, the owner/operator must apply livestock waste to the field at the phosphorus rate until the average Bray P1 or Mehlich test indicates there is less than 300 pounds of elemental phosphorus per acre. 510 ILCS 77/20(f)(3.6). Upon the development of an approved phosphorus index, the owner/operator shall use such index in lieu of the 300 pounds of elemental phosphorus per acre standard. 510 ILCS 77/20(f)(3.6). Illinois also has a nitrogen credit system where facility

owners are given credit for growing nitrogen producing crops as well as other sources of nitrogen. 8 IAC 900.08; 35 IAC 506.309.

Limits on manure application. Livestock waste may only be applied at rates that do not exceed the agronomic nitrogen demand of the crops to be grown when averaged over a five-year period. 510 ILCS 77/20(f)(4). Livestock waste applied within 1/4 mile of any residence not part of the facility must be injected or incorporated. 510 ILCS 77/20(f)(5). Facilities that have irrigation systems in operation prior to May 21, 1996 and that apply waste to frozen ground are not subject to the residential setback. 510 ILCS 77/20(f)(5). Livestock waste may not be applied within 200 feet of surface water unless the water is upgrade or there is adequate diking, within 150 feet of potable water supply wells, in a 10-year flood plain (unless the injection or incorporation method of application is used), or in waterways. 510 ILCS 77/20(f)(6)-(8). If waste is spread on frozen or snow-covered land, the application must be limited to areas where land slopes are 5% at most or where adequate erosion control practices exist. 510 ILCS 77/20(f)(9).

Groundwater monitoring. Owner/operators must, as a part of the lagoon design, implement groundwater monitoring if the uppermost aquifer material is located above or within 20 feet of the lowest point of the planned lagoon bottom. 35 IAC 506.204(d)(1). The groundwater monitoring program must meet the requirements of IAC 506.206 and 8 IAC 900, Subpart F, including the sampling and reporting requirements therein. 35 IAC 506.206(a). The program must include at least three monitoring wells within 20 feet of the exterior toe of the berm with at least two of them down gradient of the lagoon. 35 IAC 506.206(b),(d). The wells must utilize a five foot screened interval, the top of the well screen must be set at the estimated seasonal low water table elevation, and the screen must be set in a sand pack extending at least one foot above and below the screened interval). IAC 506.206(c)(2)-(4). The wells must also meet the requirements of Illinois Water Well Construction Code at 77 Ill. Adm. Code 920.170 which mandates the following conditions:, 35 IAC 506.206(c)(1).

Odor and air standards. The rules adopted pursuant to the Illinois Environmental Protection Act state that operators of livestock waste handling facilities must practice odor control methods during the manure removal and field application. 510 ILCS 77/25(a). Single-stage livestock waste lagoons constructed after the effective date of the Amendatory Act of 1997 must comply with the following operational guidelines: the lagoon must be maintained at the minimum design volume, the waste supply to the lagoon must be below the minimum design volume level, and the lagoon's waste storage capacity must be greater than 270 days. 510 ILCS 77/25(b). Above-ground livestock waste holding structures must be operated using odor control management guidelines based on scientific peer review accepted by IDOA and determined to be economically feasible to the specific operation. 510 ILCS 77/25(c). Illinois also requires AFO owner/operators to take an educational program that addresses odor management. 510 ILCS 77/5(a)(8).

Discharges and emergency planning and reporting. "No person shall cause... or allow the discharge of any contaminants into the environment in any State so as to cause or tend to cause water pollution in Illinois." 415 ILCS 5/12(a). An owner/operator of a livestock waste handling facility must report to the IEPA any release of livestock waste from a livestock waste handling facility or from the transport of livestock waste within 24 hours after discovery of the release. 510 ILCS 77/18(a), 35 IAC 580.105. Reporting is not required for releases of less than 25 gallons that are not to waters of the State not including small temporary accumulations of surface water from precipitation or irrigation systems, or from a controlled and recovered release during field

application. 510 ILCS 77/18(a), 35 IAC 580.105. At a minimum, the contents of the report must include the following: the name and telephone number of the caller; the name and address of the facility; directions to the release area; an estimate of the quantity of the release, the time and duration of the release, the area into which the release occurred, and its apparent environmental effects; dangers to health or the environment from the release; actions taken in response to the release; and the names and telephone numbers of persons who may be contacted for additional information 35 IAC 580.105.

VI. LIABILITY AND ENFORCEMENT

Any person who has a complaint concerning an earthen livestock waste lagoon may file a complaint with the IEPA. 510 ILCS 77/15(c). All IDOA actions are subject to the Illinois Administrative Procedure Act. 510 ILCS 77/15(f). Four to five staffers conduct inspections and identify facilities subject to the regulations, although most inspections are complaint driven.

Owner/operators who fail to file a valid notice of intent to construct form or construction plans prior to commencing construction are subject to an administrative hearing before IDOA. 510 ILCS 77/11(d). The administrative law judge (ALJ), shall impose a civil administrative penalty no more than \$1,000 and shall enter an administrative order directing that the owner/operator file the appropriate form within ten business days after receiving notice from IDOA. 510 ILCS 77/11(d). If after receiving the ALJ's order the owner/operator still fails to file the form with IDOA, IDOA shall impose a civil administrative penalty between \$1,000 - \$2,500 and shall enter an administrative order prohibiting the operation of the facility until the owner/operator is in compliance with the Livestock Management Facilities Act. 510 ILCS 77/11(d). Penalties not paid within 60 days of notice from IDOA shall be submitted to the Attorney General's office or an approved private collection agency. 510 ILCS 77/11(d).

If any owner/operator operates in violation of an agreement of compliance, IDOA shall seek an injunction in circuit court to prohibit its operation until construction and certification of the livestock waste handling facility are in compliance with the Act's provisions. 510 ILCS 77/13(j).

Any earthen livestock waste lagoon subject to registration shall not begin operation until the owner or operator of the lagoon has met the appropriate requirements. 510 ILCS 77/15(f). The owner/operator of an earthen livestock waste lagoon has not been registered or constructed in accordance with appropriate requirements must be given written notice by the IDOA to register and certify the lagoon within ten working days of receipt of the notice. 510 ILCS 77/15(f). IDOA may inspect such lagoon and require compliance. 510 ILCS 77/15(f). If the owner/operator fails to comply with the notice, IDOA may issue a cease and desist order until compliance is obtained. 510 ILCS 77/15(f). Failure to construct the lagoon in accordance with the construction plan and IDOA recommendations is a business offense punishable by a maximum fine of \$5,000. 510 ILCS 77/15(f).

At least once a year on a random basis, IDOA shall inspect every earthen livestock waste lagoon that services at least 1,000AU and is required to be registered under the Act. ["random" and "every" seem contradictory. Clarify & eliminate one] 510 ILCS 77/16. The inspector shall conduct a visual inspection only to determine whether any of the following are present: burrow holes, trees or woody vegetation, proper freeboard, erosion, settling of the berm, bermtop maintenance, leaks, and seepage. 510 ILCS 77/16. The inspector shall evaluate the lagoon's condition with the owner/operator or certified livestock manager and provide on-site recommendations of what

corrective actions are necessary or inform them that the lagoon meets the applicable standards. 510 ILCS 77/16. IDOA and the owner/operator shall enter into an agreement of compliance which specifies the actions and timetable to correct the deficiencies. 510 ILCS 77/16. The person making the reinspection shall notify IDOA of the results, and IDOA shall take appropriate action. 510 ILCS 77/16. If IDOA inspector finds a release or evidence of a release, it shall immediately report it to the IEPA. 510 ILCS 77/16. For a first violation of this section, IDOA shall send the owner/operator a written notice of the violation. 510 ILCS 77/16. If after an administrative hearing, IDOA finds that the owner/operator has committed a second violation, it shall impose a civil administrative penalty not exceeding \$1,000 and the Attorney General may take action to enforce collection of the penalty. 510 ILCS 77/16. If, after an administrative hearing, IDOA finds that the owner/operator has committed a third violation, it shall enter an administrative order directing the owner/operator to cease operation of the facility until the violation is corrected. 510 ILCS 77/16. If a facility has not committed a violation of this section within the five years immediately preceding a violation, the violation shall be construed and treated as a first violation. 510 ILCS 77/16.

Any person who is required to prepare and maintain a waste management plan and who fails to do so shall be issued a warning letter from IDOA for the first violation and be given 30 working days to prepare such a plan. 510 ILCS 77/20(g). If the owner/operator still fails to prepare and maintain a plan, they shall be fined an administrative penalty of up to \$1,000 by IDOA and be required to enter into an agreement of compliance to prepare and maintain a plan within 30 working days. 510 ILCS 77/20(g). If they fail to prepare and maintain a plan after the second 30-day period, or they fail to enter into a compliance agreement, IDOA may issue an operational cease and desist order until compliance is attained. 510 ILCS 77/20(g).

For the first violation of an odor requirement, IDOA shall send the owner/operator a written notice of the violation. 510 ILCS 77/25(d). If, after an administrative hearing, IDOA finds that the owner/operator has committed a second violation, it shall impose a civil administrative penalty not exceeding \$1,000. 510 ILCS 77/25(d). For a third violation, IDOA shall enter an administrative order directing that the owner or operator cease operation of the facility until the violation is corrected. 510 ILCS 77/25(d). The Attorney General may bring an action in the circuit court to enforce the collection of a penalty imposed under this Section. 510 ILCS 77/25(d). If a facility has not committed a violation of this Section within the five years immediately preceding the violation at issue, the violation shall be construed and treated as a first violation. 510 ILCS 77/25(d).

The owner/operator of a livestock waste handling facility operating in violation of livestock certification requirements shall be issued a warning letter for the first violation and be required to obtain a certified manager within 30 working days. 510 ILCS 77/30(g). Failure to comply with the warning letter will lead to an administrative penalty of up to \$1,000. 510 ILCS 77/30(g). The owner/operator will also be required to enter into an agreement to have a certified manager within 30 working days. 510 ILCS 77/30(g). If the failure to comply continues, IDOA may issue an operational cease and desist order until compliance is attained. 510 ILCS 77/30(g).

IDOA must hold an administrative hearing for owner/operators who fail to report a release, and if it is determined that the owner/operator violated regulations, IDOA shall assess a fine not exceeding \$1,000 for a first violation, \$2,500 for a second violation (within five years of the prior violation), and \$5,000 for a third or subsequent violation in addition to an injunction in the circuit court through the Attorney General. 510 ILCS 77/18(b)-(d). The Attorney General may bring an

action in the circuit court to enforce the collection of a penalty imposed for failing to report a release. 510 ILCS 77/18(c),(d).

Right to farm. Under the Illinois Farm Nuisance Suit Act, 740 ILCS 70/ et seq, the state's "right to farm" law: "No farm or any of its appurtenances shall be or become a private or public nuisance because of any changed conditions in the surrounding area occurring after the farm has been in operation for more than one year, when such farm was not a nuisance at the time it began operation, provided, that the provisions of this Section shall not apply whenever a nuisance results from the negligent or improper operation of any farm or its appurtenances." 740 ILCS 70/3. A separate statutory provision states that "compliance with the rules and regulations promulgated by the [Pollution Control] Board under the [Environmental Protection] Act shall constitute a prima facie defense to any action, legal, equitable, or criminal, or an administrative proceeding for a violation of the Act, brought by any person." 35 IAC 502.402.

VII. OTHER RELEVANT PROVISIONS

Incentives/Cost-shares. IDOA, in cooperation with the IEPA and the Illinois Department of Revenue, shall recommend to the General Assembly incentive programs that will provide for the abatement of state income tax or real estate tax on capital expenditures made by the facility owner for purchasing equipment that will mitigate air and water quality problems. 510 ILCS 77/45. Illinois has a Tax Certification Program, administered by the IEPA and the Illinois Department of Revenue, where various pollution control activities (including waste storage structures) reduce the property tax value for such operations. Illinois also has special lowered tax assessment values for farms which have been in existence for at least two years and for various agricultural structures, including improvements to agricultural facilities and vegetative filter strips located between farm fields and protected areas such as surface waters, streams, sinkholes, etc. 35 ILCS 200/10-110, 10-140, 10-152, et seq.

Facility Closure. When closing a livestock management facility, all surplus waste must be removed and applied to land at the rates specified in the facility's waste management plan. 510 ILCS 77/13(k). The removal of wastes must occur within 12 months after livestock production ceases. 510 ILCS 77/13(k). This provision does not apply to facilities using earthen livestock waste lagoons. 510 ILCS 77/13(k). The owner/operator must also "make provisions to prevent the accumulation of precipitation within the livestock waste handling facility." 510 ILCS 77/13(k). Once the manure is completely eliminated, the owner/operator must notify the Department of the facility's closure and waste removal. 510 ILCS 77/13(k). An inspector from the Department will examine the facility and verify that these provisions have been met or that additional actions are necessary. 510 ILCS 77/13(k). The reopening of a facility that has previously operated as a waste handling facility for four consecutive months in the past ten years is not considered a new or expanded livestock waste management facility. 510 ILCS 77/13(k). For the reopening provisions to apply, the facility must have met the provisions of 510 ILCS 77/13(k). during closing and its livestock shelters must have been left intact. 510 ILCS 77/13(k). Facilities constructed after May 21, 1996 that have closed for at least two years are required to undergo inspection and approval from IDOA before they may recommence operations. 510 ILCS 77/13(k).

Closure of livestock waste lagoons. Any earthen livestock waste lagoons removed from service must be completely emptied, and all rules relating to appropriate closure procedures must be followed. 510 ILCS 77/13(e). The remaining hole must be filled. 510 ILCS 77/13(e). The closure

requirements shall be completed within two years from the date of cessation of operation unless the lagoon is maintained or serviced. 510 ILCS 77/13(e). The Department may grant a waiver to the before-stated closure requirements that will permit the lagoon to be used for an alternative purpose. 510 ILCS 77/13(e). Upon a change in ownership of a registered earthen livestock waste lagoon, the owner shall notify the Department of the change within 30 working days of the closing of the transaction. 510 ILCS 77/13(e).

Research. IDOA shall annually request appropriations to fund environmental research projects pertinent to livestock management facilities. 510 ILCS 77/40. Priority should be given to the following: “(1) Determination of the contribution of soil applied livestock nutrient volatilization, leaching or storage in the soil and methods of application; (2) Integrated systems that maintain and enhance water quality; (3) Odor reduction and control through chemical, biological, or mechanical means; (4) Environmental quality in livestock facilities affecting owner, operator, and employee health; (5) Environmental quality that could affect residents who live adjacent to livestock facilities.” 510 ILCS 77/40.

INDIANA

I. PRIMARY APPLICABLE LAWS AND RESPONSIBLE GOVERNMENT AUTHORITY.

The Indiana *Confined Feeding Control Law*, IC 13-18-10 et seq., and the corresponding regulations in the Indiana Administrative Code, 327 IAC 16 et seq., contain an “approval” program, performance standards, and a compliance and assistance program for confined feeding operations (CFOs). The program is administered by the Indiana Department of Environmental Management (IDEM).

IDEM is currently in the process of developing a general National Pollutant Discharge Elimination System (NPDES) permit for concentrated animal feeding operations (CAFOs). The rule would require all CFOs that meet the definition of a CAFO to obtain a general NPDES permit. IDEM’s actions have been in response to a court order requiring Indiana to bring its CFO program into compliance with the NPDES requirements under the Clean Water Act. Indiana currently regulates CAFOs as point sources, and has adopted the language of 40 CFR 122 at 327 IAC 5-4-3. The new rules are expected to be adopted in 2003.

II. PERMITS AND THRESHOLDS

All confined feeding operations (CFOs) must have a valid “approval” from the Indiana Department of Environmental Management in order to operate (or close). 327 IAC 16-4-1. The approval satisfies the requirements of the Clean Water Act and acts in lieu of an NPDES permit, but applies to more operations. 327 IAC 16-1-4. “Confined feeding operation” means confined feeding of at least 300 cattle, 600 swine or sheep, or 30,000 fowl; animal feeding operations electing to be subject to the program; and any animal feeding operation that violates a water pollution law. 327 IAC 16-2-5. “Confined feeding” means that the animals are maintained at the site for at least 45 days during any 12-month period, and ground cover or vegetation is not sustained over at least 50% of the confinement area. 327 IAC 16-2-4(a). Livestock markets are excluded from the definition. 327 IAC 16-2-4(b).

An approval modification is required if an increase in manure generation reduces the storage capacity to less than the required storage capacity at the time of the most recent approval or if the animal population has risen above ACFO-defined levels. 327 IAC 16-6-1(c). Reapproval is also required if the number of animal units is more than 10% above the most recently approved capacity level. 327 IAC 16-6-1(c).

An animal or confined feeding operation may be removed from the regulated confined feeding approval program, but continue to operate as a smaller operation, if it maintains fewer animals than the definition requires. 327 IAC 16-12-2(a)-(b). The change must be approved by the IDEM Commissioner (“Commissioner”) based upon the number of animals at the CFO, any past enforcement actions regarding discharges, current compliance with any outstanding violations, and the existence of any conditions which pose a threat to human health or the environment. 327 IAC 16-12-2(a)-(b). As of January 1, 2002, there were 2,528 approved CFOs in Indiana.

III. PERMIT OVERVIEW

Public notice/review. An applicant who applies for approval to construct a confined feeding operation on land that is undeveloped or for which a valid existing approval has not been issued shall make a reasonable effort to provide notice to the local county executive or commissioner as well as each person who owns or occupies adjoining land. IC 13-18-10-2(b); 327 IAC 16-7-12. The applicant must certify compliance with notice requirements. IC 13-18-10-2(b); 327 IAC 16-7-12. Additional public comment and hearing provisions apply to CFOs that: (1) have conducted confined feeding activities and have had a discharge prior to application for an approval, (2) will have 20 times the minimum numbers that define a CFO, or (3) have had a discharge subject to an enforcement action by the agency within the previous five years. 327 IAC 16-7-13(a). In such instances, the Department provides notice to the public through a newspaper and notifies the local government officials. 327 IAC 16-7-13(b). A comment period of at least 30 days follows the notice, during which any interested persons may submit written comments and may request a public hearing. A public hearing on an approval application may be held by the Commissioner and must be held where there is a significant public interest in the application. 327 IAC 16-7-13(d).

Siting, design, and construction requirements. Siting, design, and construction requirements exist for confined feeding operations (ACFOs) and waste and manure management. Department approval is in part based upon site-specific information concerning the plans and specifications for the design of such facilities. IC 13-18-10-(1),(2),(2.1). If determined to be necessary to protect human health or the environment, the Commissioner may require additional design standards, operational requirements, or other best management practices, such as monitoring systems, liners, higher compaction, reporting, innovative technology, or other protective measures for large AFOs. 327 IAC 16-4-3(c). Existing operations are not subject to the waste management system site, design, and construction requirements of 327 IAC 16-8 but must meet all operational requirements. The use of an alternative design or compliance approach or an innovative technology not specified in the regulations may be approved at the option of the Commissioner if it meets the performance standards and all other existing environmental laws and regulations. 327 IAC 16-5-1. Specific provisions for the alternative design or compliance approach and innovative technology exception exist for manure management plans and setbacks. 327 IAC 16-7-11 (plans), 16-8-2(d), 16-10-1(e) (setbacks).

Manure management plan. A manure management plan is required. IC 13-18-10-1. The plan must: outline the procedures for soil and manure testing; map the manure application areas; and contain any supplemental information the department requires, including the features of topography, soil types, drainage course, identification and location of the nearest streams, ditches, lakes, field tiles, land application areas, manure treatment facilities; and including a farmstead plan, with the location of water wells. IC 13-18-10-2(a).

Financial assurance. There is no relevant bonding or financial assurance program in Indiana.

Permit fee. A \$100 fee is imposed for the submission of applications. IC 13-18-10-1; IAC 16-7-2.

IV. SITING AND DESIGN REQUIREMENTS

Setback requirements. Waste management systems must be located to maintain the minimum setback distances from the following features that are known and identifiable at the time of application: 1,000 feet from a public water supply well or public water supply surface intake structure; 300 feet from surface waters of the state, drainage inlets, sinkholes, and off-site water wells; and 100 feet from on-site water wells, property lines, and public roads. 327 IAC 16-8-2(a). A solid manure storage structure that contains the manure and prevents storm water from entering the structure must be maintained to have a minimum setback of 100 feet from the features listed above. 327 IAC 16-8-2. If deemed necessary to protect human health or the environment, the Commissioner will require a greater setback distance from residences and public buildings. 327 IAC 16-8-2(e).

Geophysical, land, and soil requirements. New waste management systems for liquid or solid manure must not be constructed in karst terrain, in a floodway, in a 100-year flood plain (unless all waste management system access is at least two feet above the 100-year flood plain), over mines, or in soil that is expected to be in the seasonal high water table (unless the water table is lowered to keep the water table below the bottom of the waste management system). 327 IAC 16-8-1(a). However, the Commissioner may allow an exception based upon the characterization of the soil and seasonal water table, design specifications that indicate adequate structural integrity and environmental protection, and any other information that the Commissioner deems necessary to ensure protection of human health and the environment. 327 IAC 16-8-1(b). The base of a new manure storage structure must be at least two feet above bedrock if it is not in karst terrain and at a distance above bedrock that is determined by the Commissioner if it is in karst terrain. 327 IAC 16-8-3(a). The Commissioner may require additional design standards or other protective measures if necessary to protect human health or the environment in highly permeable soils, in areas with a high water table, on steep slopes, in proximity to bedrock, or in sensitive areas. 327 IAC 16-8-3(c). To characterize a soil and seasonal water table, test holes for concrete liquid manure storage structures must be at least two feet below the base of the structures and test holes for earthen liquid manure storage structures must be at least five feet below the base of the structure for non-karst areas. 327 IAC 16-7-2(b)(5). In karst terrain or mine areas, the test holes must be made in accordance with 327 IAC 16-8-1(b)(1). 327 IAC 16-7-2(b)(5).

Government site review. Applicants must submit a plot map, farmstead plan, and a waste management system drawing, subject to detailed content requirements to IDEM. 327 IAC 16-7. The Department may conduct any inquiry or investigation it considers necessary before making a determination on the application. IC 13-18-10-2.1.

Storage capacity limits/requirements. Manure must be kept in an approved manure storage structure until removed for land application. 327 IAC 16-9-1(c). All new manure storage structures for CFOs must be designed, constructed, and maintained with a combined storage capacity of at least 180 days storage for manure, bedding, net average rainfall, and the expected rainfall and run-off from a 25-year/24-hour precipitation event that falls on the drainage area. 327 IAC 16-8-5. At any time, the Commissioner may amend the approval of a CFO due to a reduction in storage capacity to less than 180 days storage capacity. 327 IAC 16-7-5.

Technical standards. All uncovered liquid manure storage structures must be maintained with a minimum freeboard of two feet or as specified in the approval conditions. 327 IAC 16-9-1(d). They must have clearly identified markers to indicate manure levels relative to the approved freeboard elevation. 327 IAC 16-9-1(f). For new uncovered liquid manure storage structures, the

two feet of freeboard design must include the expected rainfall from a 25-year/24-hour precipitation event that falls directly on the liquid manure storage structure. 327 IAC 16-8-5(a). An emergency spillway must exist to handle overflow for precipitation run-off from a drainage area that exceeds 50% of the surface area of the manure storage structure (not including the manure storage structure surface area). 327 IAC 16-8-5(b). The emergency spillway must direct manure to a secondary containment structure, an appropriate manure storage structure, or an approved vegetative management system. 327 IAC 16-8-5(c). The spillway must also be designed to handle the run-off from a 50-year/24-hour precipitation event. 327 IAC 16-8-5(c). Manure transfer systems must be designed and constructed to prevent spills and to minimize leaks and seepage 327 IAC 16-8-5(d).

New concrete storage structures for liquid manure must be structurally sound using a well-proportioned and consolidated concrete mixture. 327 IAC 16-8-6. The design must minimize cracking, allow for properly-spaced joints, use reinforcement steel, possess a sufficiently supportive foundation, and use water stops. 327 IAC 16-8-6.

Designs for new earthen storage structures for liquid manure must be certified by a professional engineer registered in Indiana. 327 IAC 16-8-7(b)-(c). Liquid manure in such new structures must not have a seepage rate that exceeds 1/16-inch per day. 327 IAC 16-8-7(b)-(c). The Commissioner may incorporate conditions into the approval that require testing to verify that the earthen liquid waste management system is consistent with the design and meets the performance standards established by these regulations. 327 IAC 16-8-12(c). If necessary to protect the environment, the Commissioner may require additional design standards, such as monitoring systems, liners, higher compaction, innovative technology, or other protective measures. 327 IAC 16-8-7(d).

Solid manure storage structures must not be constructed in sand or gravel soils or soils with a Unified Soil Classification of Pt, GW, GP, GM, GC, SW, SP, SM, SC unless specially designed with an approved liner. 327 IAC 16-8-8(a). Run-on and precipitation must be diverted away from the solid manure storage structures unless the design includes a method to collect and manage the contaminated run-off. 327 IAC 16-8-8(b). Stockpiling of solid manure at the confined feeding operation or other animal feeding operation (ACFO) is subject to the design standards of this Section. 327 IAC 16-8-8(c). Installation of underground steel storage tanks for manure is prohibited. 327 IAC 16-8-9(a). Plastic and fiberglass tanks and aboveground steel tanks must be watertight and have sufficient strength to withstand design loads. 327 IAC 16-8-9(b). Tanks must be designed and installed to ensure the seasonal high water table is maintained below the tank, or the tank must be anchored to prevent flotation. 327 IAC 16-8-9(b). Above-ground tanks must have protected shut-off valves for all inlet and outlet pipes. 327 IAC 16-8-9(b).

For vegetative management systems, a settling basin, low velocity channel, or equivalent structure must be provided between the vegetative management system and the source of contaminated run-off or waste liquid. 327 IAC 16-8-10(a). A constructed settling basin or low velocity channel designed for the one-year/one-hour precipitation event must have sufficient capacity to store the contaminated run-off or waste liquid and the expected sediment. 327 IAC 16-8-10(a). Vegetative management systems must have minimum dimensions based on the peak outflow from the confined feeding area or settling basin based on a 25-year/24-hour precipitation event. 327 IAC 16-8-10(b). Owners/operators that plan to use a constructed wetland to control runoff and to discharge the treated effluent must comply with state and federal requirements. 327 IAC 16-8-11(b). Those who plan to use a constructed wetland but do not plan to discharge the treated effluent must

obtain approval of the design plan from the Commissioner and apply the treated effluent to the land in accordance with the manure land application requirements. 327 IAC 16-8-11(c). An alternate manure management plan approved by the Commissioner may also be used. 327 IAC 16-8-11(c).

Government approval of plans. Construction may not begin for any CFO, confinement building, or waste management system at a new or an existing operation without prior written approval from IDEM. IC 13-18-10-(1),(2); 327 IAC 16-7-1(b), 16-8-12(b). Within 30 days after construction is completed and prior to the introduction of any animals, the applicant shall send an affidavit to the Commissioner, under penalty of perjury, that the CFO or waste management system was constructed and will be operated in accordance with the has and will meet the requirements of the approval and appropriate regulations. IC 13- 8-10-2.2(a); 327 IAC 16-8-12(d).

Monitoring requirements. A mandatory operating record must contain all valid approvals, modifications, and notifications relevant to the approvals, the current manure management plan, and the current emergency spill response plan. 327 IAC 16-9-5(a). The operating record must also contain all applicable records regarding completed self-monitoring records for three years, minimum acreage records, land application records for five years, marketing and distribution records for three years, and documentation of any emergency spill response within the past five years. 327 IAC 16-9-5(b). At least once a month, the owner/operator must inspect all waste management systems and freeboards for compliance with the appropriate regulations and the approval conditions. 327 IAC 16-9-1(e). Completed self-monitoring records must be kept in the operating record. 327 IAC 16-9-1(e).

V. NUTRIENT/MANURE MANAGEMENT PLAN

Filing and maintenance of plans. In order to maintain a valid approval, all CFOs must submit a manure management plan at least once every five years to the Commissioner. IC 13-18-10-2.3; 327 IAC 16-7-4. This plan must outline the procedures for soil and manure testing and map out the manure application areas. IC 13-18-10-2.3; 327 IAC 16-7-4. A copy of the current plan must be reasonably accessible to an IDEM representative during an inspection. 327 IAC 16-7-11(g).

Nutrient standards addressed. For existing CFOs, the application of manure to land prior to April 1, 2002 must be at a rate not exceeding 150 pounds of potentially available nitrogen per acre per year for operations that have not received soil and manure test results. 327 IAC 16-6-1(e)(1). Otherwise, the application rate must be in accordance with agronomic rates for potentially available nitrogen, as documented in the operating record for operations that have received soil and manure test results. 327 IAC 16-6-1(e)(1). After April 1, 2002, all manure application must be in accordance with agronomic rates for potentially available nitrogen as documented in records at the CFO. 327 IAC 16-6-1(b)(2). In addition, the agronomic rate for potentially available nitrogen must not exceed the nitrogen requirements of current or planned crops of the upcoming growing season as documented in the operating record. 327 IAC 16-10- 2(b). Finally, the Commissioner may at any time issue an amendment to the approval of a CFO in order to address phosphorous limits if adequate information indicates that the application of manure to land represents a water quality threat. 327 IAC 16-7-5.

Limits on manure application. Refer to rates specified above. The manure application regulations do not apply to a person who applies manure from a CFO in amounts less than ten cubic yards or 2,000 gallons per year. 327 IAC 16-1-1(b). Manure management plans submitted to the

Commissioner must have a legible map of the manure application areas. 327 IAC 16-7-11(a). Manure must be staged or applied in such a manner as not to enter or threaten to enter waters of the state. Operations should be conducted in such a way as to prevent spills, run-off, and ponding for more than 24 hours and to minimize nutrient leaching beyond the root zone. 327 IAC 16-3-1(e). Manure that is staged at the manure application site for more than 72 hours must be covered or otherwise protected and applied to the site within 90 days. 327 IAC 16-10-3(a). Staging of solid manure at the manure application site is prohibited within 300 feet of surface waters of the state, drainage inlets, or water wells unless there is a barrier or surface gradient that contains or directs any contaminated run-off away from the water feature. 327 IAC 16-10-3(b). Staging is also prohibited on any standing water or waterway as well as any area with a slope greater than 6% that lacks run-on and run-off controls. 327 IAC 16-10-3(b).

A minimum number of acres for manure application must be maintained and documented in the operating record at all times based on the agronomic rates for potentially available nitrogen. 327 IAC 16-10-1(a)(1). Operations that have not received soil and manure test results may apply manure at the rate not exceeding 150 pounds/acre/yea. 327 IAC 16-10-1(a)(2). The Commissioner may approve a smaller amount of acreage if the applicant can demonstrate that it is equally protective of human health and the environment. 327 IAC 16-10-1(d). Detailed setback requirements are provided to separate manure application using various methods on differing slopes from: public water supplies (500 feet), State waters (25-200 feet), sinkholes (25-200 feet), wells (50-200 feet), drainage inlets (5-200 feet), and property lines and roads (0-50 feet). 327 IAC 16-10-4. Property line setback distances may be waived in writing by the owner of the adjoining property. 327 IAC 16-10-4(d). The owner/operator may also obtain a reduced setback for an innovative technology or an alternate design or compliance approach by demonstrating to the Commissioner that the alternate approach meets all applicable performance standards. 327 IAC 16-10-4(g).

To prevent leaks or excessive application of liquid manure, spray irrigation must be conducted with devices to detect pressure loss due to leaks and devices to shut down the system if leaks are detected or otherwise in accordance with a spray irrigation plan approved by the department. 327 IAC 16-10-3(c). Irrigation must be constantly supervised by an individual designated by the owner/operator or as otherwise specified in the approval. 327 IAC 16-10-3(c). Manure must not be applied to highly erodible land unless the land has residue protection or a crop cover or unless it is otherwise in accordance with a conservation plan. 327 IAC 16-10-3(h). Manure shall not be applied on saturated ground. 327 IAC 16-10-3(i). Spray irrigation of manure must not be applied to any land that has less than 20 inches of soil above the bedrock unless in accordance with an approved spray irrigation plan. 327 IAC 16-10-3(d). Spray irrigation in a flood plain must be conducted in accordance with a plan that has been approved by the Commissioner. 327 IAC 16-10-3(e). Spray irrigation of liquid manure to snow covered or frozen ground is prohibited. 327 IAC 16-10-3(f)(3). Surface application of manure to slopes greater than 2% without adequate residue protection or crop cover is prohibited on snow-covered or frozen ground. 327 IAC 16-10-3(f)(1). CFOs built or modified after March 10, 2002 are prohibited from applying manure to snow-covered or frozen ground, except as allowed by conditions in a valid approval. 327 IAC 16-10-3(f)(2).

Groundwater monitoring. There are no general groundwater monitoring requirements, however, the Indiana Department of Environmental Management has the authority to impose such monitoring and has done so on a case-by-case basis.

Odor and air standards. The program contains no odor or air standards. Setback regulations and local nuisance law provide the only relevant protection.

Discharges and emergency planning and reporting. Operations must be managed and conducted to avoid and minimize unpermitted discharges and nonpoint source pollution. 327 IAC 16-3-1(b). Operations must immediately take all reasonable steps to prevent spills or the discharge of manure. 327 IAC 16-3-1(c). The owner/operator of a CFO must develop an emergency spill response plan and implement it any time a spill occurs. 327 IAC 16-9-4(a). All employees involved with manure handling must be familiar with the plan which must be kept onsite in the operating record in a place accessible to all employees. 327 IAC 16-9-4. The emergency spill response plan must include the names and telephone numbers of the persons responsible for implementing the plan; areas where potential spills can occur and their accompanying drainage points; procedures to be followed in the event of a spill (including actions to contain or manage any spill of manure, identification of the proper authorities to be contacted, and mitigation of any adverse effects of the spill); identification of equipment and clean-up materials to be used in the event of a spill; and procedures for reporting the spill to the CFO owner/operator, any applicable local emergency or health authorities, and IDEM in accordance with 327 IAC 2-6.1. 327 IAC 16-9-4(c).

The owner/operator must maintain and update the following information in the operating record: the amount and type of manure applied; the date the manure was applied, the type of application method used, and the location and number of acres on which manure is applied; the results of the manure tests; soil tests and data for all manure application sites; and a determination of the agronomic rates for potentially available nitrogen used to apply manure to each field. 327 IAC 16-10-2(c). The owner/operator must provide an information sheet to any person that receives or purchases more than ten cubic yards or 2000 gallons of manure in a year from the operation unless the owner/operator takes responsibility for applying the manure. 327 IAC 16-10-5(a). The information sheet must contain the name and address of the operation providing the manure, a statement indicating that it is unlawful to allow the manure to enter State waters, information on the nutrient content of the manure, and the manure application requirements of the rule. 327 IAC 16-10-5(b). The operating record must contain updated records of any person who receives or purchases more than ten cubic yards or 2,000 gallons of manure in a year. 327 IAC 16-10-5(c).

VI. LIABILITY AND ENFORCEMENT

IDEM is responsible for enforcing the CFO statutes and regulations. The “owner/operator,” who is liable for any violations, is defined as the person who owns the waste management system, owns the livestock and applies for the approval, or is “in direct or responsible charge or control of one or more confined feeding operations or land application activity.” 327 IAC 16-2-29.

At reasonable times the Commissioner may enter the CFO premises or any area where relevant records must be kept in order to review such records; inspect any monitoring equipment or method, waste management systems, or other practices regulated under the approval; or to conduct sampling or monitoring for the purpose of evaluating evaluate compliance with the approval and relevant laws. 327 IAC 16-4-2(5).

Enforcement includes injunctive relief. IC 13-18-5. A person who violates the law is subject to the following: civil penalties not to exceed \$25,000 per day of violation (unless it involves a violation of an emergency order) [under IC 13-30-4]; criminal penalties including imprisonment

and fines up to \$100,000 per day of violation [under IC 13-30-4]; a Class C Infraction (where each day constitutes a separate infraction) [under IC 13-30-5]; and forfeiture of any vehicles involved in the violation [under IC 13-30-8]. IC 13-18-10-6. Approvals and approval conditions may be modified, revoked and reissued, or revoked prior to the expiration of the term for violating the conditions set forth in the approval, the statute and rules adopted under it, the water pollution control laws and rules, and as needed to prevent discharges of manure into the environment that pollute or threaten to pollute the waters of the state. IC 13-18-10-2.1(e); 327 IAC 16-7-2(c), 16-7-3(a), 16-7-6(a).

However, if the CFO at issue has a valid approval, violations of the operational requirements or land application of manure requirements are not subject to enforcement action if the violation: (1) has not caused a discharge to waters of the state or a release of manure that has crossed a property boundary; (2) is corrected immediately or within a reasonable time frame as specified in a written notification of the violation by a department representative; (3) is not the same type of violation as a violation that occurred within the previous five years; and (4) is not one of multiple concurrent violations that represent a threat to the environment. 327 IAC 16-4-4.

Right to farm. Under Indiana's right to farm law, agricultural operations and their appurtenances are insulated from public and private nuisance actions (but not enforcement actions) by virtue of changed conditions in the vicinity if they have operated for more than one year, were not a nuisance when they began, and there was no significant change in the hours or type of operation. IC 32-30-6-9(d). The exception does not apply if the nuisance results from a negligent operation. IC 32-30-6-9(a).

During 2000, 1120 sites were inspected by the Agricultural and Solid Waste Compliance Section, of which 316 were active. 76% of the inspections at active sites revealed no violations; 11% revealed maintenance concerns that were recommended for correction; 7% revealed discharges or imminent threats of discharges resulting in the issuance of Letters of Warning (but not fines or penalties); and 6% revealed significant or repeated discharges and resulted in referrals to the Office of Enforcement. During 2001, 1064 sites were inspected, 782 of which were active. Of the active sites: 85% revealed no violations; 12% revealed maintenance concerns; 2% revealed discharges or imminent threats of discharges (resulting in Letters of Warning); and 1% revealed significant or repeated discharges (and were referred to the Office of Enforcement). Indiana has approximately 15 inspectors who do on-site compliance work for feeding operations, landfills, sewage facilities, etc.

VII. OTHER RELATED PROVISIONS

Incentives/cost-shares. IDEM is charged with establishing a compliance and technical assistance program for owners and operators of confined feeding operations that may be administered by the department, a state college or university, or a contractor. IC 13-18-10-2.6.

MARYLAND

I. PRIMARY APPLICABLE LAWS AND RESPONSIBLE GOVERNMENT AUTHORITY

The Maryland Department of the Environment (MDE) administers the discharge permit program for concentrated animal feeding operations under the Maryland State Code Annotated (MSCA), Environmental Article, Section 9-319 et seq. The applicable permit regulations are located at the Code of Maryland Regulations (COMAR) 26.08.04. Other requirements are located within the actual General Discharge Permits for CAFOs [hereinafter “General Permit”], available at http://www.mde.state.md.us/assets/document/permit/af_per.pdf (visited January 30, 2003).

Maryland also has a law enforced by MDE that makes it unlawful “for any person to add, introduce, leak, spill, or otherwise emit soil or sediment into waters of the State,” except as authorized by a permit or an agricultural soil conservation and water quality plan. MSCA Env. 4-413(a). The law is largely administered by local Soil Conservation Districts (“Districts”) under the Agricultural Sediment Pollution Control regulations at COMAR 26.17.03.

Under Maryland's 1998 *Water Quality Improvement Act*, the Maryland Department of Agriculture (MDA) administers a mandatory nutrient management plan program under the MSCA Agricultural Article, Section 8-801 et seq. The applicable regulations are located at COMAR 15.20.

II. PERMITS AND THRESHOLDS

MDE has authority “to issue, modify, or revoke orders and permits that prohibit discharges of pollutants into waters of the state.” MSCA Env. 9-319(a)(7). MDE may also require a discharge permit prior to the construction, modification, or operation, of any activity that might discharge pollutants into waters of the state. MSCA Env 9-323. A general or individual discharge permit, which also acts as a National Pollutant Discharge Elimination System (NPDES) permit, is required for concentrated animal feeding operations (CAFOs) with: a) more than 1000 animal units (AU) or 55,000 turkeys; b) at least 30,000 chickens producing a minimum of 85% liquid waste stream; c) AFOs which have been or are a threat to surface water quality because confined animals come into direct contact with surface waters. COMAR 26.08.04.09(N)(2); General Permit at 1. A general or individual discharge permit is also required upon MDE’s determination, after a site inspection, that a wastewater discharge into State waters “through a man-made conveyance (including spray irrigation)” is likely because the AFO has greater than 300AU and a discharge is likely or “because the means of wastewater conveyance and site conditions including slope, lack of vegetative cover, and proximity to surface waters are likely to cause a discharge, and because water quality violations or the likelihood to discharge have previously been documented.” COMAR 26.08.04.09(N)(2); General Permit at 1. AFOs not meeting the criteria above do not require permits. COMAR 26.08.04.09(N)(1)(b). Also, the general permit does not cover discharges from feedlots for ducks, which may be permitted individually. COMAR 26.08.04.09(N)(1)(b). As of September 2001, Maryland had issued seven general permits and four or five individual permits.

Owner/operators of CAFOs required to obtain a permit must submit a Notice of Intent (NOI) to be covered under the general permit terms. Coverage under the permit is effective on the

date MDE accepts the NOI (along with its fee payment). A 20% or greater increase in animal units, process modifications, or any other factor which will result in an increased discharge must be reported to MDE along with a new NOI and appropriate fee. General Permit p.6. Owner/operators must consult their Soil Conservation District concerning changes in herd or flock size, animal wastewater handling methods, or runoff management, and make any necessary adjustments in their facilities or operation within 60 days of the district's request. General Permit p.10.

MSCA Env. 4-413 et seq., affects animal operations of all sizes since it requires all persons engaged in "agricultural land practices" to obtain a "soil conservation and water quality plan" (SCWQP) approved by the Soil Conservation District. MSCA Env. 4-413(b). The SCWQP must meet the requirements of the Maryland Technical Guide (Soil Conservation Service, United States Department of Agriculture, October, 1993) and the National Conservation Planning Manual (Soil Conservation Service, United States Department of Agriculture, June, 1978), which are incorporated by reference into the applicable regulations. COMAR 27.17.03.04. The general requirements of COMAR 26.17.03 must also be met. Compliance with the SCWQP is enforced by MDE.

As required by the Water Quality Improvement Act, and administered by MDA, all agricultural operations that have at least 8AU (1AU = 1000 pounds of live weight) or that gross at least \$2500 annually must obtain and implement a "nutrient management plan" (NM plan). Each plan must be developed in consideration of the following factors: level of bioavailable nitrogen (N) and phosphorus (P) in the soil and all fertilizer materials; the level of N and P needed to achieve expected crop yield based on soil productivity, soil erodability and nutrient retention capacity, the best reasonable scientific methods adopted by MDA and University of Maryland Cooperative Extension Service (UM Extension), and existing best management practices. Agr. 8-801(a). The plan must be prepared by a certified Nutrient Management Consultant and revised every three years. Agr. 8-802; COMAR 15.20.07.05(d). Conditions specified in NM plans are mandatory despite being labeled "recommendations." Operations that use chemical fertilizers, sludge, or animal manure must obtain and comply with a NM plan by the deadlines specified in Agr. 8-803.1(f) (see Table 3.1 below). NM plans must be modified if there is a 10% increase in acreage, an increase of 30 acres, or a 10% increase in the number of animal units "requiring significant management adjustments." COMAR 15.20.08.04(G).

Table 3.1. Deadlines for creation and compliance of nutrient management plans based on type of operation. [Agr. 8-803.1(f)]			
Type of operation	Nutrient	Deadlines	
		Plan development	Plan compliance
Involving chemical fertilizers	N & P	December 31, 2001	December 31, 2002
Involving sludge or animal manure	N	December 31, 2001	December 31, 2002
Involving sludge or animal manure	P	July 1, 2004	July 1, 2005

III. PERMIT OVERVIEW

Public notice/review. Upon receiving a permit application, MDE must publish a notice for two consecutive weeks in a local daily or weekly newspaper with general circulation in the area.

COMAR 26.08.04.01-1(D)-(E). The notice shall include the name of the applicant, type of permit, and location, type, and volume of the proposed discharge and be published at the applicant's expense. COMAR 26.08.04.01-1(D)-(E). MDE may also require that notice be posted at the site of the proposed discharge or at public facilities in the area of the proposed discharge. COMAR 26.08.04.01-1(E)(3). The discharge permit application, related public comments, and other supporting information shall be made available to the public for inspection and copying. COMAR 26.08.04.01-1(E)(6). MDE must maintain lists of concerned persons, agencies, and groups to which notice concerning discharge permits should be sent. COMAR 26.08.04.01-1(E)(4). Upon written request, MDE must hold an informational meeting to discuss the application within ten working days of the publication of a notice. COMAR 26.08.04.01-2(A)(1)-(2). An information meeting may be held at MDE's discretion. COMAR 26.08.04.01-2(A)(1)-(2). The Department may require the applicant to attend all informational meetings and present information concerning the application. COMAR 26.08.04.01-2(A)(4). Notice of such informational meetings must also be published in the manner specified above. COMAR 26.08.04.01-2(A)(5). MDE must publish notice of its tentative decision regarding the application, and, upon written request, hold a public hearing on its decision within 20 days of its published notice. COMAR 26.08.04.01-2(B)(1)-(6). MDE initially prepares a tentative determination on the permit application, which becomes final unless one of several conditions is met. COMAR 26.08.04.01-3(A)(1). MDE must prepare a final determination if one or more of the following conditions apply: (a) Comments opposing the tentative determination are received 30 days after that initial decision is published; (b) Unfavorable comments are received in writing five days after a public hearing; (c) Adverse comments are recorded at the public hearing; or (d) in the case that the final determination differs significantly from the tentative decision, all constituents who may be affected by the final determination have not officially waived their right to request a case hearing. COMAR 26.08.04.01-3(A)(2). If MDE is required to prepare a final determination, it must also publish notice and hold meetings as specified above. COMAR 26.08.04.01-3(B)(1)-(3).

Site, design, and construction requirements. All facilities must comply with "best management" practices and plans that cover design, construction, and maintenance. Agr. 8-703(c); General Permit p.11. The best management plan must be prepared and approved by the local Soil Conservation District. Agr. 8-703(c); General Permit p.11. New facilities must be designed and built in accordance with a "Waste Management System Plan" as a part of the SCWQP and be certified upon completion by the Soil Conservation District. General Permit p.9. New waste treatment and storage facilities must meet the requirements of NRCS 312 and 313, waste storage ponds must meet NRCS 425, and waste treatment lagoons must meet NRCS 359. General Permit p.9.

Manure management plan. Permitted CAFOs must operate in accordance with a "Waste Management System Plan" which must be approved by the local Soil Conservation District as a part of the SCWQP. General Permit p.8. The plan must be available on site for inspection, and must conform with the requirements of the Maryland Technical Guide and the National Conservation Planning Manual. COMAR 26.17.03.06(A). The plan must also meet the requirements of the USDA NRCS Waste Utilization Standard 633, USDA NRCS Irrigation Water Management Standard 449, and COMAR 15.20.04.09-10 for nutrient management planning. General Permit p.8-10.

In addition, Maryland's Water Quality Improvement Act requires all agricultural operations that have at least 8AU (where 1AU = 1000 pounds of live weight), or that gross at least \$2500

annually to obtain and implement a “nutrient management plan” (NM plan) prepared by a certified preparer. In order to become a certified Nutrient Management Consultant, a person must apply to MDA, pay the appropriate fee, pass the relevant examination, and meet the educational requirements (including passing the relevant examination). Agr. 8-803(a)-(b). The certificate must be renewed annually with a fee. Agr. 8-803(e)-(f). Consultants are required to “advise operator[s] when manure management changes, such as improved stockpiling or storage facilities, would minimize the potential for nutrient loss or runoff or improve nutrient use efficiency and proper timing of manure utilization.” COMAR 15.20.08.05(I).

Financial assurance. Maryland has no financial assurance program.

Permit fee. MDE may set appropriate application and permit fees by rule. MSCA Env. 9-325. General CAFO Permit “Notice of Intent (NOI) fees” are based upon the average daily discharge volume listed in the Table 3.2.

Table 3.2. NOI fees for general CAFO Permits. (COMAR 26.08.04.09-1(J), MDE Notice of Intent Form, General permit p6)	
Average daily discharge (gallons/day)	Fee (\$)
< 1000	100
1,000-5,000	200
5,001-50,000	300
50,001-100,000	400
100,001-250,000	1,000
250,001-1,000,000	2,000
> 1,000,000	4,000

In addition to the NOI fee, permittees with more than 300AU must submit an additional “discharge permit fee” for facilities discharging less than 5,000 gallons per day, as outlined in Table 3.3. This one-time payment should be submitted in the second year of the five-year permit term, except for facilities which discharge more than 5,000 gallons a day, in which case the fee must be paid annually. (General Permit p.6)

Table 3.3. Discharge permit fees for CAFO permits. (General Permit p.6)	
Average daily discharge (gallons/day)	Fee (\$)
< 1,000	500 (one-time)
1,000-5,000	2,000 (one-time)
5,001-50,000	1,000 (annually)
50,001-100,000	2,000 (annually)
100,001-250,000	3,000 (annually)

Collected permit fees are deposited into the Maryland Clean Water Fund, which is used to identify, monitor and regulate discharges into waters of the state. COMAR 26.08.04.11. Finally, certification

of individuals and licensing of businesses as Nutrient Management Consultants follows the fee schedule defined in Table 2.4.

Table 3.4. Fees associated with certification and licensing of Nutrient Management Consultants. (Agr. 8-806)	
Type of certification	Fee
Consultant certification for individual license or sole proprietorship	\$50
License for corporation or partnership	\$100
Annual renewal	\$50 (+ full cost of any MDA-required training)

All monies are paid into the Maryland Agricultural Water Quality Cost Share program. Agr. 8-806.

IV. SITING AND DESIGN REQUIREMENTS

Setback requirements. Local zoning laws are the primary source for general setback requirements for AFOs, as the regulations merely state that “[a]gricultural buildings shall have the minimum setback required for residential buildings,” COMAR 8.15.02.06. Uncontaminated storm water must be diverted away from animal waste storage areas, all drainage and sediment from the AFO area must be contained and prevented from entering surface waters, and confined animals must be prevented from direct contact with surface waters. General Permit p.11.

Geophysical, land, and soil requirements (land area, slope, groundwater zones, etc). Maryland does not have such regulations outside of the restraints on feeding operation animals in contact with State waters and the limitations of the waste management plan prepared as part of the district soil conservation and water quality plan.

Government site review/appraisal. There is no site review/appraisal outside of the application process.

Storage capacity limits/requirements. All wastewater treatment and storage systems must be operated and maintained under the USDA Natural Resources Conservation Service (NRCS) Waste Management System Standard 312. General Permit p.8. Prior to distributing wastewater, the permittee must provide a waste storage facility which meets the requirements of NRCS standard 425 for waste storage ponds, NRCS 359 for waste treatment lagoons, or NRCS 313 for agricultural waste storage facilities. General Permit p.9. The facility must be sufficient to prevent surface discharge except in the case of a 25-year, 24-hour storm. General Permit p.9. Permittees must maintain sufficient freeboard in the lagoons to hold the runoff at all times, except in a 25-year, 24-hour storm. General Permit p.13.

Operators with a NM plan who use “chemical fertilizer, animal manure, or biosolids” must address manure containment and management in order to prevent or minimize any threat to water quality. COMAR 15.20.07.05(A). Consultants and NM plans will evaluate waste handling, identify potential improvements, and potentially set up a schedule of implementing the improvement measures. COMAR 15.20.08.03, 15.20.08.04(I). Animal operations may use a Manure Management Evaluation Form under COMAR 15.20.07.03, Section III-D, Nov. 1999, which assesses their need for modification with questions and a point scale for responses.

Technical Standards. Permitted CAFOs may discharge only under 25-year, 24-hour storm event standard. All earthen embankment structures must be inspected weekly for structural stability, and the outer embankment must be kept free of shrubs and trees. General Permit p.8. Lagoon bottoms and the inner slopes of embankments must be lined with impervious material such as clay, bentonite, or other sealing material to preclude pollution of ground water by seepage. General Permit p.10. The permeability of the liner must be 10^{-7} cm/sec or less with a minimum thickness of two feet. General Permit p.10.

Government approval of plans. Maryland relies on the waste management plan prepared by the soil conservation district. All new manure management facilities must be certified upon completion by the local soil conservation district. General Permit p.9.

Monitoring requirements. Permitted discharges are subject to any MDE monitoring requirements. COMAR 26.08.04.03(A). Permittees must maintain monitoring records and results on site for at least three years; and a report summarizing the facility's wastewater, irrigation, noncompliances, and groundwater monitoring must be annually submitted to MDE. COMAR 26.08.04.03(B),(C); General Permit p.11,13. For each required measurement or sample taken, the permittee must record the exact place, date, and time of sampling or measurements and/or analyses; the person(s) who performed them; and the analytical techniques or methods used and their results. General Permit p.11. Permittees must periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation to insure accuracy of measurements. General Permit p.11. MDE may also require additional monitoring of effluent, soils, and/or monitoring wells if it determines that the waste management plan is not being adhered to or is insufficient to protect water quality. General Permit p.11. Finally, Soil Conservation Districts or MDA must monitor cost-share recipients to ensure that they are in compliance with the cost-share agreements.

V. NUTRIENT/MANURE MANAGEMENT PLAN

Filing and maintenance of plans. The "Waste Management System Plan" under the SCWQP is maintained by the permittee, who must make it available on site for inspection. COMAR 26.17.03.05(B); 26.17.03.08(C); General Permit p.8. The nutrient management plan is maintained by the owner/operator for implementation, but it is also filed and maintained by MDA. Agr. 8-801(b)(1). MDA maintains the plan for three years and must protect the identity of the owner/operator during that time. Agr. 8-801(b)(3); COMAR 15.20.07.06(A).

Nutrient standards addressed. The recommendations in the NM plan must be consistent with MDA standards and the Maryland Nutrient Management Manual. COMAR 15.20.08.05(A). The conditions are based on the nutrient rates, expected crop yield or production goal, and soil analysis results which should include tests for nitrogen, phosphorus, potassium, calcium, magnesium, manganese, copper, zinc; boron and sulfate sulfur. COMAR 15.20.08.05(A)-(D). Various steps must be taken if the phosphorus fertility index value (FIV) is 150 or more. COMAR 15.20.08.05(E).

Limits on manure application (timing and amounts). Distribution of treated wastewater may not take place during periods of precipitation, high winds, freezing conditions, or saturated soil. General Permit p.9. Permittees must maintain a buffer zone that is at least 50 feet from waters of the State, including intermittent streams. General Permit p.9. Permittees must include a buffer zone

that is 200 feet from the wetted perimeter of the spray irrigation site to property lines in open area or 100 feet in an area with a tree buffer, 500 feet from the wetted perimeter of the spray irrigation site to houses or other occupied structures in open area or 250 feet in an area with a tree buffer, and 50 feet from State waters, including intermittent streams, or as approved by MDE as suitable to control the movement of spray onto adjacent land. General Permit p.9. Permittees must prevent animal wastewater in spray or drop irrigation from entering adjacent properties through either direct application, runoff, or wind carry-over. General Permit p.9. Owner/operators must maintain daily irrigation data on site that describes the area(s) under irrigation, the application rates and times, instances of ponding or runoff, and weather conditions. General Permit p.9. The irrigation data must be made available for inspection. General Permit p.9. The annual average hydraulic loading rate may not exceed two inches per week, and animal wastewater applied may not exceed the long term soil infiltration rate or result in surface runoff or ponding. General Permit p.9.

“Nutrient application shall be made to minimize N and P losses to waters and N volatilization losses to the atmosphere,” and each NM plan must include a “recommended” nutrient application rate which the owner/operator may not exceed. COMAR 15.20.07.05(B), 15.20.08.05(G). Timing for nutrient applications must “be as close to plant nutrient uptake periods as possible; maximize plant utilization efficiency and minimize the potential for nutrient movement; and be consistent with guidelines contained in the Maryland Nutrient Management Manual.” COMAR 15.20.08.05(H). Persons who apply “nutrients for hire to land used for agricultural purposes” must obtain or work under the supervision of a certified or licensed Nutrient Management Consultant. Agr. 8-803.2; COMAR 15.20.04, 15.20.06. Persons who do not apply nutrients for hire but who apply nutrients to at least ten acres of land must complete an educational program in nutrient application every three years. Agr. 8-803.3. License holders must annually file and submit a record which includes the number of NM plans completed, the location (by county and watershed area) and acreage of the application area, the timing of the application, the type and amount of nutrients/fertilizer applied, and soil test results (for non-agricultural applications). COMAR 15.20.04.11A. The NM plan must include all of the above information for each application area, be kept for at least five years, and made available to MDA upon request. COMAR 15.20.04.11B, 15.20.08.04(E). MDA may deny, suspend, or revoke any certificate for a violation of any regulation, subject to the Administrative Procedure Act. Agr. 8-805.

Groundwater monitoring. MDE will require the installation and sampling of groundwater monitoring wells if groundwater quality is likely to be impacted, such as in areas of very sandy soil, high water tables, highly concentrated wastewaters, or highly fractured bedrock. General Permit p.10. If a monitoring well is required, two ground water monitoring wells must be installed for the sampling of ground water. General Permit p.10. One must be upgradient and the other downgradient from the irrigation site. General Permit p.10. The monitoring wells must be installed, operated and maintained in accordance with COMAR 26.04.04, and the analytical methods used must conform with Title 40 Code of Federal Regulations Part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants." General Permit p.10. Each monitoring well must allow for the proper evacuation and sampling of ground water, and prior to a sampling, the volume of water equal to 300% of the wetted volume of the casing and screen must be evacuated. General Permit p.10. The permittee must sample the monitoring wells for total nitrogen, Ph, and fecal coliform and submit the results to MDE. General Permit p.10. Monitoring wells must be installed three months prior to the start-up of the land treatment facility and permittees must analyze one sample each month from each of the monitoring wells within the three-month period.

General Permit p.10. When the land treatment facility's operations begin, the sampling frequency is extended to one sample from each well to every three months. General Permit p.10.

Odor and air standards. Maryland does not have any specific odor and air standards for CAFOs, but, however, they must be operated at all times to minimize offensive odors from escaping the facility boundaries and to prevent the facility from becoming a public nuisance. General Permit p.9. In addition, MDE investigates nuisance and odor complaints and maintains a list of the facilities which have been investigated.

Discharges and emergency planning and reporting. Except as permitted by law, no person may discharge any pollutant, including any waste or wastewater regardless of volume, into State waters. MSCA Env. 9-322; COMAR 26.08.04.02(B)(2). Permittees must take all reasonable steps to minimize or prevent any adverse impact to State waters or to human health resulting from noncompliance with any permit conditions. General Permit p.12. Wastes such as solids, sludge, or other pollutants must be disposed of in a manner that prevents runoff from entering the State waters. General Permit p.13. Discharges which do not comply with permit requirements must be reported to MDE within 24 hours of discovering the violation. General Permit p.11-12. Within five days, the permittee must provide MDE with the following information in writing: a description of the noncompliant discharge, including its impact on the receiving water; the cause of the noncompliance and its anticipated duration; steps taken to eliminate the noncompliant discharge; steps planned or implemented to prevent the recurrence of the noncompliance; and a description of the permittee's accelerated or additional monitoring to determine the nature and impact of the noncompliant discharge. General Permit p.12. The permittee must collect a grab sample of any surface discharge, including overflows or spills from waste storage structures or runoff from spray fields, and analyze for fecal coliform bacteria, biochemical oxygen demand, total suspended solids, ammonia nitrogen, and any pesticide which the operator has reason to believe could be in the discharge. General Permit p.12. The permittee must report the monitoring results to MDE within 30 days of the discharge. General Permit p.12. If unable to collect samples of the discharge, the permittee must document the reasons why they were unable to do so. General Permit p.12.

VI. LIABILITY AND ENFORCEMENT

MDE Enforcement. Issuance of a discharge permit is contingent on the applicant allowing MDE to enter the premises "at any reasonable time to inspect and investigate for violation or potential violation of any condition of the permit." MSCA Env. 9-326. Permittees must give MDE any information the Department requests to determine permit compliance. General Permit p.14. Maryland has approximately five inspectors who deal specifically with agricultural water pollution issues.

Even with permitted CAFOs, MDE does not waive or surrender its right to proceed in administrative, civil, or criminal action for any violations of State law or regulations. General Permit p.13. In addition, the permit does not preclude any legal action or relieve the permittee from any civil or criminal responsibilities, liabilities, or penalties for noncompliance with Title 9 of the Environment Article ["no discharge" provision], or any local or State law or regulation. General Permit p.13. If MDE documents any water quality violations or any threat to water quality, the operator must consult the district for a review of existing systems and practices. General Permit p.10. MDE will review the district's recommendations and require additional measures as necessary to monitor and protect water quality. General Permit p.10.

MDE must investigate any reports of agricultural sediment pollution in violation of a SCWQP. MSCA Env. 4-413(b); COMAR 26.17.03.05(A)(1). On average MDE has received about 50 agricultural waste complaints per year. MDE may not impose penalties for violations of MSCA Env. 4-413(b) if the person is operating under a valid SCWQP unless the agricultural practices in violation are not those described in the plan, the conservation practices in violation were not properly constructed or implemented, or the agricultural practices that caused the violation of the conservation practices were not in an area included in a plan or not implemented or constructed in accordance with a plan. COMAR 26.17.03.03. MDE may issue a written complaint and/or an order to the violator correct the problem and require that the violator “obtain district-approved modifications [to the plan]... to reflect changes in agricultural operation, pollution problems, and site conditions.” COMAR 26.17.03.05(A). All sediment violations must be addressed by the preparation of a “corrective action water quality plan” (CAWQP) which must be approved by the district and filed/maintained by the owner/operator. COMAR 26.17.03.05-07; 26.17.03.08(C).

Whenever MDE believes a violation has occurred under an applicable law or regulation, it shall serve the alleged violator with a written complaint, which specifies the legal provisions allegedly violated and the alleged fact that constitutes the violation. MSCA Env. 9-344; 4-412(a); COMAR 26.08.04.10-1(A)(1). Subsequent to or concurrent with service of the complaint, MDE may: (1) issue an order requiring necessary corrective action be taken within the time prescribed in its order; (2) require the alleged violator to file a written report regarding the alleged violation; (3) require the alleged violator to appear before MDE to answer the charge outlined in the complaint; (4) require the alleged violator to file a written report and appear before MDE. Env. 9-335; 4-412(a); COMAR 26.08.04.10-1(A)(1)(a)-(d). Any person named in the order may request in writing a hearing before MDE not later than ten days after the date the order is served, in which case a hearing shall be scheduled within ten days from receipt of the request and a decision shall be rendered within ten days from the date of the hearing. MSCA Env. 9-337(b); 4-412(a)(1). If MDE exercises (2), the alleged violator may request in writing a hearing not later than ten days after the date that notice is served. MSCA Env. 9-337(c); 4-412(a). The appearance of the alleged violator before MDE under the options provided by paragraph (3) or (4) constitutes an administrative hearing. MSCA Env. 4-412(a); COMAR 26.08.04.10-1(A)(4). If MDE exercises (2), (3), or (4), it may not issue an order requiring corrective action to be taken before expiration of the time set for filing any report and holding any hearing required under these paragraphs. MSCA Env. 9-338(b); 4-412(a); COMAR 26.08.04.10-1(A)(6). A person is not entitled to a hearing before MDE as a result of this order. MSCA Env. 9-338(b)(3); 4-412(a). Every order shall be served on the person and become effective immediately according to its terms upon service. MSCA Env. 9-336; 4-412(a); COMAR 26.08.04.10-1(A)(2). A person aggrieved by an order may obtain immediate judicial review. MSCA Env. 9-340; 4-412(b). If a witness refuses to obey a notice of hearing or subpoena, any circuit court, upon MDE’s application, may issue an order requiring the person to appear, testify, or produce evidence as required; and the failure to obey a court order may be punished by the court as contempt. MSCA Env. 4-412(c). If the violation is not corrected within the time specified in the order, MDE shall refer it to the Attorney General, who, in addition to any other action taken or which he elects to take against the violator, shall take appropriate legal action to require correction of the violation. MSCA Env. 4-415.

MDE or the State Attorney General (at the request of MDE for SCWQP-related actions) may bring an action for an injunction for any violation of an environmental law concerning agricultural operations. MSCA Env. 9-339; 9-342(a); 9-344; 4-416(a). Persons who violate a

permit, a SCWQP, or a related law or regulation are guilty of a misdemeanor and subject to a maximum fine not exceeding \$25,000 (for a permit-related violation) or \$50,000 (for a SCWQP-related violation) and/or imprisonment not exceeding one year..MSCA Env. 9-343(a)(1)(i) 4-417(b). Subsequent Repeat offenses are punishment by a fine not exceeding \$50,000 per day of violation and/or two years imprisonment. MSCA Env. 9-343(a)(1)(ii); 4-417(b). Persons who knowingly make any false statement, representation, or certification in a permit or a soil conservation and water quality plan, or who falsify, tamper with, or knowingly render inaccurate any required monitoring device or method shall be subject to a fine not exceeding greater than \$10,000 and/or six months imprisonment. MSCA Env. 9-343(b); 4-417(c); General Permit p.13.

In addition to the criminal penalties, violators may be enjoined from continuing the violation and are liable under a civil action brought by MDE for a maximum penalty of \$10,000 for a permit violation and \$25,000 for a SCWQP violation. MSCA Env. 9-342(a); 4-417(a). Each day may be regarded as constituting a separate offense. MSCA Env. 9-342(a); 4-417(a). In addition to any other remedies available at law or in equity, an additional civil penalty may be assessed by MDE for permit or SCWQP-related violations after an opportunity for a hearing. MSCA Env. 9-342(b); 4-417(d). The civil penalty may be up to \$1000 for a permit violation and \$10,000 for an SCWQP violation. Env. 9-342(b); 4-417(d); General Permit p.13. Civil penalty may be charged for each day of violation but may not exceed a total sum of \$50,000 or \$100,000, respectively. Env. 9-342(b); 4-417(d); General Permit p.13. Consideration will be given to the willfulness of the violation, the damage or injury done, the cost of clean-up, the available technology and economic reasonableness of preventing or controlling the damage at the time, and other relevant factors. MSCA Env. 9-342(b); 4-417(d); General Permit p.13.

In emergency circumstances where there is imminent danger to the public health, welfare, or the environment, the Attorney General (on behalf of MDE) may institute a civil action for an immediate injunction to halt any pollution or other activity causing the danger. Env. 4-416(b). In such situations, MDE may also summarily modify or suspend a permit. COMAR 26.08.04.10-1(C). MDE must notify the permittee in writing that the permit has been modified or suspended for emergency reasons, and that the permittee has the right to a hearing concerning MDE's action. COMAR 26.08.04.10-1(C)(3). Emergency modifications or suspensions of permits are “effective without stay upon receipt by the permittee of the appropriate notice.” COMAR 26.08.04.10-1(B).

Nutrient Management Plans. MDA has a right to enter the property of all nutrient management plan holders so long as it does so “in daylight hours at a reasonable time that allows the property owner/operator the opportunity to be present.” and attempts to “minimizes any inconvenience to the farmer.” MSCA Agr. 8-801(b)(2). Soil Conservation Districts shall also occasionally inspect the projects of cost-share beneficiaries. COMAR 15.01.05.09. Approximately 5-10% of farms will be inspected annually to verify their compliance with their NM plans. Persons failing to install best management practices under a cost-share agreement are liable for the full amount of cost-share funding that was allocated to the project. COMAR 15.01.05.12.

Persons who fail to obtain a timely NM plan will receive notice from MDA that they are in violation and, if not corrected within a reasonable time, will be fined a maximum of \$250. MSCA Agr. 8-803.1(h). Persons who violate a NM plan will receive a warning from MDA for a first violation, and will be fined up to \$100 for each subsequent violation, to a maximum of \$2000 per operator per year. MSCA Agr. 8-803.1(i). Persons who violate the commercial fertilizer application provisions under 8-803.4 are subject to a civil penalty no greater than \$1000 for the first violation

and \$2000 for each subsequent violation. Agr. 8-803.4(c). Penalties shall not exceed \$10,000 per operator per year. MSCA Agr. 8-803.4(c). A violation of the Nutrient Management Consultant certification and licensing provisions may result in a fine up to \$250. MSCA Agr. 8-802. Each day of violation is a separate violation, and the penalty amount will be based on the willfulness and recurrence of the violation, actual harm done, and available technology and economic difficulty in preventing the harm. MSCA Agr. 8-803.1(i)(2)-(3), 8-803.4(c)-(d). Violations concerning a NM plan may also result in the denial and/or mandated repayment of cost share fund. MSCA Agr. 8-803.1(j). All penalties are paid into the Maryland Agricultural Water Quality Cost Share program. MSCA Agr. 8-803.1(i)(4), 8-803.4(e).

Fish Kill Law. Under Maryland's fish kill provisions, persons responsible for a "discharge" or "spillage" which kills fish or other aquatic life must "immediately clean up and abate the effects of the spillage and restore the natural resources of the State." MSCA Env. 4-405(c). If MDE believes a suit is appropriate, the State Attorney General will bring suit, and violators "shall be jointly and severally liable for the reasonable cost of rehabilitation and restoration of the resources damaged and the cost of eliminating the condition causing the damage, including the environmental monetary value of such resources." MSCA Env. 4-405(c).

Right to farm. Maryland's right to farm provision protects operations that have existed for at least one year, have not been conducted in a negligent manner, and have been "in compliance with all applicable federal, State, and local health, environmental, zoning, and permit requirements relating to any nuisance claim..." MSCA Lim., Proh. Acts. & Imm. 5-403(c). Such operations are not considered to be a public or private nuisance, and private actions concerning the operation's interference with the enjoyment of private or public property may not be sustained. MSCA Lim., Proh. Acts. & Imm. 5-403(c).

VII. OTHER RELEVANT PROVISIONS

Incentives/Cost-shares. MDA and MDE are required to jointly promulgate rules and regulations for the administration of the Maryland Agricultural Water Quality Cost Share Program. MSCA Agr. 8-701 - 705, 8-803.1(d). Soil Conservation Districts are charged with providing technical assistance as well as the preparation and approval of "best management" plans which include design, construction, and maintenance. MSCA Agr. 8-703(c). MDA and MDE must identify watershed areas with high potential soil erosion, sediment and animal waste movement, or agricultural chemical movement into surface waters of the state. MSCA Agr. 8-703(a). Farmers in designated priority areas who want a non-governmental consultant to develop their NM plan may be eligible for cost-share assistance of up to 50% of certain first-time NM plan costs and 25% of updating an NM plan (in no case exceeding \$3/acre), such as soil testing; or up to \$75,000 per farm per person for animal waste storage and treatment facilities. COMAR 15.01.05.03(A)-(B), 15.01.05.10. NM plans developed for sludge application are not cost-share eligible. Farms in these areas may be eligible for cost sharing of up to 87.5% (not to exceed \$75,000) of installing best management practices certified by a district. MSCA Agr. 8-704(a); COMAR 15.01.05.03-08. Farmers who receive cost share assistance must implement the NM plans immediately (not by the delayed dates above) and seek MDA approval of "design, construction, maintenance, and other plans for the project." COMAR 15.01.05.03-08. It is also possible to obtain cost shares for "projects" which are not NM plans. COMAR 15.01.05.04(B). Persons failing to establish best management practices must refund the full amount of the cost share for the practice not implemented, and at the

request of MDA, the State Attorney General may enforce the terms and conditions of all cost share agreements. MSCA Agr. 8-705.

Maryland also has a system of tax credits for agricultural operations. Until Jan 1, 2009, an individual or corporation which incurs certified commercial fertilizer costs necessary to convert agricultural production to a nutrient management plan may claim, for up to three consecutive years, a credit against the State income tax for up to 50% of costs (not to exceed \$4500/year). MSCA Tax 10-704.9. In addition, counties may offer up to a 50% tax credit against property tax imposed on real property used for agricultural purposes so long as it is operating under a valid district-approved SCWQP (and NM plan, if eligible). MSCA Tax-Property 9-226. Finally, Dorchester County is allowed to grant a property tax credit against the county property tax imposed on land subject to a NM plan. MSCA Tax-Property 9-311(f).

Manure Transportation Pilot Project. In 1999, Maryland established a four-year voluntary Manure Transportation Pilot Project designed to transfer poultry litter and livestock manure away from areas experiencing phosphorus over-enrichment and areas lacking adequate cropland. MSCA Env. 704.1, 704.2; COMAR 15.20.05. The project envisioned that the litter and manure would be used “in environmentally acceptable ways other than land application.” MSCA Env. 704.1, 704.2; COMAR 15.20.05. Cost sharing is available to assist participants, and shares are capped at \$10/ton or 87.5% for poultry litter and \$20/ton for livestock manure. MSCA Env. 8-704.2(d); COMAR 15.20.05.03-07. The project’s cost share program may go to manure producers, brokers, or receivers and is based on various factors including the county involved. COMAR 15.20.05.03-07. Manure is to be tested before transport, according to MDA specifications. MSCA Env. 8-704.2(f). The project also has requirements for soil testing, application, and transport, as well as annual reporting requirements. COMAR 15.20.05.03, 15.20.05.09. While the voluntary project was set to expire on June 30, 2002, the Maryland General Assembly extended the project during its 2002 term. MSCA Env. 704.2.

NEBRASKA

I. PRIMARY APPLICABLE LAWS AND RESPONSIBLE GOVERNMENT AUTHORITY

The Nebraska *Livestock Waste Management Act*, Nebraska Revised Statute (NRS) 54-2401 to 54-2414, enacted in 1998, and its corresponding rules and regulations in Title 130 of the Nebraska Administrative Code (NAC), are administered by the Nebraska Department of Environmental Quality (NDEQ).

II. PERMITS AND THRESHOLDS

An existing or proposed livestock operation of at least 300 animal units (AU) is required to have a "livestock waste control facility" if livestock wastes are discharged into State waters or if the operation violates or threatens to violate the Nebraska surface water quality standards, ground water quality standards, or the Nebraska Environmental Protection Act. NAC 130.2.001. Construction and operating permits are required for livestock waste control facilities "when there is a potential for discharge into waters of the state." NRS 54-2404(1). The Livestock Management Act requires that all livestock operations, except calf-cow operations and operations with less than 300 AUs, submit a Request for Inspection to NDEQ, unless they already have a permit. "Livestock operation" means the feeding or holding of beef cattle, dairy cattle, horses, swine, sheep, poultry, and other livestock in buildings, lots, or pens which normally are not used for the growing of crops or vegetation. NRS 54-2402(9); NAC 130.1.033. It does not include the holding of cattle in calving operations for less than 90 days per year. NRS 54-2402(9); NAC 130.1.033. Nebraska has four classifications of livestock operations: Class I is a facility designed for 1000AU or less; Class II is for 1001 to 5000AU; Class III is for 5001 to 20,000AU; and Class IV is for 20,001AU and higher. NRS 54-2404; NAC 130.001.008-011. An "existing" facility is one in existence prior to April 15, 1998 that does not hold a permit and which has requested an inspection prior to January 1, 2000. NRS 54-2402(8),(11); NAC 130.1.025. "New" facilities are those that applied for a permit on or after April 15, 1998. NRS 54-2402(8),(11); NAC 130.1.025.

National Pollutant Discharge Elimination System (NPDES) permits are required, in addition to any applicable construction or operating permits, "when a livestock waste control facility discharges or has the potential to discharge pollutants into waters of the State as a result of runoff from a precipitation event." NAC 130.4.001. Livestock operations with less than 300 AU are exempt from the permitting process (including the requirement to request an inspection) unless there has been a confirmed discharge into waters of the State or NDEQ determines that the operation has a "high potential" for discharge into waters of the State, in which case NDEQ must notify the owner that the operation is subject to the Act. NRS 54-2403; NAC 130.2.002.

NDEQ is currently in the process of developing a proposed NPDES general permit for open-lot livestock operations with livestock waste control facilities that have the potential to discharge into State waters. The proposed permit would prohibit discharges into State waters except in chronic wet periods or in the event of a 25 year, 24 hour rainfall event. Currently, all operations required to have an NPDES permit are issued individual permits. The new NPDES permitting system would still require certain facilities to obtain an individual permit, but the vast majority of operations would qualify for the general NPDES permit.

If an owner/operator proposes to expand an operation or facility, the owner/operator must submit information to NDEQ regarding the proposed method to control livestock wastes from the expansion. NAC 130.5.005.03. If NDEQ determines that an additional facility or modifications to an existing facility are required, the applicant shall obtain a construction permit prior to construction of the facility and operation of the expanded or modified facility. NAC 130.5.005.03. Also, owner/operators wishing to increase to a larger class size must submit a permit modification along with its appropriate fee. NAC 130.6.004. Permits remain valid as long as the livestock operation continues to operate. NRS 54-2407(1).

If NDEQ determines the operation has a potential to discharge, a livestock waste control facility may not be constructed or operated without a valid NDEQ permit or interim use authorization. NRS 54-2404; NAC 130.5.001. However, a person required to obtain a construction permit may begin construction of the proposed livestock operation if the applicant acknowledges that a permit may eventually not be approved. NRS 54-2405. In addition, NDEQ may authorize interim use of an existing livestock operation provided that: actions are taken by the applicant to prevent runoff from the livestock operation from entering State waters; a limitation is placed upon the number of livestock; the land area to be used by the livestock operation is specified; best management practices [under NAC 130.11.005,6] are followed; the applicant is complying with the compliance dates set by NDEQ; the applicant submits a completed and signed applicant disclosure and certification form; and such other conditions as deemed reasonable by NDEQ are met. NAC 130.02.005.01.

The Livestock Waste Control Program staff consists of four engineers and nine program specialists. Nebraska issued 106 construction permits and 57 operating permits under its Livestock Waste Control Program in financial year (FY) 2002, 87 and 66 in FY2001, and 60 and 97 in FY2000. There were 57 permit modifications, upgrades, and transfers were issued in FY2002, compared with 54 in FY2001 and 31 in FY2000. As of January 1, 2003, there were 213 livestock operations in Nebraska with NPDES permits, up one from FY2000. The Livestock Program staff's four engineers performed 917 reviews and compliance assistance activities in FY2002, up from 760 in FY 2001.

The Livestock program staff conducted a total of 950 inspections in FY2002, 1012 in FY2001, and 1359 in FY2000. These numbers include initial and post-construction inspections, routine and maintenance inspections, complaint-based inspections, and other miscellaneous inspections. As noted above, requests for inspection can trigger permitting. The following are the number of inspection requests received by the program by year: 116 (FY2002), 161 (FY2001), 1183 (FY2000), approx. 4500 (FY1999). The numbers in FY1999 and 2000 were significantly higher because the program was new at the time, and many of the requests were for operations with less than 1000AU.

III. PERMIT OVERVIEW

Public notice/review. Within five days after receipt of a permit application, NDEQ must notify the local county board and natural resource district of the proposed facility's location and permit application. NRS 54-2411(2)-(3). The district shall have 20 days to notify NDEQ of any conditions that may exist at the proposed site pertaining to the requirements for a permit. NRS 54-2411(2)-(3). Once NDEQ has determined that a permit application for a Class II, Class III, or Class IV livestock waste control facility is complete, it shall issue a notice providing an opportunity for any interested person to submit written comments on the application within 30 days. NRS 54-2411(4). The notice shall be published in a local newspaper or other publication with general circulation in the area and a copy shall be provided to the applicant. NRS 54-2411(4); NAC 130.3.005.

Siting, design, and construction requirements. Nebraska has site, design and construction requirements. When the construction is completed, the applicant and the designer, must certify that the facility was constructed pursuant to the application approved by NDEQ. NAC 103.3.009.02. Construction of a facility for a proposed livestock operation must commence within 24 months of issuance of the construction permit. NAC 103.3.009.04. In the case of an existing livestock operation, the facility shall be completed according to the compliance schedule stated in the permit. NAC 103.3.009.01. An operating permit is required prior to using a livestock waste control facility that has been “constructed as approved” by NDEQ. NAC 130.111.008.

Manure management plan. A “comprehensive nutrient management plan” and “operational and maintenance plan” must be submitted to NDEQ with a construction and operating permit application. NAC 130.3.001.04H; 130.3.001.04J.

Financial assurance. Nebraska does not have a financial assurance program.

Permit fee. As of January 1, 1999, the inspection fee for livestock operations is \$50 for Class I & II Livestock Waste Control Facilities and \$500 for Class III & IV Livestock Waste Control Facilities. NAC130.2.003. All operations should have been inspected by Jan. 1, 2000, and persons who operate a livestock operation without first submitting a request for an inspection shall be assessed a late fee of \$50 for each offense for Class I and Class II facilities and \$500 for each offense for Class III and Class IV facilities. NRS 54-2406; NAC 130.2.004. This fee does not apply if good cause has been shown. NRS 54-2406; NAC 130.2.004. Each month constitutes a separate offense. NRS 54-2406; NAC 130.2.004. Permit application fees for each class are shown in Table 4.1.

Table 4.1. Nebraska’s permit fees arranged by class of livestock waste control facility. NRS 54-2408(1).	
Facility class	Fee
I	\$300
II	\$800
III	\$1500
IV	\$5000

For permit modifications, the fee equals the amount of the application fee for the class of the proposed modification minus the application fee for the size and corresponding class of the facility permitted at the time the modification is requested. NRS 54-2408(1). However, there is no fee if the permit modification will result in a lower class designation. NRS 54-2408(1). All such fees are remitted to the State Treasurer for credit to the Livestock Waste Management Cash Fund. NRS 54-2408(2).

IV. SITING AND DESIGN REQUIREMENTS

Setback requirements. Setback requirements include regulations dealing with property lines, dwellings, waterways, etc. The following restrictions apply for the location of a proposed livestock waste control facility. The facility must be not located within 100 feet of any well used for domestic purposes, unless NDEQ issues an exemption after evaluating the groundwater depth and flow direction, structural integrity of the facility and well, and any other circumstance that may adversely affect groundwater quality. NRS 54-2403; NAC 130.9.001.01, 130.9.002. However, under no circumstances may NDEQ not issue a permit to an existing livestock waste control facility if it is located within 100 feet of a well not

owned by the operation that is used primarily for human consumption NRS 54-2403; NAC 130.9.003. A facility may not be sited within 1,000 feet of a public drinking water supply well, unless the applicant provides NDEQ with sufficient information ensuring that the facility will not result in groundwater contamination. NAC 130.9.001.02. A facility may not be located in an area or in such a manner that threatens beneficial use impairment to State surface waters or where there is potential for groundwater contamination, as determined by NDEQ. NAC 130.9.001.03-04. Finally, a livestock waste control facility may be not sited less than four feet above the seasonal high groundwater level unless its design provides for structural stability, a maximum operating depth of six feet, and other provisions are made to maintain the facility. NAC 130.9.001.05.

Geophysical, land, and soil requirements. No new Class II, Class III or Class IV livestock waste control facilities are allowed in any part of a watershed that feeds directly or indirectly into a cold water Class A stream [under NRS 54-2404.02] except for: 1) an existing livestock operation required to construct a livestock waste control facility after a NDEQ inspection, 2) applications for a facility received and deemed complete by the Department prior to January 1, 1999, or 3) livestock operations exempt from permit requirements as set forth in these rules and regulations. NRS 54-2404(3); NAC 130.9.004. In addition, NDEQ may deny or restrict an application for a permit regarding the transfer or modification of an existing permit based upon the potential degradation of a cold water Class A stream. NAC 130.9.005. The evaluation of the potential degradation will include, at a minimum, the proximity of the facility and land application area to State waters, the type and size of facility, and the topography and land use of the area between the facility and State waters. NAC 130.9.005. A map delineating segments and watershed boundaries for cold water Class A streams designated prior to May 25, 1999 must be maintained by NDEQ and used for determinations concerning cold water Class A streams under Act. NRS 54-2404.02. The Environmental Quality Council may designate and may redesignate State waters as cold water Class A streams. NRS 54-2404.02.

Government site review/appraisal. Construction permit and operating permit applications must include the following information as specified in NAC 130.3.001.04:

- Name, address and phone number for the applicant, authorized representative and technical advisor
- Type of livestock, maximum animal capacity of the livestock operation and the average animal weight
- Scaled drawings, topographic maps, or the equivalent of the livestock operation and facility. This must include the spatial location of the facility and land application areas, the source of the livestock operation's water supply, surface water flow direction, the location of all major structures such as components and pipes, liner details, sealing and concrete specifications
- A description of the methods which will be implemented to insure the facility is constructed in accordance with the applicable design criteria and regulations. Relevant information includes soil liner testing; pipe material and placement verification; sealing of joints or seams in concrete, steel, or flexible membrane liners; placement of splash pads or other protective devices; and other items as determined by NDEQ.
- The engineer's scope of services contract or a detailed construction quality assurance plan for the construction of all Class II, III, or IV livestock waste control facilities.
- United States Geological Survey Quadrangle Map(s) or equivalent maps showing the location of the facility and the area extending 2,000 feet from the facility. This map must show all known wells, homesteads, and businesses.

- Design calculations for sizing of conveyances and storage facilities, which includes structural determinations for particular earthen structures
- Geotechnical reports, (as necessary to support design calculations and groundwater information)
- A comprehensive nutrient management plan
- Sludge management plan
- Operational and maintenance plan
- Emergency response plan
- A facility closure plan

Storage capacity limits/requirements. New confined livestock operations must control wastes using a liquid manure storage pit or tank or holding pond designed to retain all livestock waste for a minimum of 180 days. NAC 130.8.001. A biological treatment lagoon or other waste control facility approved by NDEQ may be used as an alternative. NAC 130.8.001. New open lot livestock operations must control wastes using a structure that meets minimum design criteria, defined as the runoff from a 25-year, 24-hour rainfall event plus additional calculated amounts, or other waste control facilities approved by NDEQ may also be used. NAC 130.7.001; 130.1.036, 037. A “sludge management plan” for holding ponds and lagoons must be submitted to NDEQ with a construction and operating permit application. NAC 130.3.001.04I. The plan must include periodic monitoring of accumulated solids and a schedule for removal. NAC 130.3.001.04I.

Excess accumulations of waste material must be removed periodically or mounded within the lots. NAC 130.11.005. Owner/operators are responsible for wastes removed from the facility which are not sold. NAC 130.11.005. At least 180 days of storage must be provided prior to the winter months except for existing livestock facilities per NAC 130.12.002. NAC 130.11.002.

Owner/operators of open lots and confined livestock operations must consider land application or waste utilization practices when determining the storage volume of the facility. NAC 130.7.003; NAC 130.8.002. Adequate storage must be provided to allow application or utilization at times compatible with crop management and available waste handling equipment. NAC 130.7.003; NAC 130.8.002. In the case of liquid storage pits, adequate storage must be provided prior to winter operation; and storage methods must be described in the operational and maintenance plan. NAC 130.3.001.04I

Technical Standards. All livestock wastes from a confined livestock operation must be controlled by using one or more of the following methods specified in NAC 130.8.001. . One technique consists of using a liquid manure storage pit or tank, holding pond or a combination designed to retain all livestock waste for a minimum storage period of 180 days. NAC 130.8.001. This method excludes operations involving poultry in cages or on slatted floors over pits, confined livestock operations where the waste produced is dry and handled as a dry material, and the use of biological treatment,lagoons. NAC 130.8.001. An alternative waste control facility may only be employed if the livestock numbers do not exceed a Department specified head count; the facility results in removal of solids; the facility prevents the liquid releases from reaching State waters; best management practices [under NAC 130.11] are followed; and the applicant agrees to such other conditions as required. NAC 130.8.001. The surface drainage area must be diverted around the livestock operation and waste control facility to the maximum extent possible, by a diversion terrace, berm, or ditch or by another method approved by the NEQ. NAC 130.7.002. These diversion structures must be designed and constructed to convey at least the runoff

from the peak discharge of a 25-year, 24-hour storm event; and in no case may be less than 1.5 feet in channel depth. NAC 130.7.002.

All livestock wastes from an open lot must be controlled by one or more of the following methods: 1) a single retention structure which meets or exceeds the minimum design criteria [under NAC 130.1]; 2) a combination of debris basins and holding ponds which meets or exceeds the minimum design criteria; or 3) other waste control facilities recognized by NDEQ. NAC 130.7.001. For this last alternative, the livestock numbers must not exceed a Department specified head count; the facility must result in removal of solids; the facility must prevent liquids released from the livestock operation from reaching State waters; best management practices must be followed; and the applicant must agree to such other conditions as required. NAC 130.7.001. Minimum design criteria storage must be provided prior to the winter months to accommodate subsequent snow melt and early spring precipitation runoff. NAC 130.11.003.

Previously permitted livestock waste control facilities and existing non-permitted facilities are not required to conform with the design standards for open lot and confined livestock waste handling and storage under NAC 130.7.001, 130.8.001.01, 130.12.002. However, the aforementioned regulations do apply to them if the operation has an unauthorized discharge from the facility. practices improper waste application, expands to an extent which would warrant additional capacity for a common facility, or violates another provision of Title130. NAC 130.12.002.

Owner/operators of proposed storage facilities must provide NDEQ with design calculations, liner design rationale, and supporting documentation. NAC 130.3.001.04F. Proposed earthen structures that exceed a 2:1 horizontal:vertical ratio must provide structural determinations to NDEQ. NAC 130.3.001.04F. 1.5 feet of freeboard must be provided for earthen structures, and at least six inches must be provided for vertical-walled structures. NAC 130.3.001.04F. Liners may not utilize manure amendments to meet percolation requirements except for facilities utilized by open lot operations. NAC 130.3.001.04F.

Livestock waste control facilities must be located on soils and/or constructed with materials and construction methods which will ensure that percolation does not exceed the following rates: 0.25 inches per day (7.35×10^{-6} cm/sec) for a Class I facility and 0.13 inches per day (3.82×10^{-6} cm/sec) for a Class II, Class III, and Class IV facility. NAC 130.9.006. When a flexible membrane liner is used, a properly compacted soil sub-base must be constructed below the liner with a minimum thickness of six inches. NAC 130.9.006. Furthermore, when modifying the capacity or structure of the facility, existing or permitted facilities shall meet the appropriate percolation requirements of NAC 130.9.003. NAC 130.12.004. Percolation for existing livestock waste control facilities and for those facilities permitted prior to the effective date of these regulations shall not exceed 0.25 inches per day (7.35×10^{-6} cm/sec), and NDEQ may request an engineering evaluation or assessment by a licensed engineer. NAC 130.12.003; NAC 130.3.001.01B.

Side-slopes for all livestock waste control facilities will be evaluated by the NDEQ for slope stability during on-site inspections. NAC 130.12.005. Excessive sloughing, erosion or other forms of slope failure will require modification to the facility. NAC 130.12.005. In the case that modifications are determined significant by NDEQ the owner/operator must submit a plan for the stabilization of side-slopes containing appropriate design analyses for review and approval by the Department. NAC 130.12.005. A construction permit may also be required. NAC 130.12.005. Facilities located at or below the seasonal high groundwater level must have a low permeability liner with saturated hydraulic conductivity of 1×10^{-7} cm/sec., or less with a minimum thickness of one foot. NAC 130.9.001.

All irrigation distribution systems through which livestock wastes are distributed, except open discharge systems, must be equipped with appropriate mechanical devices [under NAC 130.10.002] to prevent livestock wastes or a waste-water mixture from being pumped, drained, or siphoned into the irrigation water source. NAC 130.10.001. A livestock operation proposing to use an irrigation distribution system for disposal shall submit a plan to NDEQ for its approval detailing the type and location of mechanical devices to be installed. NAC 130.10.001.01. An irrigation distribution system which is disconnected from the irrigation water source during livestock waste application shall be considered in compliance with these requirements. NAC 130.10.001.02.

Revisions to the livestock regulations may result in the modification of construction and operating permits. NRS 2407(1); NAC 130.6.002. When modifying permits or regulations, NDEQ shall give livestock operations up to one year to achieve compliance, except as provided in NAC 130.12.001. NRS 54-2407(2); NAC 130.6.002, 130.12.001.

Government approval of plans. Upon initial receipt of a permit application, NDEQ has 30 days to conduct a preliminary review of the application and to request additional information or to acknowledge that the application is complete. NRS 54-2411(4). All facilities except for new Class I facilities and existing livestock waste control facilities must be designed by a registered professional engineer and comply with minimum design criteria set forth in NAC 130.7-10 after an inspection by NDEQ. NAC 130.3.001.01-2. NDEQ may require an engineering evaluation or assessment by a licensed professional engineer if the facility has visible signs of structural breakage below the permanent pool, signs of discharge due to structural weakness, improper maintenance, inadequate capacity, or if there is reason to believe that an existing livestock waste control facility has violated, or threatens to violate, the Environmental Protection Act, the Livestock Waste Management Act, or any rules or regulations adopted and promulgated under such acts. NRS 54-2412(2); NAC 130.3.001.01B.

NDEQ must transmit its written findings, conclusions, and reasons for approval or disapproval to the applicant within 60 days of receiving a completed permit application for any Class I or Class II livestock waste control facility, or within 90 days of receiving a completed Class III or IV facility application. NRS 54-2411(4); NAC 130.3.007,8. A construction or operating permit may be denied, revoked, modified or suspended for cause. NAC 130.6.001. NDEQ may also reject an application for a construction or operating permit upon finding that the applicant is unsuited or unqualified to perform the obligations of a permit holder. NRS 54-2409; NAC 130.6.006. Furthermore, NDEQ must perform a post-construction inspection of all livestock waste control facilities requiring a permit prior to initiating their operations and within 30 days after the department receives notification of the completion of the facility. NRS 54-2410. If the inspection is not conducted within the time specified in this section, the livestock waste control facility may proceed with operations. NRS 54-2410.

Finally, before being issued a permit by NDEQ, applicants must obtain any necessary approvals from the Department of Natural Resources (NDNR) [under §46-257] and certify such approvals with NDEQ. NRS 54-2412(1). NDEQ, with the concurrence of the NDNR, may require the applicant to obtain approval from the NDNR for any dam or lagoon structure, the failure of which could result in a significant discharge into State waters and have a significant impact on the environment. NRS 54-2412(1). When such approval is required, the NDNR shall approve or deny the dam or lagoon structure within 60 days after the request is made. NRS 54-2412(1). The NDEQ may provide for the payment of such costs of the NDNR with revenue generated under the Livestock Waste Management Cash Fund. NRS 54-2412(1).

Monitoring requirements. The operational and maintenance plan must include the following:

- a schedule for monitoring the available waste storage capacity
- a schedule for comprehensive inspections of the facility
- methods to prevent tampering with gravity drain valves
- waste removal based on type and capacity of the facility and the availability of disposal area
- maintenance activities
- procedures to maintain the facility for periods of time when it is not in operation
- record keeping of all maintenance or necessary repairs made to the facility and appurtenances as required under NAC 130.11. NAC 130.3.001.04J.

Monitoring may also be required by NDEQ “where a significant risk to waters of the state exists.” NRS 54-2413(1)(a)(iv).

V. NUTRIENT/MANURE MANAGEMENT PLAN

Filing and maintenance of plans. A “comprehensive nutrient management plan” must be submitted to NDEQ which includes the following:

- a legal description of planned waste application areas,
- the number of useable acres, slope, soil type, cropping practices, historic yields, distance to surface water, location of wetlands, use by other operations,
- waste sampling and analysis procedures,
- land application, soil sampling and analysis procedures,
- planned application rates, methods, and frequencies under NAC 130.11,
- appropriate record keeping of locations and quantities of livestock wastes land applied, sold, or given away,
- and sample results as specified under NAC 130.11. NAC 130.3.001.04H.

Any areas not owned by the operation shall include the landowners’ name, address, legal description, number of acres and an agreement signed by the landowners allowing for the planned use of the land in addition to any restrictions. NAC 130.3.001.04H. The applicant may be required to provide the location and extent of wetlands on the operation or land application areas, as determined by the Natural Resources Conservation Service,. NAC 130.3.001.04H.

Nutrient standards addressed. Land application of livestock wastes may not be in excess of agronomic rates for nitrogen, and the owner/operator shall sample and analyze the soil for nitrogen and phosphorus prior to the application of waste. NAC 130.11.006.02-3. The frequency and methods of sampling and analyzing the two compounds shall be based on planned crops, crop rotation and other site-specific requirements. NAC 130.11.006.02-3. These methods shall be specified in the comprehensive nutrient management plan. NAC 130.11.006.02-3. The owner/operator shall report all test results which exceed 150 parts per million (ppm) of phosphorus in the surface soil or at an alternate level approved by NDEQ based on sampling and analysis methods. NAC 130.11.006.03. Upon reviewing the data and evaluating the potential for contamination of State waters, NDEQ may require the owner/operator to modify the comprehensive nutrient management plan. NAC 130.11.006.03. In accordance with the nutrient management plan and operating permit requirements, the owner/operator must maintain records for at least five years after the estimates and analyses were conducted. NAC 130.11.006.07. These nutrient value records may be of the livestock waste nutrient values used to determine land application

rates for waste. NAC 130.11.006.07. If requested, the results of the sampling events must be submitted to NDEQ. NAC 130.11.006.07.

Limits on manure application. All livestock wastes must be land applied or stockpiled in a manner that will not contribute to water pollution. NAC 130.11.005. Furthermore, all owner/operators must attend a “land application training program” with additional training every five years. NAC 130.5.005.05. Owner/operators must notify NDEQ of any changes in the land application areas from what was specified in the application. NAC 130.5.005.06. Owner/operators must utilize application areas that are under proper conservation treatment to prevent runoff into State waters. NAC 130.11.006.01. An adequate application area must be available at all times when land application is necessary. NAC 130.11.005. Waste must be land applied on dewatering days in order to maintain the required minimum storage criteria and to prevent a discharge from the facilities. NAC 130.11.002-3.

Waste may not be applied within 30 feet of any streams, lakes and impounded waters specifically designated by the Department [under 117.6,7], unless in accordance with the approved comprehensive nutrient management plan. NAC 130.11.006.04. When waste is land applied within 100 feet of a stream, lake, or impounded waste, NDEQ may require an additional buffer between the application area and the water. NAC 130.11.006.04.05. NDEQ may also require land application of waste at the appropriate agronomic rate for phosphorus or application in a manner which reduces the potential for runoff of nutrients or pathogens by incorporation, injection of waste, or other approved practices. NAC 130.11.006.04.05.

Groundwater monitoring. Groundwater monitoring may be required for Class I facilities if a spill or non-permitted release from the facility has occurred, if percolation from the facility exceeds the allowable percolation rates [under NAC 130.9.006], or if NDEQ determines it necessary to maintain groundwater quality. NAC 130.13.002. Groundwater monitoring may be required for Class II, Class III and Class IV livestock waste control facilities based on a site-specific review by NDEQ. NAC 130.13.001. Information used to determine the need for groundwater monitoring includes

- materials and methods used in the construction of the facility,
- size of the livestock operation,
- depth to ground water,
- type of soils,
- type of consolidated or unconsolidated sediments above and below the water table,
- local and regional use of ground water for drinking water and other beneficial uses, and
- other criteria, including, but not limited to, location of nearest public water supply wells, use of local Rural Water District, and location of on-site wells. NAC 130.13.001.

If groundwater monitoring is required, an applicant may ask NDEQ to reconsider by submitting additional site-specific information, including a geologic log of on-site test hole or water well (extending at least to ground water, with adequate detail concerning the sediments and rocks drilled through) and static water level (in an existing or new on-site water well or new test hole, measured after the water level has had time to stabilize). NAC 130.13.003.

All owner/operators must submit plans for the design, installation and operation of a groundwater monitoring system (if required) and operate the system as approved by NDEQ. NAC 130.5.005.04. Facilities where groundwater monitoring will be required must have a minimum of three monitoring wells, one up-gradient and two down-gradient wells. NAC 130.13.004. All wells must be constructed according to Nebraska Health and Human Services, Regulation and Licensure Title 178 (NAC), Article

12 or by other means approved by the Department. NAC 130.13.004. These alternative means include but are not limited to direct push techniques for monitoring of ground water and/or sediments, and lysimeter installation and sampling. NAC 130.13.004. Sampling must occur as set out in the sampling and analysis plan approved by NDEQ, and the results must be reported to the Department within 45 days of the sampling event. NAC 130.13.005. The report should include the depth to water prior to purging and sampling (conducted by a qualified person), and at a minimum, sampling and analysis for nitrate, chloride, and ammonia using accepted lab methods and sampling techniques, so long as the sampling and analysis plan for ground water samples is submitted and approved as part of the groundwater monitoring plan. NAC 130.13.005. NDEQ may also require water level measurements at a frequency adequate to establish seasonal groundwater flow directions. NAC 130.13.006.

Groundwater monitoring will continue for the life of the permit, or until NDEQ concurs with the applicant request for revocation. NAC 130.13.007. Additional groundwater monitoring or investigation may be required if contaminant concentrations in the monitoring wells are above the background concentrations, a spill or non-permitted release from the facility occurs, NDEQ determines that percolation from the facility exceeds the allowable percolation rates [under NAC 130.9.006], or under any other circumstances the Department determines may impact ground water quality. NAC 130.13.008.

Odor and air standards. Class II, Class III, and Class IV facilities applying for a construction or operating permit must provide a plan describing best management practices to minimize odors from the livestock operation, the facility, and the disposal of livestock waste. NAC 130.11.007. At a minimum, the plan should describe the following BMP items:

- considerations given to the location of the livestock operation, facility and application area,
- selection of size and type of facility to minimize odors, and facilitate management of waste,
- management procedures to be incorporated in operation of the facility,
- methods and scheduling procedures to minimize adverse odors or control frequency of odor during application times,
- any other planned methods or procedures to be utilized by the livestock operation to reduce offensive odors. NAC 130.11.007.

Discharges and emergency planning and reporting. An “emergency response plan” for any spill, release or discharge of animal waste due to events such as power failures, large storms or chronic wet periods, leaks or breaks in water supply systems, component failure of the waste control facilities, and any releases during land application due to equipment failure or accidents or irrigation equipment failure, must be submitted to NDEQ with a construction and operating permit. NAC 130.3.001.04K. A discharge of livestock waste from a livestock waste control facility is prohibited unless: such discharge is to prevent a facility failure which would result in loss of life, personal injury or severe property damage; no feasible alternative exists; the permittee submits a notice to the Director within 24 hours of becoming aware of a discharge or the need to discharge; and the discharge is conducted in a manner to minimize any adverse effects. NAC 130.4.004; NAC 130.5.005.07. The burden is on the permittee to demonstrate compliance with these requirements. NAC 130.4.005; NAC 130.5.005.08. Any discharge of waste must be reported to NDEQ within 24 hours of the event and in a written report to NDEQ within seven days of the event. NAC 130.3.001.04K. For any discharge, NDEQ may request the operation to supply rainfall, land application and system storage records for the 12-month period prior to the event. NAC 130.3.001.04K.

VI. LIABILITY AND ENFORCEMENT

Owner/operators of livestock operations must request that NDEQ inspect their operation to determine if a livestock waste control facility is required. NAC 130.2.003. NDEQ will conduct an on-site inspection for each inspection request (which also includes a fee). NAC 130.2.003. In the case of an existing livestock operation, the applicant will be notified in writing that a facility is required and shall apply for a construction or operating permit. NAC 130.02.005.01. All livestock waste control facilities must be operated and maintained to prevent water pollution and to protect the State's environment. NAC 130.11.001. Livestock operations must also comply with all local laws and zoning regulations. NRS 54-2404.01; NAC 130.02.006.

At any reasonable time, NDEQ may have access to a livestock operation, facility, groundwater monitoring wells and records required under these regulations. NAC 130.5.005.01. Any discharge due to an improperly maintained or operated facility is subject to enforcement action by the Department. NAC 130.4.005, NAC 130.5.005.08. NDEQ may impose additional conditions or requirements to the permit to prevent reoccurrence of the discharge event. NAC 130.4.005; NAC 130.5.005.08-9. Parties may appeal any final order or determination by the Director. NRS 81-1509; NAC 130.15.005. It is the Legislature's intent that in enforcing the Act, NDEQ shall give priority to livestock waste control facilities within classes in the following order: Class IV, Class III, Class II, and Class I. NRS 54-2414.

Enforcement of the Act is through correlative action orders, injunctions, civil penalties up to \$10,000 per day, and criminal (felony and misdemeanor) prosecution. NRS 81-1508(1), 81-1508.01(1), 81-1508.02. Each day of a continuing violation constitutes a separate offense, and persons who "knowingly and willingly" violate the Act are subject to criminal personal liability. NRS 81-1508.02(2); 81-1508.01(4). The state may also recover damages for the purpose of restocking the waters with fish or replenishing wildlife. NRS 81-1508(1). Enforcement proceedings and injunctive relief may also be instituted by the county attorney or Attorney General. NAC 130.15.002.

Right to farm. Under Nebraska's Right to Farm Act, NRS 2-4401 to 2-4404, an AFO on an area larger than ten acres is not a public or private nuisance if it was not a nuisance before the change in land use or local occupancy. NRS 2-4403. More specifically, under NRS 81-1506(B), a livestock operation is not considered a nuisance if it meets the following conditions: "reasonable techniques are used to keep dust, noise, insects, and odor at a minimum;" it is in compliance with all applicable regulations; the nuisance action is brought by a person whose possession of the alleged affected land was subsequent to (a) the issuance of an appropriate permit for the livestock operation or (b) if a department inspection revealed that the feedlot did not require a permit. NRS 81-1506(b).

VII. OTHER RELATED PROVISIONS

Incentives/Cost-shares. Nebraska does not have an incentive or cost-share program outside of the Air and Water Pollution Tax Refund Act. NRS 77-26, 155. Under the Act, owners/operators may be eligible for a refund of the "sales and use taxes" they paid in constructing a water pollution control facility. The Agriculture Section of the Nebraska Department of Environmental Quality administers inspections of secondary containment facilities for the tax refund program. In 2002, it processed 14 tax fund requests.

Anti-Corporate Farming Law. Nebraska's anti-corporate farming law is a constitutional provision [Article XII, Section 8] which was adopted through the referendum "Initiative 300" in 1982. The law states: "No corporation or syndicate shall acquire, or otherwise obtain an interests, whether legal beneficial, or otherwise, in any title to real estate used for farming or ranching in this state, or engage in

farming or ranching.” Corporations in existence at the law’s passage may continue to operate so long as they are held in continuous ownership by the same corporation. Two major exemptions include poultry production and “family farm corporations,” which must have the majority of voting stock owned by family members and at least one family member residing on the farm. Additional exemptions exist for non-profit corporations, Indian Tribes, and research or experimental farms. In 1998 Nebraska’s legislature passed LB 1193 which requires reporting of corporate interests and activities to the Secretary of State. NRS 76-1520. Such reports are available to the public. NRS 76-1520(2). As for enforcement, the Nebraska Secretary of State monitors land purchases and farming operations, while the Attorney General may bring an action to enjoin an illegal land purchase or farming operation or to force a divestiture of land.

OREGON

I. PRIMARY APPLICABLE LAWS AND RESPONSIBLE GOVERNMENT AUTHORITY

The Oregon Department of Agriculture (ODA) has general authority to regulate activities which are a threat to pollute State waters under Oregon Revised Statutes (ORS) Chapter 468B et seq. ORS 468B.010 – 468B.025. ODA’s authority to control animal wastes through regulation of “confined animal feeding operations” (CAFO) is explicitly granted under ORS 468B.035(2) and 468B.200 – 468B.230. General authority to require groundwater monitoring can be found at ORS 468B.150 – 468B.190. Applicable regulations are located in the Oregon Administrative Rules (OAR), Chapter 603 Division 74, 90, and 95 [Department of Agriculture]; and OAR 340-51 [Department of Environmental Quality].

The 1993 Oregon *Agricultural Water Quality Act* (“SB 1010”), ORS 568.900, et seq., authorizes the Oregon Department of Agriculture to designate areas to be covered by a water quality management plan (WQMP) and to adopt rules requiring AFOs and other landowners in the affected areas to take actions necessary to carry out the plan. ORS 568.909, 568.912. The designation of areas covered by these regulations are often based upon the U.S. EPA’s 303(d) list of water quality impaired watersheds. ORS 568.909, 568.912. Once a WQMP is implemented, all activities in the affected area must be conducted “in full compliance with the plan and rules implementing the plan and with all rules and standards of the Environmental Quality Commission relating to water pollution control.” ORS 568.930(1). Corresponding regulations can be found in OAR 603-090 [Department of Agriculture].

In 1995, SB 1010 was supplemented and strengthened by ORS 561.190 and 561.191, otherwise referred to as “SB 502,” which requires ODA to “develop and implement any program or rules that directly regulate farming practices... for the purpose of protecting water quality.” ORS 568.191(1). Such rules include, but are not limited to those protecting the quality of surface and ground waters; as well as those relating to wellhead protection areas, coastal zone management areas, groundwater management areas, and areas of groundwater concern. ORS 568.191(1). All rules adopted by ODA under ORS 561.191 must meet the water quality standards adopted by the Environmental Quality Commission. ORS 561.191(2). Corresponding regulations can be found in OAR 603-074, 603-090, and 603-095 [Department of Agriculture].

The Oregon Revised Statute states that in cases of jurisdictional overlap under ORS 468B.150 to 468B.190, the involved agencies must consult with one another to coordinate their rules and consolidate the rulemaking proceedings. ORS 568.191(3). However, ODA believes it has exclusive statutory authority, under ORS 561.191, to administer all programs that concern agricultural activities and water quality. The provisions of ORS 468B.217 charge the Department of Agriculture, the Department of Environmental Quality (ODEQ), and the Environmental Quality Commission with entering into a Memorandum of Understanding. The memorandum is to provide for ODA to “operate a program for the prevention and control of water pollution from a confined animal feeding operation.” ORS 468B.217(1). Subject to the terms of the memorandum, ODA may perform any function of the Commission or ODEQ “relating to the control and prevention of water pollution from a confined animal feeding operation”; and enter and inspect any such operation “for the purpose of investigating a source of water pollution or to ascertain compliance with a statute, rule, standard or permit condition relating to the control or prevention of water pollution from the operation.” ORS 468B.217(2).

In 2001, the Oregon legislature passed House Bill 2156, directing ODA to regulate all livestock operations consistent with state water quality laws and the federal Clean Water Act. ODA is currently in the process of revising its administrative rules for animal feeding operations and preparing to take over administration of the National Pollutant Discharge Elimination System (NPDES) permitting program for CAFOs upon approval from the U.S. Environmental Protection Agency. As of January 2003, Oregon is in the notice and comment stage with regard to its draft administrative rules and its draft general CAFO NPDES permit, both of which are expected to be adopted in early 2003.

II. PERMITS AND THRESHOLDS

All livestock operations that meet the Oregon definition of a “Confined Animal Feeding Operation” (CAFO) need a permit from ODA. ORS 468B.050, 468B.210. “Confined Animal Feeding Operation” is defined as “the concentrated confined feeding or holding of animals or poultry, including, but not limited to horse, cattle, sheep, or swine feeding areas, dairy confinement areas, slaughterhouse or shipping terminal holding pens, poultry and egg production facilities and fur farms, in buildings or in pens or lots where the surface has been prepared with concrete, rock or fibrous material to support animals in wet weather or which have wastewater treatment works.” ORS 468B.205; OAR 340-051-0010(2). ODA or ODEQ may only impose permit conditions that are “necessary to ensure that wastes are disposed of in a manner that does not cause pollution of the surface and ground waters of the state.” ORS 468B.215(3). CAFO permits issued under ORS 468B.050 must specify the maximum number of animals that may be housed at the facility, based on the operation’s capacity. “to contain, treat, hold and dispose of wastes as necessary to comply with all conditions of the permit.” ORS 468B.210(1)-(2). CAFO permits may be revoked or modified by ODEQ or terminated upon request by the permit holder. ORS 468B.215(4). “In lieu of a permit required under ORS 468B.025 or 468B.050, the Environmental Quality Commission by rule may: exempt de minimis discharges from permit requirements; establish performance-based criteria for exempt operations and discharges; [or] require an [exempt] operator or person discharging waste... to comply with the criteria established [and] monitor performance and certify and report the results to [ODEQ].” ORS 468B.053. As of September 1, 2001 there were approximately seven to ten individual permittees and 500 general permittees in Oregon.

ODA may designate “agricultural and rural lands” as “water quality management areas” thereafter subject to a “Water Quality Management Plan (WQMP)” under three circumstances: 1) subject to the Environmental Quality Commission establishing a TMDL for a water body under FWPCA 33 U.S.C 1313; 2) upon a declaration of a ground water management area [under ORS 468B.180]; or 3) when an agricultural water quality management plan is otherwise specifically required by state or federal law. ORS 568.909(1). ODA must develop and carry out the WQMP for designated areas in order to prevent and control water pollution from agricultural activities and soil erosion. ORS 568.909(2). ODA must consult with ODEQ and the Environmental Quality Commission during the adoption and review of water quality management plans and the rules for implementing the plans. ORS 568.930(3). ODA in consultation with the State Board of Agriculture “may adopt rules necessary to implement a water quality management plan initiated under ORS 568.909.” ORS 568.912(1).

All agricultural activities on lands within the boundaries of an area subject to a water quality management plan must be in compliance with the plan, its implementing rules, and all Environmental Quality Commission water pollution control rules and standards. ORS 568.930(1). ODA may require any landowner located within a designated area to perform any necessary measures to carry out the water quality management plan. ORS 568.912(2). However, “[n]o specific practice may be prohibited under

this section unless the department has a scientific basis for concluding that the practice is a factor in causing water quality standards to be exceeded.” ORS 568.912(3).

III. PERMIT OVERVIEW

Public notice/review. Oregon does not have any notice and comment provisions outside of those required by the NPDES program. WQMPs and individual CAFO permits require public notice and comment while general permits do not. In general the WQMP program under SB 1010 includes public participation in the rulemaking process through local advisory committees as well as interaction with the local Soil and Water Conservation District.

Site, design, and construction requirements. In Oregon these requirements are mostly based in a case-by-case permit or the plan approval process. The design, construction, operation, and maintenance of confined feeding and holding operations and waste control facilities must conform with the Guidelines for the Design and Operation of Animal Waste Control Facilities “[u]nless it can be demonstrated that contaminated drainage can be effectively controlled by other means, or unless a specific written variance is obtained from NDEQ as provided in OAR 340-051-0025.” OAR 340-051-0020(2). The Guidelines, which are specified in OAR 340-051-0050 through 340-051-0090, are “recommendations” that “convey many of the criteria considered by [ODEQ] to conform to best practicable design and operational practices.” OAR 340-051-0050. While equally effective alternative controls may be acceptable, compliance with the Guidelines “will in most instances constitute satisfactory performance of the design and operation functions to which the ‘Regulations...’ apply.” OAR 340-051-0050. The Guidelines include recommendations for drainage and waste volume control; collection, storage, conveyance, and disposal facilities and practices; incidental control practices; and a list of sources for qualified assistance in facility design. OAR 340-051-0050 to 340-051-0080.

Manure management plan. CAFOs are required to have a waste management plan. [Phone Conversation with ODA Representative]. An individual waste management plan may not need to include specific actions required as a result of an agricultural water quality management plan. Landowners subject to an agricultural water quality management area plan may be required to undertake “certain specific actions” which may be incorporated into an “individual water quality management plan.” OAR 603-090-0040(1). A landowner may appeal a “specific action requirement” by filing a formal request for alternate measures under OAR 603-090-0050, but requirements for an individual plan may not be appealed. OAR 603-090-0040(1).

Financial assurance. Oregon does not have a financial assurance program.

Permit fee. The total initial registration cost is \$75 which includes a one-time non-refundable filing fee of \$50 and a \$25 annual renewal requirement. ORS 468B.215(1); OAR 603-074-0020(1). Fees and permits are not required for CAFOs which operate four months or less per year and which do not have waste water control facilities. ORS 468B.215(2). ODA, in consultation with the State Board of Agriculture, may also establish and collect fees from landowners subject to a WQMP. ORS 568.921. However, the fees cannot be more than \$200 per year and cannot exceed the total cost of developing and implementing the plan. ORS 568.921. All fees are deposited into the Department of Agriculture Service Fund. ORS 568.921.

IV. SITING AND DESIGN REQUIREMENTS

Setback requirements. Setback distances are largely determined by local and county ordinances. The regulations require that: “all confinement areas, manure handling and accumulation areas and disposal areas and facilities shall be located... such that manure, contaminated drainage waters or other wastes do not enter the waters of the state at any time.” OAR 340-051-0020(1). It is also unlawful to construct a water supply well within 50 feet of a confined animal feeding or holding area and any animal waste holding area (such as a pond or lagoon), and 100 feet of a sewage sludge disposal area unless ODEQ Director has granted written approval. OAR 690-210-0030(1).

Geophysical, land, and soil requirements (land area, slope, groundwater zones, etc). Oregon does not have any such requirements outside of its application and approval process and Guidelines.

Government site review/appraisal. In most cases, Oregon inspectors do a site appraisal before a CAFO application is approved. [Phone Conversation with ODA Representative].

Storage capacity limits/requirements. Oregon does not have any such requirements.

Technical Standards. Oregon does not have any such requirements outside of the application and approval process, any applicable WQMP, and the Guidelines.

Government approval of plans. All plans and specifications for “the construction, installation or modification of disposal systems, treatment works and sewerage systems” must be submitted to ODEQ prior to commencing the activity. ORS 468B.055. New, modified, or expanding confined feeding facilities, holding facilities, and waste management facilities must be constructed in accordance with plans approved by ODEQ. OAR 340-051-0015. Such operations must submit detailed plans and specifications to ODEQ which must include the following components:

- a location map showing zoning and use of adjacent lands and location of the proposed facility in relation to residences and domestic water supply sources
- a topographic map of the area showing the natural drainage pattern and any area or roof drainage control system
- any proposed surface water diversion
- climatological data, with annual and seasonal precipitation quantities and patterns, evaporation rates and prevailing winds
- information on groundwater and soil types in the area
- the numbers and types of animals and estimated volume of wastes
- the procedures for “wastewater and manure collection, handling, retention, storage, treatment and disposal systems”
- additional information required by ODEQ. OAR 340-051-0015(1).

Monitoring requirements. Monitoring is required by ODA only on a case-by-case basis.

V. NUTRIENT/MANURE MANAGEMENT PLAN

Filing and maintenance of plans. All new CAFOs must file a waste management plan with ODA within a year of initiating operations. Existing CAFOs only need to keep the plan at the facility unless they are required to do otherwise by ODA.

Nutrient standards addressed. Oregon does not have any such requirements outside of the application and approval process, any applicable WQMP, and the Guidelines.

Limits on manure application. Waste must be land applied at an agronomic rate. [Phone Conversation with ODA Representative]. The Environmental Quality Commission is charged with adopting rules for the use of sludge on agricultural, horticultural and silvicultural lands. These rules must include, but are not limited to, mission includes creating the following provisions:

- procedures and criteria for selecting sludge application sites, including the opportunity for public comments and public hearings;
- requirements for the treatment and processing of sludge prior to application is applied;
- methods and minimum frequencies for analyzing sludge and the soil where it is applied
- record keeping requirements for sludge applicators must keep;
- restrictions on public access to and cropping of land where sludge has been applied; and
- “any other requirements necessary to protect surface water, ground water, public health and soil productivity from any adverse effects resulting from sludge application.” ORS 468B.095.

Groundwater monitoring. A groundwater management area must be designated by ODEQ if nitrate contaminant and other contaminants are found at levels greater than those established by ORS 468.180 and ORS 468B.165. ORS 468B.180, 468B.175. ODEQ must provide for necessary monitoring in all groundwater management areas, and it is charged with coordinating other state agencies that have responsibility in groundwater management areas. ORS 468B.177, ORS 468B.162. ORS 468B.180 specifies the involvement of different state agencies in areas of groundwater concern. Designated entities must develop a draft action plan “to reduce existing contamination and to prevent further contamination of the affected ground water aquifer,” which is then subject to a 60-day notice and comment period. ORS 468B.184(1). Notice shall be published in two issues of a generally-circulating newspaper or newspapers with general circulation in the area. ORS 468B.186(1). In addition, ODEQ and the Oregon State University Agricultural Experiment Station, in cooperation with the Water Resources Department, is charged with conducting “an ongoing statewide monitoring and assessment program of the quality of the ground water resource of this state.” ORS 468B.190(1).

Odor and air standards. There are no odor or air standards for CAFOs in Oregon.

Discharges and emergency planning and reporting. “Except as provided in ORS 468B.050 or 468B.053, no person shall [c]ause pollution of any waters of the state or place or cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means.” ORS 468B.025(1). Unless operating under a permit issued by ODEQ (under ORS 468B.053 or 468B.215), no person shall “discharge any wastes into the waters of the state from any industrial or commercial establishment or activity or any disposal system [or]... [c]onstruct, install, operate or conduct any industrial, commercial, confined animal feeding operation or other establishment or activity or any extension or modification thereof or addition thereto, the operation or conduct of which would cause an increase in the discharge of wastes into the waters of the state or which would otherwise alter the physical, chemical or biological properties of any waters of the state in any manner not already lawfully authorized.” ORS 468B.050(a),(d).

VI. LIABILITY AND ENFORCEMENT

ODA may enter any lands in a water quality management plan area to determine what actions landowners must take under ORS 568.900 to 568.933 and to assure landowner compliance with those actions. ORS 568.915(1). Prior to initiating the inspections in such an area, ODA must notify the landowners in the area of the applicable regulations. ORS 568.915(3). ODA and ODEQ also have the authority to inspect animal feeding operations for compliance with the water quality laws and regulations. ORS 468B.215(4).

Prior to conducting an investigation of a CAFO on the basis of a complaint, the person making the complaint must specify it in writing or ODA must make a “detailed written record” of the complaint; and ODA must determine which statutory provision, rule or permit section the CAFO operator has violated. ORS 468B.225(1). If ODA finds, after an investigation, that the operation has not caused a violation, it may refuse to consider future complaints made by the complainant if it finds that the complaint was “groundless and made for the purposes of harassing the operator.” OAR 603-074-0015(2).

Oregon’s enforcement strategy places a heavy emphasis on technical assistance. There are three types of enforcement documents issued by ODA under OAR 603-074-0040: the Notice of Noncompliance, Plan of Correction and a Notice of Civil Penalty Assessment. A Notice of Noncompliance informs the owner/operator of the violation and its location, references the statute, administrative rules or order involved, and addresses the consequences of the violation or future violations. OAR 603-074-0040(1). It also will direct the owner/operator to perform those actions necessary to comply with the particular regulatory provision and shall specify a reasonable period of time to achieve compliance. OAR 603-074-0040(1)(b)-(c). A Plan of Correction will specify actions that must be taken to eliminate the violation as well as a time frame by which to complete those actions. OAR 603-074-0040(2). ODA will make a reasonable attempt to consult with the owner/operator when developing the plan. OAR 603-074-0040(3). ODA may consider the failure to perform any of the requirements of a plan of correction “to be a failure to correct the violation within the period of time set for correction by the department.” OAR 603-074-0040(4).

Violations of rules or standards adopted pursuant to a WQMP are subject to “all remedies and sanctions available” to DEQ and Environmental Quality Commission. ORS 568.930(1). If a landowner in an area subject to a water quality management plan has failed to perform actions required by the plan, ODA must notify and direct the landowner take action to bring the lands in compliance with the plan. ORS 568.918.

CAFO owner or operators who have not applied for or do not have a permit required by ORS 468B.050 must be assessed a civil penalty of \$500 in addition to any other penalties assessed by ODEQ. ORS 468B.220; OAR 603-074-0070(6), OAR 340-012-0049(4). Any CAFO that exceeds its permit limit by more than 10% or 25 animals is in violation of its permit, and the owner/operator is subject to enforcement action. ORS 468B.210(3).

In addition to any other penalty provided by law, ODA may assess a civil penalty against the owner or operator of a confined animal feeding operation for failing to comply with an applicable statutory provision “relating to the control and prevention of water pollution from a confined animal feeding operation.” OAR 603-074-0070(1). The amount of the civil penalty is determined using the two matrices contained in OAR 603-074-0080 in conjunction with the formula contained in OAR 603-074-0080(4). OAR 603-074-0070(1), 603-090-0110(1).

Prior to the assessment of a civil penalty, ODA must provide a notice of noncompliance to the owner or operator. ORS 568.918; OAR 603-074-0070(2). A civil penalty may not be imposed for a first violation unless the department has notified the landowner of the violation and prescribed a reasonable time for the elimination of the violation (typically not to exceed 30 days). ORS 468B.230(2), 568.933(2). An exception applies to animal feeding operations subject to 33 U.S.C. 1342. ORS 468B.230(2). Persons receiving notice have thirty days from the date of receipt to make a written application for a hearing before the department. ORS 568.933(5). Advance notice or period to achieve compliance prior to assessment of a civil penalty is not required if the violation was intentional or the owner/operator has received a previous notice of the same or similar violation. ORS 468B.230(5), 568.933(7); OAR 603-074-0070(2). ODA may enter an order assessing a civil penalty if the person received notice and failed to request a hearing [under OAR 603-074-0050], or, if after a hearing, the person is found to be in violation of the rules. OAR 603-074-0060(1), 603-090-0100(1). Civil penalties must be reduced by the amount of any civil penalty imposed by another state agency, commission, or department, so long as they are both imposed on the same person and are based on the same violation. ORS 568.933(9); OAR 603-074-0070(3).

Except for AFOs which are “concentrated animal feeding operations” under 40 C.F.R. 122.23, the initial civil penalty may not exceed \$2,500 with subsequent penalties for repeat occurrences not exceeding \$10,000 per violation. OAR 603-074-0070(1)(a), 603-090-0110(1); ORS 468B.230(2),(3), 568.933(3). For “concentrated animal feeding operations” under 40 C.F.R. 122.23, initial civil penalties may not exceed \$5,000 per violation with subsequent penalties for repeat occurrences not exceeding \$10,000 per violation.” OAR 603-074-0070(1)(b), 603-090-0110(1); ORS 468B.230(2),(3). Each day of continuing violation is a separate violation “unless the department finds that a different period of time is more appropriate to describe a specific violation event.” ORS 468B.230(1), 568.933(4). Civil penalties recovered under this section are deposited into a special subaccount in the Department of Agriculture Service Fund, which is be used for water quality management educational programs and demonstration or research projects. ORS 468B.230(6), 568.933(8).

The magnitude of a violation is classified according to the tables below.

Table 5.1. Category I (Major) violations. OAR 603-074-0070(4)(a), 603-090-0110(4) [excluding (F)].
<ul style="list-style-type: none"> (A) A violation of a department order issued as part of or in connection with a formal enforcement action. (B) Failure to provide access to premises or records when required by statute, rule or order. (C) Any direct discharge of wastes that enters State waters either without a waste discharge permit, or from a point not authorized by a waste discharge permit. (D) Submitting records, reports or application forms which are false, misleading, or fraudulent. (E) Failure to provide notification of a spill or upset condition that results in a nonpermitted discharge of waste to waters of the state. (F) Violation of a permit compliance schedule. (G) Any violation of any pretreatment standard or requirement by a user of a municipal treatment works which either impairs or damages the treatment works, or causes major harm or poses a major risk of harm to public health or the environment.

Table 5.2. Category II (Moderate) violations. OAR 603-074-0070(4)(b), 603-090-0110(4).
<ul style="list-style-type: none"> (A) Failure to submit a plan or report as required by rule, permit or order. (B) Placing wastes such that the wastes are likely to enter the waters of the state by any means.

(C) Any violation related to water quality which is not classified elsewhere in these rules as major or minor.

Table 5.3 Category III (Minor) violations. OAR 603-074-0070(4)(c), 603-090-0110(4) [excluding (B)].
(A) Failure to operate in accordance with an animal waste management plan when one has been approved by the department.
(B) Failure to submit a discharge monitoring report on time or failure to submit a completed discharge monitoring report.

The violation’s gravity of effect, classified as high, medium or low, is determined by the possibility of harm to public health or the environment. OAR 603-074-0070(5), 603-090-0110(5). The existence of one or more high level factors results in a high level gravity of effect; the existence of one or more medium level factors results in a medium level gravity of effect, and the lack of any such factors results in a low level gravity of effect. OAR 603-074-0070(5), 603-090-0110(5). High level factors include: “[e]vidence of significant injury to crops, wildlife or livestock... [or] ...surface or groundwater contamination of a level that poses a significant risk of harm to public health or the environment.” OAR 603-074-0070(5)(a), 603-090-0110(5)(a). Medium level factors include “[s]urface or groundwater contamination that causes a loss of beneficial uses or a violation of applicable water quality standards, but does not pose a significant threat to human health or the environment.” OAR 603-074-0070(5)(b), 603-090-0110(5)(b). Low level factors are such that water contamination is not found “or not found at a level in excess of applicable water quality standards.” OAR 603-074-0070(5)(c), 603-090-0110(5)(c).

In determining the amount of a civil penalty to be assessed for any violation, the department shall apply the following procedure:

- (1) Determine the magnitude of the violation as specified in OAR 603-074-0070(4)/603-090-0110(4);
- (2) Determine the gravity of effect pertinent to the violation as specified in OAR 603-074-0070(5)/603-090-0110(5); and
- (3) Using the magnitude of the violation and the gravity of effect identified, and depending on whether it is the first or a repeat violation, determine the base penalty (B) by reference to the appropriate matrix contained in OAR 603-074-0080/603-090-0110. OAR 603-074-0080(1)-(3), 603-090-0120(1)-(3). These penalties are specified in the Tables 5.4 and 5.5 below.

Table 5.4. Penalties incurred for first violations. OAR 603-074-0080(3), 603-090-0120(3), Civil Penalty Matrix.			
	High gravity	Medium gravity	Low gravity
Category I (Major)	\$1,200	\$800	\$400
Category II (Moderate)	\$600	\$400	\$200
Category III (Low)	\$240	\$120	\$50

Table 5.5. Penalties incurred for repeat violations. OAR 603-074-0080(3), 603-090-0120(3), Civil Penalty Matrix.			
	High gravity	Medium gravity	Low gravity
Category I (Major)	\$5,000	\$2,400	\$800

Category II (Moderate)	\$1,600	\$800	\$400
Category III (Low)	\$400	\$200	\$100

After determining the base penalty, ODA must calculate the amount of the civil penalty to be assessed with the following formula:

Table 5.6. Formula used for calculating amount of civil penalty. $B + [(.1 \times B) (P + H + R)] = \text{Penalty Amount}; \text{ where: } B = \text{Base penalty}; P = \text{Past occurrence of violations}$
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P is weighted from 0 to 6 where: 0 = no prior violation; and 6 = past occurrence of more than three Category I violations or five or more Category II violations]. H = History of the person in taking steps to prevent or correct a violation. H is weighted from -2 to 2 where: -2 = the person took all feasible steps to correct any prior violations, and 2 = the person took no action to correct prior violations. R = Preventability of the violation and whether negligence or misconduct was involved. R is weighted from -2 to 7 in the following way: -2 = the person's actions determined to be violative were unavoidable, and 7 = the person's actions were flagrant or reckless. OAR 603-074-0080(4), 603-090-0120(4).

There are approximately three inspectors in Oregon who exclusively deal with AFOs, however, more staff are expected to be hired soon as the State receives delegation to administer the NPDES program for concentrated animal feeding operations. Inspectors try to visit each permitted site at least once a year. [Phone Conversation with ODA Representative].

Fish Kill Law. “Where the injury, death, contamination or destruction of fish or other wildlife or injury or destruction of fish or wildlife habitat results from pollution or from any violation of the conditions set forth in any permit or of the orders or rules of the Environmental Quality Commission, the person responsible for the injury, death, contamination or destruction shall be strictly liable to the state for the value of the fish or wildlife so injured or destroyed and for all costs of restoring fish and wildlife production in the affected areas, including habitat restoration.” ORS 468B.070(1). An action or suit for the recovery of such may be brought by ODEQ, the State Department of Fish and Wildlife or the Attorney General. ORS 468B.070(3).

Right to farm. The Oregon right to farm provisions protect farming and forest practices from legal actions that may limit such activities. ORS 30.933(1). The law invalidates any local ordinance that “makes a farm practice a nuisance or trespass or provides for its abatement as a nuisance or trespass.” ORS 30.935. Operations on lands zoned for farming are also not subject “to any private right of action or claim for relief based on nuisance or trespass.” ORS 30.936(1). The law applies whether or not the operation “has undergone any change or interruption.” ORS 30.936(3). Additionally, a separate provision indemnifies farming practices “allowed as a preexisting nonconforming use.” ORS 30.937(1). However, this provision applies only where if the operation “existed before the conflicting nonfarm... use of real property that gave rise to the right of action or claim for relief” and only where the farming practice has not “significantly increased in size or intensity from November 4, 1993, or the date on which the applicable urban growth boundary is changed to include the subject farming... practice within its limits, whichever is later.” ORS 30.937(3),(4). Neither legal provision applies to damages to commercial agricultural products or death or serious physical injury [ORS 161.015]. ORS 30.936(2), 30.937(2). The

law goes further to award attorney fees and trial costs to the prevailing party in any nuisance or trespass case regarding a farm. ORS 30.938. In addition it explicitly states: “[t]he Department of Environmental Quality, Division of State Lands, State Department of Agriculture or State Forestry Department is not required to investigate complaints if the agency has reason to believe that the complaint is based on practices protected by ORS 30.930 or 30.947.” ORS 30.943. This law does not impair the right of individuals and governments from pursuing “any remedy authorized by law that concerns matters other than a nuisance or trespass.” ORS 30.940.

VII. OTHER RELEVANT PROVISIONS

Oregon does not have provisions applicable to this category.

APPENDIX

TABLE I: GENERAL PROGRAM INFORMATION

State	Responsible Government Authority	Permits and Thresholds (AU = Animal Unit)	Number of Permits
AL	Dept. of Env. Management (ADEM)	Notice of Registration (NOR) for NPDES if 1000AU; 300AU+ discharge through man-made device; 100AU+ in priority watershed; any AFO with waste mgmt system w/o a plan (WMSP); any designated AFO. Smaller AFOs need not register, but must comply with BMP and related stds.	298 registration 35 pending
AR	Department of Environmental Quality	-NPDES permits for "CAFOs" under fed #; -State General or Individual Permits for construction and operation of any sized "confined" animal feeding ops with liquid waste disposal systems.	116 NPDES 404 state permits
IL	-Dept. of Agriculture (DOA) -Environmental Protection Agency	-"Notice of intent to construct" for new facilities -Registration for any AFO >1000AU, and any AFO w. new/modified lagoon. -NPDES for CAFOs >1000AU, and CAFOs >300AU if discharge (w/ man-made direct device or w/ direct contact b/t animals and water). -Certificate for livestock mgr -reqd for >300AU	>40 NPDES 50 registrations 268 NOI
IN	Dept. of Environmental Management	Regulatory "Approval" required for confined feeding of 300 cattle, 600 swine, or 30,000 fowl; and operations with water pollution violation. (Serves as NPDES)	2,528 approvals
MD	-Dept. of Environment (MDE) -Dept. of Agriculture (MDA) -Soil Conservation Districts	-Discharge Permit (incl NPDES) for CAFOS with >1000AU; 30,000 chickens w/ waste stream ≥85% liquid; or threat to State waters. -Nutrient Management Plan for AFOs with ≥8AU -Soil Conservation & Water Quality Plan for all "agricultural land practices."	7 General & 4-5 Indiv. Permits
NE	Department of Environmental Quality	-AFO >300AU must file request for inspection. -Construction and operating permits required for waste control facility for all operations >300AU when potential discharge into State waters. -NPDES permit required when discharge or potential discharge of runoff from a precip event. -4 Classes of operations: I (<1000AU), II (1001-5000), III(5001-20,000),IV(20,001+)	213 NPDES in place; In FY2002 106 const & 57 op. permits issued
OR	-Dept. of Agric. (ODA) (primary permitting authority), consults Dept. of Env. Quality re: water quality standards	-ODA Permit required for all "confined" AFOs (no numerical threshold) (includes NPDES permitting). -ODA designates Water Quality Mgmt Areas & area-wide Plans (WQMP) for water pollution, may impose additional requirements on AFOs.	Indiv: 7-10 General: ~500

TABLE II: FACILITY SITING AND NUTRIENT MANAGEMENT REQUIREMENTS

State	Facility Setback Requirements	Geophysical Requirements	Nutrients Addressed in Nutrient Mgmt Plan	Limits on Application (includes setbacks for land application)
AL	<ul style="list-style-type: none"> -Meet NRCS std for AFO -Existing April 1, 1999 exempt from setback. -If new liquid waste facility: 500 ft from potable well; 200 ft from watercourse; 100 ft from stream; 1320 from dwelling (660 if built at existing AFO); and from property line: 500ft (if <100AU); 1320ft (1000-2499AU); 2640ft (2500-3999AU);5280ft (4000+AU). -If dry waste only: 330 ft from dwelling; 165 from property line. -New wells constructed ≥100ft from waste facil. 	<ul style="list-style-type: none"> -Not in 100 year flood plain. -Earthen structures must meet NRCS stds and need investigation by Qualified Credentialed Professional (QCP). 	<ul style="list-style-type: none"> -NRCS Comp.Nutr. Mgt Plan Stds - "account for all avail nutrients applied" -Test for nutrients id. by ADEM. 	<ul style="list-style-type: none"> -prevent pollution -Soil sampling for each app area. -App rate based on NRCS Stds or sampling -Only at sites identified in WSMP unless contracted w/ Certified Animal Waste Vendor (CAWV) or sold in "good faith." -Not on frozen ground; steep slopes; NRCS times and dates; etc. -Setbacks: 50ft surface water; 100ft non-potable well; 200ft potable well or classified waters; 500ft from dwelling (if spray) & 200 if non-pumped; -Annual report to ADEM.
AR	<ul style="list-style-type: none"> -1320 ft from dwellings for confinement facilities and waste containment for new confined large AFOs -500 ft from dwellings for other facilities at new AFOs 	<ul style="list-style-type: none"> -Not in FEMA 100 year flood plain unless protected by adequate berms or structures. -Subsurface investigation req for earthen holding ponds, treatment lagoon suitability, and liners. 	<ul style="list-style-type: none"> N, P, K, NH4 & approx 20 parameters incl. metals. 	<ul style="list-style-type: none"> -Required mgmt plan for each application area -Soil and wastewater sampling & analysis -Annual report forms
IL	<ul style="list-style-type: none"> -Vary by initiation date -50-999AU: 1/4 mile from residence & 1/2 mile from populated area. -1000-6999AU: •440 feet over the minimum setback of 1/2 mile for each 1,000AU over 1,000AU from a populated area & • 220 feet over the minimum setback of 1/4 mile for each 1,000AU over 1,000AU from any occupied residence. 	<ul style="list-style-type: none"> -Not in 100 year flood plain unless w/i fringe -Must prevent seepage if in karst area; no new facility w/i 400ft of karst natural depression from subsurface removal -Prevent seepage if w/i 5 ft of groundwater 	<ul style="list-style-type: none"> N, P (& others if groundwater monitoring is required) 	<ul style="list-style-type: none"> -Only at agronomic nitrogen rates -Soil sampling (every 3 years) -Phosphorus test -200 ft of surface water (unless upgrade or adequate diking) -150 ft from potable water supplies -Not w/i 10 year floodplain or waterway -If w/i ¼ mile of residence must inject or incorporate -On frozen only if ≤5% slope or adequate erosion practices

State	Facility Setback Requirements	Geophysical Requirements	Nutrients Addressed in Nutrient Mgmt Plan	Limits on Application (includes setbacks for land application)
	-≥7000AU: 1 mile for a populated area & ½ mile from occupied residence -Local planning & zoning laws			
IN	1000 ft - pub water supp 300 ft - surface waters 300 ft - offsite wells 100 ft - onsite wells 100 ft - property line	-Above bedrock -Not in karst, or floodway, floodplain -Above seasonal high water table	N (P only if state makes threat finding)	-on mapped area only -agronomic rate based on req. soil and manure testing -setbacks: 500 ft. pub water supply; 25-200 ft waters, wells; 0-50ft prop. lines -no spray on frozen or snow -no appl fr. new on froz/snow -no appl on saturated ground
MD	“Minimum” setback is required, but nothing numeric specified.	No	N, P, Potassium, Calcium, Magnesium, Zinc, etc.	Wastewater spray irrigation reqs: -50 ft from State waters -200 ft to property line (100 if trees) -500 ft to houses (250 if trees) -Certification for certain applications -agronomic rates per manual
NE	1000 ft - pub water supply 100 ft – domestic well	-No Class II-IV in watershed for cold water class A stream -Not in area if threat to groundwater or surface water use -≥ 4 ft above seasonal high water table	N, P	-comprehensive nutrient management plan -training program -agronomic rate based on sampling/analysis of area -prohib w/30 ft from streams, lakes, specified waters; -if applied w/100 ft of waters, may have to meet additional reqs
OR	-Local Ordinances -New wells may not be constructed w/in 50 ft of CAFO	No	Not specified	Agronomic rate

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