STATE OF COLORADO

John W. Hickenlooper, Governor
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Executive Director and Chief Medical Officer

WATER QUALITY CONTROL COMMISSION
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Denver, Colorado 80246-1530
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Colorado Department of Public Health and Environment

NOTICE OF PUBLIC RULEMAKING HEARING
BEFORE THE
COLORADO WATER QUALITY CONTROL COMMISSION

SUBJECT:

For consideration of the adoption of revisions to the Animal Feeding Operations Control Regulation, Regulation #81 (5 CCR 1002-81). The revisions to Regulation #81 proposed by the CDPHE Environmental Agriculture Program, along with a proposed statement of Basis, Specific Statutory Authority and Purpose, are attached to this notice as Exhibit 1. In this attachment, proposed new language is shown with double-underlining and proposed deletions are shown with ~~strikeouts.~~ Any alternative proposals related to the revisions proposed in Exhibit 1 and developed in response to this proposal will also be considered.

HEARING SCHEDULE:

DATE:	Monday, October 7, 2013
TIME:	11:00 a.m.
PLACE:	Florence Sabin Conference Room Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, Colorado 80246

PUBLIC PARTICIPATION ENCOURAGED:

The Commission encourages all interested persons to provide their opinions or recommendations regarding the matters to be addressed in this rulemaking hearing, either orally at the hearing or in writing prior to or at the hearing. Although oral testimony from those with party status (see below) and other interested persons will be received at the hearing, the time available for such oral testimony may be limited. Written submissions prior to the hearing are encouraged, so that they can be distributed to the Commission for review prior to the hearing.

For logistical reasons, the Commission office cannot guarantee that electronic submissions received after 1:00 p.m. Friday, October 4, 2013 will be provided to Commissioners. Interested persons wishing to submit comments or other documents after that date and time should bring paper copies to the hearing. Oral testimony at the hearing should primarily summarize written material previously submitted. The hearing will emphasize Commission questioning of parties and other interested persons about their written prehearing submittals. Introduction of written material at the hearing by those with party status generally will not be permitted. The Commission requests that all interested persons submit to the Commission any available information that may be relevant in considering the noticed proposals.

PARTY STATUS:

Participation as a "party" to this hearing will require compliance with section 21.3(D) of the Procedural Rules, Regulation #21 (5 CCR 1002-21). It is not necessary to acquire party status in order to testify or comment. **For each request for party status, please provide the organization's name, a contact person, mailing address, phone number, and email address.** Written party status requests are due in the Commission Office on or before:

DATE: Tuesday, July 23, 2013
TIME: 5:00 p.m.

A single copy of the party status request may be transmitted as an email attachment to cdphe.wqcc@state.co.us, submitted by fax to 303-691-7702, mailed or otherwise conveyed so as to be received in the mail room of the Colorado Department of Public Health and Environment (Department) no later than this deadline.

ELIMINATION OF MAILING LIST STATUS:

On June 10, 2013, the Water Quality Control Commission approved revisions to the Procedural Rules, Regulation #21 (5 CCR 1002-21), which eliminate mailing list status.

PREHEARING STATEMENTS:

PLEASE NOTE that for this hearing two separate deadlines for prehearing statements are established:

(1) A PDF version of a **Proponent's Prehearing Statement** from the Environmental Agriculture Program as the proponent of revisions proposed in Exhibit 1 attached to this notice, including written testimony and exhibits providing the basis for the proposals, must be emailed to cdphe.wqcc@state.co.us **AND** 14 paper copies of the Proponent's Prehearing Statement must be received in the Department's mail room no later than **July 30, 2013**; and

(2) A PDF version of a **Responsive Prehearing Statement**, including any exhibits, written testimony, and alternative proposals of **anyone seeking party status and intending to respond to the proponent's proposal** must be emailed to cdphe.wqcc@state.co.us **AND** 14 paper copies must be received in the Department's mail room no later than **August 22, 2013**.

As soon as prehearing statements are posted on the Commission's web site, the Commission office will email a link to the page containing the prehearing statements to proponents, parties and the Attorney General's Office representatives for the Commission and the Division.

Also **note** that the Commission has prepared a document entitled **Information for Parties to Water Quality Control Commission Rulemaking Hearings.** A copy of this document will be emailed to all persons requesting party status. It is also posted on the Commission's web site as Appendix C to the Public Participation Handbook. Following the suggestions set forth in this document will enhance the effectiveness of parties' input for this proceeding. **Please note the request that all parties submit two-sided copies of all hearing documents on three-hole punch paper.**

REBUTTAL STATEMENTS:

Written rebuttal statements responding to the prehearing statements due on August 22, 2013 may be submitted by the Division or anyone seeking party status. Any such rebuttal statements must be received in the Commission Office by **September 25, 2013**. A PDF version of written rebuttal statements must be emailed to cdphe.wqcc@state.co.us **AND** 14 paper copies must be received in the Department's mail room by this deadline. No other written materials will be accepted following this deadline except for good cause shown.

PREHEARING CONFERENCE:

DATE: Thursday, September 5, 2013
TIME: 2:00 p.m.
PLACE: Sabin Conference Room
Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80246

Attendance at the prehearing conference is mandatory for all persons requesting party status. An opportunity may be available to participate in this prehearing conference by telephone. Persons wishing to participate by telephone should notify the Commission Office as early as possible.

SPECIFIC STATUTORY AUTHORITY:

The provisions of sections 25-8-202(1)(c) and (2); 25-8-205; and 25-8-402 C.R.S. provide the specific statutory authority for consideration of the regulatory amendments proposed by this notice. Should the Commission adopt the regulatory language as proposed in this notice or alternative amendments, it will also adopt, in compliance with section 24-4-103(4) C.R.S., an appropriate Statement of Basis, Specific Statutory Authority, and Purpose.

NOTIFICATION OF POTENTIAL MATERIAL INJURY TO WATER RIGHTS:

In accordance with section 25-8-104(2)(d), C.R.S., any person who believes that the actions proposed in this notice have the potential to cause material injury to his or her water rights is requested to so indicate in the party status request submitted. In order for this potential to be considered fully by the Commission and the other agencies listed in the statute, persons must fully explain the basis for their claim in their prehearing statement which is due in the Commission Office on the date specified above. This explanation should identify and describe the water right(s), and explain how and to what degree the material injury will be incurred.

Dated this 13th day of June 2013 at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

Digitally signed by Paul Frohardt, Administrator
DN: cn=Paul Frohardt, Administrator, o=Colorado Department of Public Health and Environment, ou=Water Quality Control Commission, email=cdphe.wqcc@state.co.us, c=US
Date: 2013.06.13 13:22:21 -06'00'

Paul D. Frohardt, Administrator

ENVIRONMENTAL AGRICULTURE PROGRAM
EXHIBIT 1

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

ANIMAL FEEDING OPERATIONS CONTROL REGULATION

5 CCR 1002-81

Throughout these regulations, standards and requirements promulgated by the U.S. Environmental Protection Agency have been adopted and incorporated by reference. The federal references cited herein include only those versions that were in effect as of ~~April 14~~December 22, 2008, and not later amendments to the incorporated material.

All material incorporated by reference may be examined during regular business hours either at any state publications depository library or the Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530. To review the materials at the Colorado Department of Public Health and Environment, contact the Water Quality Control Division's records center at 303-692-3600.

81.0 AUTHORITY

Section 25-8-205, C.R.S. as amended of the Colorado Water Quality Control Act.

81.1 ~~Applicability~~ APPLICABILITY

The provisions of this control regulation are applicable to all animal feeding operations and concentrated animal feeding operations, except those defined as housed commercial swine feeding operations ~~under~~ in section 61.2 of the Colorado Discharge Permit System Regulations, Regulation No. 61. Housed commercial swine feeding operations are subject to permitting requirements ~~under~~ as set forth in Regulation No. 61 and financial assurance requirements in Regulation No. 66. A concentrated animal feeding operation is also ~~is~~ subject to permitting requirements under Regulation No. 61 where it discharges to waters of the U.S.

81.2 PURPOSE

The purpose~~s~~ of this control regulation ~~are~~is:

(1) ~~t~~To ensure that discharges to ground water from permitted and non-permitted concentrated animal feeding operations are controlled in a manner consistent with the performance standards as set forth in this regulation.

(2) ~~t~~To ensure that non-permitted concentrated animal feeding operations protect surface waters of the state.

(3) ~~t~~To ensure that non-permitted large concentrated animal feeding operations register with the Division.

(4) ~~t~~To ensure that animal feeding operations that are not defined as concentrated animal feeding operations protect waters of the state through proper application of "best management practices" that consider existing physical conditions and constraints at the facility site.

This regulation is not intended to address public health nuisance conditions or land use controls such as zoning requirements.

81.3 DEFINITIONS

A. As used in this regulation, the following definitions of terms apply.

(1) "25-YEAR, 24-HOUR STORM" means a storm of a 24-hour duration which yields a total rainfall of a magnitude which has a probability of recurring once every twenty-five years.

(~~1~~2) "AGRONOMIC RATE"~~"Agronomic rate"~~ means the rate of application of nitrogen to plants that is necessary to satisfy the plants' nutritional requirements while accounting for applicable nitrogen credits.

(~~2~~3) "ANIMAL FEEDING OPERATION"~~An "animal feeding operation"~~ (AFO) means a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

(a) Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and

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

(~~3~~4) "BEST MANAGEMENT PRACTICE"~~"Best Management Practice"~~ means an activity, procedure, or practice necessary for the reduction of impacts from animal feeding operations on surface or ground water, as described in section 81.~~9~~8.

(~~4~~5) "CHRONIC STORM"~~"Chronic Storm"~~ means a series of storms that occur during a 10-day period which yield a total precipitation of a magnitude that has a probability of recurring once every ~~(10)~~ 10 years.

(~~5~~6) "CONCENTRATED ANIMAL FEEDING OPERATIONS"~~Concentrated Animal Feeding Operation"~~ (CAFO) means an AFO that is defined as a Large or Medium CAFO, or that is designated by the Division as a CAFO pursuant to Section 81.4. Two or more AFOs under common ownership are deemed to be a single AFO for the purposes of determining whether they qualify as a Large or Medium CAFO, if they are adjacent to each other or if they use a common area or system for land application of manure or wastewater.

(~~6~~7) "CONVEYANCE STRUCTURE"~~"Conveyance Structure"~~ means a natural or constructed conduit (e.g., berm, channel, ditch, pipe, or culvert) that carries process-generated wastewater ~~from production area buildings (such as milking barns), or that captures~~ and/or open-lot wastewater from production areas, and diverts the wastewater to an impoundment or between impoundments.

(~~7~~8) "DISCHARGE"~~"Discharge"~~ means the introduction or addition of a pollutant into waters of the state.

(~~8~~9) "DIVISION"~~"Division"~~ means the Water Quality Control Division of the Department of Public Health and Environment. The Environmental Agriculture Program (Ag Program) implements this regulation on behalf of the Division.

(~~9~~10) "FACILITY"~~"Facility"~~ means the production area and land application sites of an animal feeding operation or concentrated animal feeding operation.

(~~10~~11) "FREEBOARD"~~"Freeboard"~~ means the vertical distance measured from the liquid surface level (elevation) ~~downward from the top elevation of~~ in an impoundment or tank to the top elevation of the impoundment or tank (for example, berm or wall)~~maximum water level~~.

(~~11~~12) "GROUND WATER"~~"Ground Water"~~ means subsurface waters in a zone of saturation which are or can be brought to the surface of the ground or to surface waters through wells, springs, seeps, or other discharge areas.

(~~12~~13) "GROUND WATER RECHARGE"~~"Ground water Recharge"~~ means the entry into the saturated zone of water made available at the water-table surface, together with the associated flow away from the water table within the saturated zone.

(~~13~~14) "IMPOUNDMENT"~~"Impoundment"~~ means a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials or other seepage control materials), or any other structure which is used for the storage, treatment, evaporation or discharge of pollutant-containing waters, sludge or associated sediment.

(~~14~~15) "LAND APPLICATION SITE" ~~"Land Application Site"~~ means:

(a) Land owned by an AFO or CAFO, to which manure or wastewater from the production area is or may be applied; or

(b) Land under the control of an AFO ~~animal feeding operation~~ or CAFO ~~concentrated animal feeding operation operator~~, whether it is owned, rented, or leased, to which manure or wastewater from the production area ~~is or~~ may be applied, or where cropping or nutrient budget decisions for the site are made by the AFO or CAFO.

(~~15~~16) "LARGE CONCENTRATED ANIMAL FEEDING OPERATION"~~"Large Concentrated Animal Feeding Operation"~~ (Large CAFO) means an AFO that stables or confines as many as or more than the numbers of animals specified in any of the following categories:

(a) 700 mature dairy cows, whether milked or dry;

(b) 1,000 veal calves

(c) 1,000 cattle other than mature dairy cows or veal calves. Cattle includes, but is not limited to, heifers, steers, bulls and cow/calf pairs;

(d) 2,500 swine each weighing 55 pounds or more;

(e) 10,000 swine each weighing less than 55 pounds;

(f) 500 horses;

(g) 10,000 sheep or lambs;

(h) 55,000 turkeys;

(i) 30,000 laying hens or broilers, if the AFO uses a liquid manure handling system;

(j) 125,000 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system;

(k) 82,000 laying hens, if the AFO uses other than a liquid manure handling system;

(l) 30,000 ducks (if the AFO uses other than a liquid manure handling system) or

(m) 5,000 ducks (if the AFO uses a liquid manure handling system).

(~~16~~17) "MAN-MADE DRAINAGE SYSTEM"~~"Man-made drainage system"~~ means a drainage ditch, flushing system, or other drainage device which was constructed by man and is used for the purpose of transporting manure or wastewater.

(~~17~~18) "MANURE"~~"Manure"~~ means feces, litter, and/or urine and materials, such as bedding, sludge, compost, feed waste, dry harvested forage, and any raw material used in or resulting from the operation of an animal feeding operation, that have been commingled with feces, litter, and/or urine.

(~~18~~19) "MEDIUM ANIMAL FEEDING OPERATION"~~"Medium Animal Feeding Operation"~~ (Medium AFO) means an AFO with the type and number of animals that fall within any of the ranges listed in section 81.3(A)(~~19~~20), and which has not been defined or designated as a CAFO.

(~~19~~20) "MEDIUM CONCENTRATED ANIMAL FEEDING OPERATION"~~"Medium Concentrated Animal Feeding Operation"~~ (Medium CAFO) means an AFO with the type and number of animals that fall within any of the ranges listed in (a) below and which has been defined or designated as a CAFO. An AFO is defined as a Medium CAFO if:

(a) The type and number of animals that it stables or confines falls within any of the following ranges:

(I) 200 to 699 mature dairy cows, whether milked or dry;

(II) 300 to 999 veal calves;

(III) 300 to 999 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls, and cow/calf pairs.

(IV) 750 to 2,499 swine each weighing 55 pounds or more;

(V) 3,000 to 9,999 swine each weighing less than 55 pounds;

(VI) 150 to 499 horses;

(VIII) 3,000 to 9,999 sheep or lambs;

(IX) 16,500 to 54,999 turkeys;

(X) 9,000 to 29,999 laying hens or broilers, if the AFO uses a liquid manure handling system;

(XI) 37,500 to 124,999 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system;

(XII) 25,000 to 81,999 laying hens, if the AFO uses other than a liquid manure handling system;

(XIII) 10,000 to 29,999 ducks (if the AFO uses other than a liquid manure handling system); or

(XIV) 1,500 to 4,999 ducks (if the AFO uses a liquid manure handling system); and

(b) Either one of the following conditions are met:

(I) Pollutants are discharged into surface waters of the state through a man-made drainage system; or

(II) Pollutants are discharged directly into surface waters of the state which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

(~~20~~21) "NEW SOURCE" ~~"New Source"~~ means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced after the promulgation of standards of performance for the particular source, pursuant to section 306 of the Clean Water Act. The term also applies where a standard of performance has been proposed, provided that the standard is promulgated within 120 days of its proposal. Except as otherwise provided in an applicable new source performance standard, a source is a "new source" if it meets this definition of "new source", and:

(a) It is constructed at a site at which no other source is located; or

(b) It totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or

(c) Its processes are substantially independent of an existing source at the same site. In determining whether these processes are substantially independent, the Division shall consider such factors as the extent to which the new facility is integrated with the existing ~~plant~~source; and the extent to which the new facility is engaged in the same general type of activity as the existing source.

(~~21~~22) "OPEN-LOT WASTEWATER"~~"Open-Lot Wastewater"~~ means any precipitation that comes into contact with manure or feed~~;~~, any spillage or overflow from animal or poultry watering systems in production area facilities that are not roof-covered (except livestock drinking water in constant-flow watering troughs that overflow into in-trough drain pipes and is retained separately from wastewater storage)~~;~~, ~~and~~or, spray-cooling water used in open-sided pole sheds that are not flushed.

(~~22~~23) "OPERATOR"~~"Operator"~~ means any person who owns, leases, operates, controls, or supervises an animal feeding operation or concentrated animal feeding operation.

(~~23~~24) "PERMIT"~~"Permit"~~ means a permit issued pursuant to Colorado Water Quality Control Commission Regulation No. 61~~and therefore includes Colorado Discharge Elimination System permits, including new permits, renewals, general permits, GPPA permits and temporary permits~~.

(~~24~~25) "PERSON"~~"Person"~~ means an individual, corporation, partnership, association, state or political subdivision thereof, federal agency, state agency, municipality, commission, or interstate body.

(~~25~~26) "POLLUTANT"~~"Pollutant"~~ means dredged spoil, dirt, slurry, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, chemical waste, biological nutrient, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, or any industrial, municipal, or agricultural waste.

(~~26~~27) "PROCESS-GENERATED WASTEWATER"~~"Process-generated Wastewater"~~ means wastewater resulting from water being directly or indirectly used in the operation of an animal feeding operation for any or all of the following:

(a) Spillage or overflow from animal or poultry watering systems in roof-covered production area facilities (except livestock drinking water in constant-flow watering troughs that overflows into in-trough drain pipes and is retained separately from wastewater storage);

(b) Washing, cleaning or flushing pens, barns, manure pits, or other roof-covered production area facilities;

(c) Direct contact swimming, washing or spray cooling of animals (except in open-sided pole barns in open lots);

(d) Dust control; or

(e) Water which comes into contact with any products or byproducts including manure litter, feed, milk, eggs, or bedding that is not defined as open-lot wastewater.

~~wastewater, except tank overflow and open-lot wastewater, resulting from waters being directly or indirectly used in the operation of an animal feeding operation for any or all of the following: spillage or overflow from animal or poultry watering systems, washing, cleaning, or flushing barns, manure pits, or other roof-covered production area facilities; washing of animals; spray-cooling of animals (except in open-sided pole barns in open lots); cooling or cleaning feed mills (also known as blowdown water); or direct contact swimming by animals. Process-generated wastewater includes any wastewater, except tank overflow and open-lot wastewater, which results from water coming into contact with any raw materials, products, or byproducts, including manure, litter, feed, milk, or eggs.~~

(~~27~~28) "PRODUCTION AREA"~~"Production Area"~~ means that part of an AFO or CAFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and wastewater containment areas. Also included in the definition of production area is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities.

The animal confinement area includes but is not limited to:

(a) Open lots, housed lots and feedlots;~~,~~

(b) Confinement houses;~~,~~

(c) Stall barns~~,~~ and free stall barns;~~,~~

(d) Milkrooms~~,~~ and milking centers;~~,~~

(e) Cowyards, barnyards and stables;~~,~~

(f) Medication and hospital pens;~~,~~

(g) Walkers~~,~~ and animal walkways~~, and stables~~.

The manure and residual solids storage area includes but is not limited to:

(a) Lagoons, runoff ponds, liquid impoundments and tanks;

(b) Storage sheds, ~~stockpiles,~~ under house or pit storages;~~,~~

(c) ~~liquid impoundments and tanks~~Stockpiles, static piles and composting piles.

The raw materials storage area includes but is not limited to:

(a) Feed silos, silage bunkers and bedding materials.

The waste containment area includes but is not limited to:

(a) Settling basins;~~,~~ and

(b) Areas within berms and diversions which separate uncontaminated storm water. ~~Also included in the definition of production area is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities.~~

(~~28~~29) "PUBLIC DRINKING WATER SYSTEM"~~"Public Drinking Water System"~~ means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or serves an average of at least 25 persons daily at least 60 days out of the year. A public drinking water system includes both community and non-community systems.

(~~29~~30) "SETBACK"~~"Setback"~~ means a specified distance from waters of the state, or potential conduits to waters of the state.

(~~30~~31) "SMALL CONCENTRATED ANIMAL FEEDING OPERATION"~~"Small Concentrated Animal Feeding Operation"~~ (Small CAFO) means an AFO that is designated by the Division as a CAFO, and is not a Medium CAFO.

(~~31~~32) "SOLID/LIQUID WASTE SEPARATION FACILITY"~~A "Solid/Liquid Waste Separation Facility"~~ means a filtration or screening device, settling tank, or settling channel used to separate a portion of solids from a liquid wastewater stream.

(~~32~~33) "STOCK WATERING POINT"~~"Stock Watering Point"~~ means a fenced area with a hardened surface that limits access to surface water for a very small number of animals (typically one or two at a time) for the purpose of the animals obtaining drinking water.

(~~33~~34) "STORMWATER"~~"Stormwater"~~ means precipitation induced surface runoff from land, except that defined as wastewater.

(~~34~~35) "SURFACE WATER" ~~"Surface Water"~~ means all waters of the state, except ground water, but includes ground water that may be hydrologically connected to non-subsurface water.

(~~35~~36) "TANK"~~"Tank"~~ means a stationary device designed to contain an accumulation of pollutant-containing water, which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support.

~~(36) "TANK OVERFLOW"~~

~~"Tank Overflow" means livestock drinking water in constant-flow watering troughs that overflows into in-trough drain pipes and is retained separately from wastewater storage.~~

~~(37) "25-YEAR, 24-HOUR STORM"~~

~~"25-Year, 24-Hour Storm" means a storm of a 24-hour duration which yields a total rainfall of a magnitude which has a probability of recurring once every twenty-five years.~~

(~~38~~37) "WASTEWATER"~~"Wastewater"~~ means water defined as process-generated wastewater and/or open-lot wastewater.

(~~39~~38) "WASTEWATER TREATMENT STRIP"~~"Wastewater Treatment Strip"~~ means a treatment component of an agricultural waste management system consisting of a strip or area of herbaceous vegetation that assimilates pollutants and within which wastewater runs via sheet flow.

(~~40~~39) "WATERS OF THE STATE"~~"Waters of the State"~~ means any and all surface and subsurface waters which are contained in or flow in or through this state, except waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed.

(~~41~~40) "WATERS OF THE U.S."~~"Waters of the U.S."~~ means waters of the United States as defined in 40 C.F.R. Part 122.2.

(~~42~~41) "WATER QUALITY STANDARD"~~"Water Quality Standard"~~ means any standard promulgated pursuant to section 25-8-204, C.R.S.

81.4 DESIGNATION OF AN ANIMAL FEEDING OPERATION AS A CONCENTRATED ANIMAL FEEDING OPERATION

The Division may designate any AFO as a CAFO upon performing an on-site inspection and determining that it reasonably could be a significant contributor of pollutants to waters of the U.S.

(1) The following criteria shall be considered to determine if an AFO will be designated as a CAFO:

(a) The size of the AFO and the amount of manure and wastewater reaching waters of the U.S;

(b) The location of the AFO relative to waters of the U.S.;

(c) The means of conveyance of manure and wastewater into waters of the U.S.;

(d) The slope, vegetation, rainfall, and other factors affecting the likelihood or frequency of discharge of manure and wastewater into waters of the U.S.; and

(e) Other relevant factors.

(2) No AFO with animal numbers below those established for a Medium CAFO shall be designated as a CAFO unless:

(a) Pollutants are discharged into waters of the U.S. through a manmade ditch, flushing system, or other similar manmade device from the animal feeding operation; or

(b) Pollutants from the animal feeding operation are discharged directly into waters of the U.S. that originate outside of the facility and pass over, across, or through the facility or otherwise come into contact with the animals confined in the operation.

(3) Where an AFO is at risk of being designated a CAFO, the AFO operator shall submit to the Division, within 60 days of receiving written notice by the Division of such a risk, one of the following:

(a) In consultation with the Division, an approvable work plan and associated timeline for reducing actual or potential environmental impacts such that the Division would not

designate the AFO as a CAFO. The operator shall implement the plan within 30 days of it being approved by the Division; or

(b) A written statement signed by the operator indicating the operator's intention to do one of the following:

(i) Operate as a CAFO and submit a complete application to be covered under a CAFO discharge permit within 180 days of the date of the written statement; or,

(ii) Comply with all of the CAFO surface water and ground water protection provisions of this control regulation.

(4) Where an operator does not complete and implement a work plan pursuant to section 81.4(3)(a), does not submit a written statement pursuant to section 81.4(3)(b), or evidence exists of a discharge from the facility to waters of the U.S., the AFO may be designated a CAFO by the Division and be required to submit a complete application to be covered under a CAFO discharge permit within 90 days of receiving written notice by the Division of such a designation and permit application requirement.

81.5 REQUIREMENTS – NON-PERMITTED LARGE CAFOs~~REQUIREMENT TO REGISTER WITH DIVISION - NON-PERMITTED LARGE CAF0s~~

(1) Performance Standards – Surface Water Protection

(a) There shall be no discharge of manure or wastewater from the production area to waters of the U.S. without a discharge permit.

(b) There shall be no discharge of manure or wastewater from the production area to surface water, except whenever precipitation causes a discharge and the production area is designed, constructed, operated, and maintained to contain all manure and wastewater, including the runoff and direct precipitation from a 25-year, 24-hour storm or Chronic Storm, whichever is greater.

(c) The discharge of manure and wastewater to waters of the U.S. from a CAFO as the result of the application of that manure or wastewater by the CAFO to a land application site is a discharge from that CAFO subject to permit requirements, except where it is an agricultural storm water discharge. Where the manure or wastewater has been applied in accordance with the requirements of sections 81.6(2)(a-d), a precipitation-related discharge of manure or wastewater from the site to waters of the U.S. is an agricultural storm water discharge.

(d) Manure and wastewater shall not be applied directly to surface water.

(2) Requirement to Register With The Division - The operator of a ~~Large~~ non-permitted Large CAFO shall register the facility with the Division by no later than February 27, 2009 or upon being defined as such a CAFO.

~~(1)~~(a) The registration shall be submitted to the Division and include the following information about the facility:

(~~a~~i) Legal name;

(~~b~~ii) Names of legal owner and current operator;

(~~c~~iii) Facility phone number;

(~~d~~iv) Physical address~~,~~;

(~~e~~v) Mailing address~~,~~;

(~~f~~vi) County in which the facility exists~~,~~;

(~~g~~vii) Latitude/longitude coordinates at the entrance of the facility and source of the datum~~,~~;

(~~h~~viii) Maximum number and type of all animals the facility will confine in the production area~~,~~;

(~~i~~ix) A Standard Operating Procedure (SOP) for removal of manure from impoundments in accordance with section 81.~~8~~7(3), unless the facility has previously submitted ~~such~~ ~~an~~ SOP~~.~~ ; and

(x) Evidence of impoundment liner certification, unless previously submitted.

(~~2~~b) At such time that any of the above information changes, the operator shall submit to the Division a revised registration by no later than 30 days after a change occurs.

(3) Discharge Reporting – The operator shall notify the Colorado Release and Incident Reporting Line at 1-877-518-5608 of a discharge of manure or wastewater to surface water.

(a) Such notification shall be made by telephone, electronic mail, or facsimile within 24 hours after the operator becomes aware of the discharge.

(b) The notification shall describe, at minimum, the date, time, cause of the discharge, approximate volume of the discharge, the estimated length of time of the discharge, the level of wastewater in the discharging impoundment(s), and whether the discharge entered, or could enter, waters of the U.S.

(4) Fees – Non-permitted Large CAFOs shall pay fees in accordance with the schedule set forth in section 25-8-502(1)(g), C.R.S.

(a) All annual fees must be paid within 30 days of receipt of the Division's billing statement.

(b) All fees collected under this regulation shall be made payable to the Colorado Department of Public Health and Environment.

(c) The annual fee for non-permitted Large CAFOs shall be prorated if the following occur during a fiscal year in which a fee has been paid:

(i) Issuance of a concentrated animal feeding operation discharge permit; or

(ii) Termination of a registration at the registrant's request with Division approval.

The prorated fee for terminations shall be based on the period of time the registration is in effect for the fiscal year during which the termination is requested, except that the period of time shall not exceed 90 days from the date the registration termination request is received by the Division. Prorated amounts less than $75 will not be refunded.

(d) The administrative fee shall be applicable to all non-permitted Large CAFOs as of July 1, 2009, regardless of the date upon which registration with the Division is made.

81.6 FACILITY MANAGEMENT PLAN: NON-PERMITTED LARGE CAFOs

The operator of a non-permitted Large CAFO shall compile and maintain on-site a facility management plan (FMP) that includes, to the extent applicable, the information specified in sections 81.6(1), 81.6(2), 81.6(3) and 81.6(4).

(1) Surface water protection elements – Production Area. The operator of a non-permitted Large CAFO must develop, document in the FMP and implement the following design, construction and performance requirements for the production area by no later than May 30, 2011~~. The operator of such a CAFO that comes into existence after May 30, 2011, shall develop and implement the requirements~~ or ~~upon being defined as a Large CAFO.~~.

~~(a) By the implementation deadline stated in section 81.6(1), as applicable, the operator shall include in the FMP the requirements that have been developed and implemented.~~

(~~b~~a) Use of the following structures, methods and procedures to control wastewater ~~shall be accomplished using the following structures, methods, and procedures~~:

(i) Impoundments

(A) All impoundments must be designed, constructed, and maintained to be capable of storing, the volume of all ~~liquid~~manure and wastewater, including the runoff resulting from a 25-year, 24-hour storm or Chronic Storm, whichever is greater, plus two ~~(2)~~ feet of freeboard~~.~~, except where the operator requests, and the Division approves, an alternative freeboard level.

(B) All requests for an alternative freeboard level shall include documentation that the alternative freeboard level will protect the structural integrity of the impoundments and terminal tanks, and will be functionally equivalent to two feet of freeboard to prevent overflows caused by factors such as wind and receipt of direct precipitation.

(ii) Conveyance Structures

(A) All conveyance structures must be designed, constructed, and maintained to be capable of carrying the flow expected from a 25-year, 24-hour storm or Chronic Storm, whichever is greater.

(iii) For open-lot wastewater only; ~~, in addition to the conveyance structures as described in section 81.6(1)(ba)(ii), one of the following structures or methods: 1) an impoundment(s) designed, constructed, and maintained as described in section 81.6(1)(ba)(i); 2)~~ a solid/liquid waste separation facility used in conjunction with a wastewater treatment strip ~~designed, constructed, and maintained in accordance with sections 81.6(1)(ba)(iii)(A-B), below; or, 3) a method approved by the Division.~~

(A) ~~A~~The solid/liquid waste separation facility in conjunction with a wastewater treatment strip shall be designed, constructed, and maintained so that it is capable of managing the flow expected from a 25-year, 24-hour storm or Chronic Storm, whichever is greater.

(B) The system described in subsection (A) above shall also be designed in accordance with United States Department of Agriculture – Natural

Resources Conservation Service standards, or other standards approved by the Division.

(iv) For process-generated wastewater, the operator may use the wastewater control system described in section 81.6(1)(~~b~~a)(iii) where the Division approves a plan submitted by the operator demonstrating that the system will be sustainable, including that wastewater released into the treatment strip will be properly assimilated by the vegetation.

(v) A method approved by the Division.

(~~c~~b) Install a depth marker in all impoundments indicated in the facility design calculations as being necessary to contain a 25-year, 24-hour storm or Chronic Storm, whichever is greater. Depth markers must be clearly marked, at minimum, in one foot increments and shall clearly indicate the minimum capacity necessary to contain the greater storm event.

(i) Perform weekly inspections of depth markers and record the wastewater level in each impoundment containing a depth marker.

(~~d~~c) Design, construct, and maintain structures that are sized to divert stormwater from running onto a production area as ~~the result of a 25-year, 24-hour storm or Chronic Storm, whichever is greater~~ appropriate.

(~~e~~d) Procedures to ensure proper operation and maintenance of the impoundments, including the following:

(i) Whenever the storage capacity of impoundments and tanks is less than the volume required to store runoff from the designed storm event, the structures shall be dewatered to a level that restores the required capacity once soils on a land application site ~~has~~ have the water holding capacity to receive the wastewater, or in accordance with section 81.6(2)(~~b~~a)(i)(C).

(2) Surface water protection elements – Land Application Sites. The operator of a non-permitted Large CAFO shall develop, document in the FMP and implement the following practices and procedures for land application sites by no later than February 27, 2009~~. The operator of such a CAFO that comes into existence after February 27, 2009, shall develop and implement the practices and procedures~~or upon being defined as a Large CAFO.

~~(a) By the implementation deadline stated in section 81.6(2), as applicable, the operator shall include in the FMP the developed and implemented practices and procedures.~~

(~~b~~a) Apply manure and wastewater to a land application site in accordance with the following practices and procedures:

(i) Conservation Practices - Site-specific conservation practices that have been identified and implemented, including as appropriate, buffers or equivalent practices, to control runoff of pollutants to surface water. Such practices shall include, but are not limited to:

(A) Solid manure shall be incorporated as soon as possible after application, unless the application site has perennial vegetation or is no-till cropped, or except where the operator adequately demonstrates that surface water quality will be protected where manure is not so incorporated.

(B) Where wastewater is applied to a land application site via furrow- or flood-irrigation, it shall be applied in a manner that prevents any wastewater runoff into surface water.

(C) There shall be no discharge to surface water from land application activities when the ground is frozen or saturated.

(D) Manure or wastewater shall not be land-applied within 150 feet of domestic water supply wells, and within 300 feet of community domestic water supply wells.

(ii) Sampling and Analysis - Manure, wastewater, and soil shall be sampled and analyzed with the following frequency. The results of the analyses shall be used in determining application rates for manure and wastewater.

(A) Manure and wastewater shall be sampled and analyzed a minimum of once annually for nitrogen and phosphorus content.

(B) The soil of land application sites shall be sampled and analyzed a minimum of once annually for available nutrients, including nitrate-nitrogen.

(~~B~~C) The top one foot of soil of land application sites shall be sampled and analyzed for available phosphorus a minimum of once every five years, or as specified in ~~otherwise necessary to meet the transport risk assessment requirements of~~ section 81.6(2)(~~c~~b)(~~i~~v), below.

(iii) Protocols established by the operator for land applying manure or wastewater in accordance with site specific nutrient management practices that ensure appropriate utilization of the nutrients in the manure or wastewater. Such protocols shall include, but are not limited to:

(A) No application of manure or wastewater shall be made to a land application site at a rate that will exceed the capacity of the soil and the planned crops to assimilate plant available nitrogen within ~~twelve (~~12~~)~~ months of the manure or wastewater being applied.

(B) Manure and wastewater shall be applied as uniformly as possible with properly calibrated equipment.

(C) Application rates of manure and wastewater shall be calculated using one of the following methods, including but not limited to: ~~1)~~ the most current published fertilizer suggestions of Cooperative Extension in Colorado or adjacent states; ~~2) a method provided in a complete and current Comprehensive Nutrient Management Plan (CNMP) that meets United States Department of Agriculture – Natural Resources Conservation Service standards; 3)~~ the most current nutrient management planning guidelines for Colorado as published by the USDA, NRCS; or an alternative method approved by the Division.~~United States Department of Agriculture – Natural Resources Conservation Service; or, 4) a method approved by the Division~~.

~~(iv) Records - Records identified by the operator that will be maintained to document the implementation and management of the elements described in sections 81.6(2)(b)(i-iii), above.~~

~~(A) Such records shall be maintained on-site for five years from the date they are created.~~

~~(B) Such records shall be made available to the Division or its designee, upon request.~~

(~~c~~b) Nutrient Transport Minimization - Application rates for manure and wastewater applied to a land application site must minimize phosphorus and nitrogen transport from the sites to surface water and shall be in accordance with the following standards.

(i) Assessments shall be made for each land application site of the potential for phosphorus and nitrogen transport from the site to surface water and that address the form, source, amount, timing, and method of application of nitrogen and phosphorus to achieve realistic yield goals, while minimizing nitrogen and phosphorus movement to surface water.

(A) Phosphorus transport risk assessments shall be made using the most current USDA, NRCS Colorado Phosphorus Index Risk Assessment tool or other Division-approved method. ~~a transport risk-screening tool approved by the Division and that is current, readily available, peer-reviewed, and appropriate for use in Colorado~~. The ~~screening tool~~ approved risk assessment tool shall provide for off-site transport risk scores of either 'low', 'medium', 'high', ~~and~~or 'very high'.

(B) An initial assessment of the potential for phosphorus and nitrogen transport risk to surface water shall be made prior to manure or wastewater being applied to an application site after the operator's ~~Facility Management Plan (~~FMP~~)~~ is implemented.

(ii) Where the assessed risk of off-site phosphorus transport for a land application site is rated as 'high', ~~P~~phosphorus-based manure and wastewater application rates ~~shall~~ may be applied at crop phosphorus removal rates only if a phosphorus draw-down strategy is implemented for the crop rotation (i.e. rotational phosphorus application rate is less than the rotational crop removal).~~made to an application site where the risk of off-site phosphorus transport is scored as 'high'.~~

(iii) No application of manure or wastewater shall be made to a land application site where the assessed risk of off-site phosphorus transport is rated as 'very high' until the risk of phosphorus movement off-site has been decreased to a ~~. Where the initial assessment of a land application site is scored as 'very high', the operator shall have a three-year period within which to manage the site for the purpose of lowering the~~ phosphorus transport risk assessment rating ~~to~~of 'high' or less. ~~During this period, manure and wastewater may be applied to the site at either nitrogen- or phosphorus-based rates.~~

(iv) No application of manure or wastewater shall be made to a land application site where the risk of off-site nitrogen transport to surface water is not minimized.

(v) After an initial assessment is made of the potential for phosphorus and/or nitrogen transport from a land application site to surface water, additional assessments shall be made at the following frequency, whichever is sooner:

(A) Of both phosphorus and nitrogen transport risk, every five ~~(5)~~years; or,

(B) Where a crop management change has occurred, assess phosphorus transport risk within one ~~(1)~~ year after such change would reasonably result in an increase in the phosphorus transport risk assessment score, and assess nitrogen transport risk within one ~~(1)~~ year after such a change would reasonably result in the nitrogen transport to surface water not being minimized; or,

(C) Where a phosphorus transport risk assessment score was 'very high', assess phosphorus transport risk within six ~~(6)~~months of intending to apply manure or wastewater, except as provided in section 81.6(2)(~~c~~b)(iv), above.

(D) Where a nitrogen transport risk assessment reveals that nitrogen transport to surface water is not minimized, assess nitrogen transport risk within six~~(6)~~ months of intending to apply manure or wastewater.

(vi) Where a multi-year phosphorus application was made to a land application site, no additional manure or wastewater shall be applied to the same site in subsequent years until the applied phosphorus has been removed from the site via harvest and crop removal.

(c) Inspect Land Application Equipment - Periodically inspect for leaks from equipment used for land application of manure or wastewater. At minimum, such inspection shall be made annually and within the six month period prior to the first application of manure or wastewater, and at least once daily when wastewater is being applied.

(d) Setback Requirements – Unless the operator exercises one of the alternatives provided below, manure and wastewater shall not be applied closer than 100 feet to any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface water.

(i) As a setback alternative, the operator may substitute the 100-foot setback with a 35-foot wide vegetated buffer where applications of manure or wastewater are prohibited.

(ii) The Division may approve an alternative setback or buffer based on a demonstration by the operator that a required setback or buffer is not necessary because implementation of alternative conservation practices or land application site conditions will provide pollutant reductions equivalent or better than the reductions that would be achieved by the 100-foot setback.

(e) Mortalities – Mortalities shall remain on the production area until disposal and shall be managed ~~Ensure proper management of animal mortalities~~to ensure that they are not disposed of in a wastewater storage system that is not specifically designed to treat animal mortalities.

(f) Prevent direct contact of confined animals with surface water.

(g) Ensure that chemicals and other contaminants handled on-site are not disposed of in any manure or wastewater storage system unless specifically designed to treat such chemicals and other contaminants.

(3) Ground water protection elements – Production Area. The operator of a non-permitted Large CAFO shall include in the FMP the following information by no later than February 27, 2009 or upon being defined as a large CAFO. ~~After February 27, 2009, t~~The FMP shall be updated as

necessary to meet the requirements of the sections of this regulation cited below~~, and by the deadlines specified in the sections~~.

(a) The impoundment liner ~~certification(s)~~ records and certifications specified in sections 81.~~8(2)(b)~~7(2)(b) and (c).

(b) The current approved Standard Operating Procedure (SOP) specified in section 81.~~8(3)(a)~~7(3)(a), and manure/sludge removal certifications specified in section 81.7(3)(d).

(c) Information demonstrating that the facility is in compliance with the depth marker, conveyance structure, and setback requirements specified in sections 81.~~8(4-6)~~7(4),(5) and (6).

(4) Recordkeeping – The operator shall create, maintain at the facility for five years from the date they are created, and make available to the Division or its designee, upon request, the following records:

(a) Records identified by the operator that will be maintained to document the implementation and management of the surface water protection elements described in sections 81.6(2)(a)(i) through (iii).

(b) Weekly records of the depth of the manure and wastewater as indicated by the depth markers in the impoundments required to be inspected by section 81.6(1)(b)(i), or as indicated by an alternative method approved by the Division.

(c) A copy of the current FMP shall be compiled and maintained in one discrete place at the facility, such as an office or filing cabinet.

~~**81.7 ADDITIONAL REQUIREMENTS – NON-PERMITTED LARGE CAFOs**~~

~~(1) Performance Standards – Surface Water Protection~~

~~(a) There shall be no discharge of manure or wastewater from the production area to waters of the U.S. without a discharge permit.~~

~~(b) There shall be no discharge of manure or wastewater from the production area to surface water, except whenever precipitation causes a discharge and the production area is designed, constructed, operated, and maintained to contain all manure and wastewater, including the runoff and direct precipitation from a 25-year, 24-hour storm or Chronic Storm, whichever is greater.~~

~~(c) The discharge of manure and wastewater to waters of the U.S. from a CAFO as the result of the application of that manure or wastewater by the CAFO to a land application site is a discharge from that CAFO subject to permit requirements, except where it is an agricultural storm water discharge. Where the manure or wastewater has been applied in accordance with the requirements of sections 81.6(2)(a-d), a precipitation-related discharge of manure or wastewater from the site to waters of the U.S. is an agricultural storm water discharge.~~

~~(d) Manure and wastewater shall not be applied directly to surface water.~~

~~(2) Recordkeeping – The operator shall create, maintain at the facility for five years from the date they are created, and make available to the Division or its designee, upon request, the following records:~~

~~(a) A copy of its current FMP shall be compiled and maintained in one discrete place at the facility, such as an office or filing cabinet.~~

~~(b) The land application records specified in section 81.6(2)(b)(iv).~~

~~(c) Weekly records of the depth of the manure and wastewater as indicated by the depth markers in the impoundments required to be inspected by section 81.6(1)(c)(i), or as indicated by an alternative method approved by the Division.~~

~~(d) The records and certifications specified in sections 81.8(2)(c) and 81.8(3)(d).~~

~~(3) Discharge Reporting – The operator shall notify the Division of a discharge of manure or wastewater to surface water.~~

~~(a) Such notification shall be made by telephone, electronic mail, or facsimile within 24 hours after the operator becomes aware of the discharge.~~

~~(b) The notification shall describe, at minimum, the date, time, cause of the discharge, approximate volume of the discharge, the estimated length of time of the discharge, the level of wastewater in the discharging impoundment(s), and whether the discharge entered, or could enter, waters of the U.S.~~

~~(4) Fees – Non-permitted Large CAFOs shall pay fees in accordance with the schedule set forth in section 25-8-502(1)(g), C.R.S.~~

~~(a) All annual fees must be paid within 30 days of receipt of the Division's billing statement.~~

~~(b) All fees collected under this regulation shall be made payable to the Colorado Department of Public Health and Environment.~~

~~(c) The annual fee for non-permitted Large CAFOs shall be prorated if the following occur during a fiscal year in which a fee has been paid:~~

~~(i) Issuance of a concentrated animal feeding operation discharge permit; or~~

~~(ii) Termination of a registration at the registrant's request with Division approval.~~

~~The prorated fee for terminations shall be based on the period of time the registration is in effect for the fiscal year during which the termination is requested, except that the period of time shall not exceed 90 days from the date the registration termination request is received by the Division. Prorated amounts less than $75 will not be refunded.~~

~~(d) The administrative fee shall be applicable to all non-permitted Large CAFOs as of July 1, 2009, regardless of the date upon which registration with the Division is made.~~

81. ~~8~~7 GROUND WATER PROTECTION REQUIREMENTS - CONCENTRATED ANIMAL FEEDING OPERATIONS (PERMITTED AND NON-PERMITTED)

(1) Tanks at concentrated animal feeding operations shall be operated and maintained so as not to discharge wastewater to ground water.

(2) Impoundment liners

(a) An impoundment at a concentrated animal feeding operation shall be constructed and maintained to comply with one of the following standards, as applicable:

(i) The seepage rate from an impoundment shall not exceed 1 x 10^{-6} cm/sec; or

(ii) Where approved by the Division for an impoundment with an earthen liner that collects only open-lot runoff, the seepage rate from the impoundment shall not exceed 7.35 x 10^{-6} cm/sec. The operator of the impoundment shall submit to the Division a request that the impoundment be approved to meet this seepage standard. Such a request shall include, but not be limited to, information documenting that only open-lot wastewater will be diverted to the impoundment, that the impoundment is not designed as an evaporation impoundment, and that the ten ~~(10)~~foot soil depth zone immediately beneath the impoundment has a cation exchange capacity of at least 15 meq/100 g of soil. Demonstration of compliance with the cation exchange capacity criteria requires the following:

(A) At least seven soil samples shall be acquired from below the entire surface area of the impoundment and analyzed for cation exchange capacity.

(B) The soil samples shall be reasonably equidistant from each other, with five locations being within ten feet of, and downslope of, the two-foot freeboard elevation of the impoundment, and two locations from the middle of the impoundment.

(C) The operator shall have available a map of the impoundment and soil sampling locations.

(D) Where soil samples were taken below existing impoundments, the operator shall have available documentation from a professional engineer registered in the State of Colorado of how the core locations were sealed to meet a 1 x 10^{-6} cm/sec maximum seepage rate.

(b) CAFO operators shall have available documentation, including the supporting information required by section 81.~~8(2)(b)(iii)~~7(2)(b)(i), prepared by a professional engineer registered in Colorado certifying that the provisions of section 81.~~8~~7(2) have been met, and stating what constitutes each constructed liner (e.g., synthetic, clay).

~~(i) For impoundments constructed prior to June 30, 2004, the liner certification shall be available no later than April 13, 2006.~~

~~(ii) For any impoundment constructed by an operator on or after June 30, 2004 and before February 27, 2009, the liner certification shall be available prior to wastewater entering the impoundment.~~

~~(iii) For any impoundment constructed by an operator on or after February 27, 2009, t~~The liner certification and, where applicable (i.e., for impoundments constructed after February 27, 2009), the seepage rate calculations using Darcy's Law shall be available prior to wastewater entering the impoundment.

(~~iv~~i) Copies of the liner certification and supporting information shall be made available to the Division ~~and~~ or its designee, upon request. ~~In addition, these documents shall be submitted to the Division as follows:~~

~~(A) For impoundments constructed after February 1, 2007, and before December 30, 2008, submit the documents by February 27, 2009.~~

~~(B)~~ For ~~an~~a newly constructed impoundment, ~~constructed after December 30, 2008,~~ submit the documents to the Division by no later than 30 days after construction of the impoundment is complete.

(c) A CAFO operator shall visually inspect the exposed liner of an impoundment weekly to identify physical changes or deficiencies that may affect the integrity of the liner. Such deficiencies and physical changes shall be corrected ~~within thirty (~~30~~)~~ days of having been identified.

(i) The operator shall record the date of the inspection, deficiencies identified, corrective actions taken, and dates that corrective action was completed.

(ii) Deficiencies not corrected within 30 days shall be accompanied by an explanation of the factors preventing completion of corrective actions within this time period.

(iii) The records shall be maintained on-site for five years from the date of creation and shall be made available to the Division upon request.

(3) Removal of manure or wastewater from an impoundment shall be accomplished in a manner that does not damage the integrity of the liner. The operator shall submit to the Division for approval a Standard Operating Procedure ("SOP") that demonstrates how manure, including sludge, will be removed such that the liner integrity of impoundments is not damaged. The SOP also shall indicate the expected frequency with which manure will be removed from impoundments.

(a) The approved SOP must be available on-site and be submitted to the Division upon request.

(b) The operator shall follow the approved SOP whenever manure, including sludge, is removed. Where the SOP was not followed, the Division may require that the operator make the liner available for inspection. Where the Division has just cause as a result of the inspection, the Division may require re-certification of the liner by a professional engineer registered in Colorado.

(c) ~~An existing CAFO shall submit the SOP no later than December 31, 2004.~~

~~(i)~~ A CAFO ~~that comes into existence after December 31, 2004~~ shall submit the SOP no later than 120 days after animals are placed on the production area.

~~(ii)~~(i) The operator shall submit a revised SOP for approval within 30 days of a change having been made to the impoundment(s) at the facility that requires a revision of the SOP, such as a new impoundment or different liner having been constructed.

(d) The operator shall certify after each manure, or sludge removal event that the manure or sludge was removed in accordance with the approved SOP.

(i) The certifications must be available on-site and be submitted to the Division upon request.

(ii) For a concrete-lined impoundment, where a certification for each removal event is not completed, at least once every five years the operator shall:

(A) Drain and clean the impoundment. ~~every five years~~The operator shall use best professional judgment to determine whether the liner integrity is~~damaged such that the impoundment is no longer~~ capable of having a maximum seepage rate of 1 x 10^{-6} cm/sec.

(B) Where the operator determines that the ~~liner integrity is such that the~~ impoundment remains capable of having a maximum seepage rate of 1 x 10^{-6} cm/sec, the operator shall ~~so certify~~document the determination within five days of the liner inspection. The ~~certification~~documentation shall include photographs supporting the determination.

(C) Where the operator determines ~~that~~ the liner integrity is damaged such that the impoundment is no longer capable of having a maximum seepage rate of 1 x 10^{-6} cm/sec, the operator shall:

(I) Repair the impoundment within 30 days of the liner inspection so that ~~the liner integrity is such that~~the impoundment is capable of having a maximum seepage rate of 1 x 10^{-6} cm/sec.

(II) Within 14 days of repairing the impoundment ~~having been repaired~~, submit ~~to the Division~~ evidence of the properly completed repair ~~having been properly completed~~to the Division. The evidence shall consist either of photographs with accompanying written documentation or of other evidence approved by the Division.

~~(ii) The certifications must be available on-site and be submitted to the Division upon request.~~

(e) Where the SOP is not followed, the operator shall provide notice to the Division within 30 days of the date of manure removal.

(4) Any depth marker in an impoundment shall be installed in a manner that maintains the integrity of the liner and maintains the required seepage rate standard.

(5) ~~Earthen~~Wastewater Conveyance Structures - ~~Earthen c~~Conveyance structures shall be designed and maintained to ~~minimize ponding of~~convey but not store any manure or wastewater. ~~In addition, such structures shall be constructed and maintained as follows for the purpose of limiting seepage of wastewater in the structures:~~

~~(a) Conveyance structures that carry open-lot wastewater~~

~~(i) Where constructed in soils that have 35-60 percent gravel, a conveyance structure shall be constructed by sufficiently compacting the existing soil material (less than 60 percent gravel) in place with at least two passes of rubber-tired construction equipment, four passes of track-type equipment, or equivalent, over the entire surface of the conveyance structure. Moisture content of the soil material during compaction shall be maintained to promote sufficient compaction of the in-place materials. The soil should be wet to the touch and leave a stain on the hand when squeezed.~~

~~(ii) Where constructed in soils that have greater than 60 percent gravel, or in loamy sand or sandy soils with greater than 35 percent gravel, a conveyance structure shall be constructed by placing a compacted liner over the entire surface of the conveyance structure. A conveyance structure liner shall be constructed of soils~~

~~having less than 60 percent gravel, shall be twelve (12) inches thick, and shall be compacted with at least two passes of rubber-tired construction equipment, four passes of track-type equipment, or equivalent, over the entire surface of the conveyance structure. Moisture content of the soil material during compaction shall be maintained to promote sufficient compaction of the soil liner material. The soil should be wet to the touch and leave a stain on the hand when squeezed. In addition, the constructed liner shall be maintained to retain these standards.~~

~~(iii) Where constructed in soils having less than 35 percent gravel, a conveyance structure does not need to be lined or compacted.~~

~~(b) Conveyance structures that carry process-generated wastewater intermittently (greater than 48 hours between conveyance events) – Earthen conveyance structures that carry process-generated wastewater intermittently shall be constructed and maintained in accordance with the standards specified in section 81.8(5)(a)(ii), above.~~

(~~c~~a) Conveyance structures that carry process-generated wastewater ~~non-intermittently~~ continuously (48 hours or less between conveyance events) ~~– Earthen and non-earthen (e.g., pipe or concrete) conveyance structures that carry process-generated wastewater non-intermittently~~ shall be constructed and maintained to have a maximum seepage rate of 1×10^{-6} cm/sec.

(~~d~~b) Where upon inspection the Division has just cause to determine that the required liner is not in place, the Division may require that the operator submit to the Division a certification that the conveyance structure meets the requirements of section ~~81.8(5)(b) or (c), or~~ 81.~~8(5)(a)(ii)~~7(5)(a). The certification shall be made by a professional engineer registered in the State of Colorado.

(6) Setbacks for New and Expanded Impoundments – A new impoundment constructed after June 30, 2008, ~~and~~ or an existing impoundment that is expanded by 50 percent or more of existing storage capacity after June 30, 2008, shall not be located:

(a) Except as provided below, where the seasonally high ground water level is located within four ~~(4)~~feet of the bottom of the impoundment liner; and

(i) Where the seasonally high ground water level is located within four ~~(4)~~feet of the bottom of the impoundment liner, the impoundment shall be constructed and maintained in accordance with the design by a professional engineer registered in the state of Colorado that~~prevents ground water from contacting~~ accounts for hydrostatic pressure adversely affecting the integrity of the impoundment's liner.

(b) Within 150 feet of a private domestic water supply well or within 300 feet of a community domestic water supply well.

(7) Ground Water Monitoring - Where an impoundment is not in compliance with section 81.~~8~~7(2), or where the Division determines that an impoundment liner is not being properly maintained, the Division may require the operator to conduct site-specific ground water quality monitoring of, but not limited to, total nitrogen, ammonia-nitrogen, nitrate-nitrogen, and fecal coliform. In making a determination of whether ground water monitoring is required, the Division shall consider all pertinent factors, including but not limited to: whether the impoundment poses a significant potential risk to beneficial uses of ground water, whether there is suspected contamination of ground water attributable to the facility, whether early detection of ground water contamination is essential to protect valuable drinking water sources, and whether there has been a significant failure on the part of the operator to comply with sections 81.~~8~~7(2), (3), (4), (6), or (7).

(8) Ground Water Remediation - When the Division determines that non-compliance with sections 81.~~8~~7(2), (3), (4), (6), or (7) has caused, or contributed to, the exceedance of established ground water quality standards, the operator shall:

(a) Submit, in consultation with the Division, an approvable investigation plan ~~(IP)~~ within 60 days of being notified by the Division of the exceedance, unless an extension of time is granted by the Division based on good faith efforts made by the operator.

(i) The ~~IP~~ investigation plan must indicate how the nature and extent of the contamination will be delineated and shall include the following, at minimum:

(A) A plan to determine the full vertical and horizontal extent of ground water contamination.

(B) All potential human and environmental receptors, including: 1) all surface water features including springs, streams, and lakes that could be impacted; and 2) all municipal, agricultural, and domestic ground water users.

(C) A plan to obtain other site-specific hydrogeologic data necessary to fully determine the nature and extent of the contamination. These shall include, as appropriate, but not be limited to, the hydraulic conductivity of all hydrogeologic units, associated porosity values, ground water flow directions, regional and local hydraulic gradients, and pumping rates associated with all wells. The Division may require that the operator install additional monitoring wells for the purpose of fully determining the nature and extent of the contamination.

(D) A reasonable timeline for completing the investigation.

(ii) The operator shall implement the ~~IP~~ investigation plan within 30 days of it being approved by the Division.

(b) The operator shall submit the following information by no later than 60 days after completion of the approved ~~IP~~investigation plan, unless an extension of time is granted by the Division based on good faith efforts made by the operator:

(i) A summary report of the findings of the investigation conducted pursuant to section 81.~~8~~7(8)(a).

(ii) A comparison of all appropriate and applicable remediation alternatives, including innovative technologies, the associated performance and costs of each alternative, the estimated timelines to achieve the required remediation goals and the monitoring that will be done until the remediation goal(s) is reached. The Division shall review remediation alternatives based on technological, economic and environmental risk factors. In determining economic reasonableness, the Division shall take into account such factors as costs of the various alternatives, the potential impact of the alternatives on a project's profitability or competitive position and any long-term energy impacts. In determining environmental risk factors the Division will include potential exposures of sensitive human and environmental receptors. In cases where sensitive human and environmental impacts could occur, the Division may require interim, or emergency, remedial activities.

(c) The operator shall submit an approvable remediation plan ~~(RP)~~by no later than 60 days of being notified of the Division's preferred remediation alternative, unless an extension of time is granted by the Division based on good faith efforts made by the operator. The RP shall contain designs and plans for implementation of the preferred alternative.

(i) The operator shall implement the ~~RP~~remediation plan within 30 days of it being approved by the Division.

(9) Impoundment Closure – The operator of a facility shall remove manure and wastewater from a closed impoundment, to the fullest extent practicable within 60 days of the impoundment being closed, unless an alternative timeline is approved by the Division. Within ~~one hundred twenty (~~120~~)~~ days of an impoundment being closed, an impoundment shall be backfilled with soil that is graded to blend with surface topography and prevent ponding, unless an alternative procedure and timeline is approved by the Division.

81.~~9~~8 ANIMAL FEEDING OPERATIONS - BEST MANAGEMENT PRACTICES

The following Best Management Practices (BMPs) shall be utilized by animal feeding operations, as appropriate, based upon existing physical conditions and site constraints. Best management practices means, for purposes of this regulation, activities, procedures, or practices necessary for the reduction of impacts from animal feeding operations on surface or ground water, as described in this section.

The following practices, designed to decrease runoff volume from animal feeding operations, are BMPs within the meaning of this regulation:

(1) ~~Operators of animal feeding operations shall d~~Divert runoff from uncontaminated areas away from animal confinement areas, and manure and wastewater control facilities to the extent practicable through:

(a) Construction of ditches, terraces or other waterways

(b) Installation of gutters, downspouts and buried conduits to divert roof drainage;

(c) Construction of roofed areas over animal confinement areas everywhere it is practicable.

(2) ~~Practices to d~~Decrease open lot surface area, where practicable by:

(a) ~~Where practicable, operators of animal feeding operations shall:~~

~~(i)~~ Reduc~~e~~ing lot size;

~~(ii)~~(b) Improv~~e~~ing lot surfacing to support increased animal density;

~~(iii)~~(c) Provid~~e~~ing roofed area to the maximum extent practicable; and

~~(iv)~~(d) Eliminat~~e~~ing animal confinement areas, and manure and wastewater control facilities in areas that slope in directions such that wastewater/rainfall cannot be collected.

(3) ~~Practices to d~~Decrease water volume by:

(a) Repairing or adjusting waterers and water systems to minimize water wastage.

(b) Us~~e~~ing lowest practical amounts of water for manure and wastewater flushing.

(c) Recycl~~e~~ing water used to flush manure from paved surfaces or housed confinement areas, if practical.

(4) ~~Practices to d~~Decrease wastewater discharges to surface water by:

(a) Collecting and allowing process-generated wastewater to evaporate, or by collecting and evenly applying wastewater to land application sites at agronomic rates.

(b) In addition, Medium AFOs must design, construct and maintain an impoundment(s) that is capable of storing wastewater as described in 81.8(4)(b)(i) and (ii) below:

(i) For Medium AFOs that do not apply wastewater to land application sites (i.e. evaporative impoundments only), the impoundment(s) must be ~~design, construct, and maintain an impoundment(s) that is~~ capable of storing~~, at minimum,~~ the volume of all ~~liquid manure and~~ process-generated wastewater for 180 days, at a minimum.

~~(b) Collect and evenly apply wastewater to land application sites at agronomic rates.~~

(ii) For Medium AFOs that apply wastewater to land application sites, the~~, design, construct, and maintain an~~ impoundment(s) ~~that is~~must be capable of storing~~, at minimum,~~ the volume of all ~~liquid manure~~ open-lot runoff and process-generated wastewater for 120 days, at a minimum.

(iii) For Medium AFOs that land apply wastewater, the operator shall keep records demonstrating that wastewater has been applied to each land application site at an agronomic rate.

(A) Such records shall be maintained on-site for five years from the date they are created.

(B) Such records shall be made available to the Division or its designee, upon request.

(c) Treating open-lot wastewater through use of one of the following:

(i) A wastewater treatment strip; or,

(A) Inflow to a wastewater treatment strip shall be pretreated by a solid/liquid waste separation facility, as appropriate based upon site constraints and to have the wastewater treatment strip adequately assimilate pollutants.

(ii) A method approved by the Division.

(d) Preventing ~~A~~animals ~~shall not have~~from having direct contact with surface water. A stock watering point may be used where animals have access to no other source of drinking water. A stock watering point shall be cleaned frequently of manure and have wastewater diverted at the watering point entry.

(e) ~~Operators shall not deposit such waste which might pollute waters of the state in such locations that storm water run-off or normally expected high stream flow will carry the waste into the waters of the state.~~ Locating wastewater retention structures or collection sites away from areas where stormwater run-off or seasonally high stream flow may carry the waste into waters of the state.

(f) Not locating ~~W~~wastewater retention structures ~~shall not be~~ located within a mapped 100 year flood plain as designated by the Colorado Water Conservation Board (CWCB) unless proper flood proofing measures (structures) are designed and constructed.

(g) ~~The operator shall m~~Managing animal mortalities in a manner that prevents a discharge of pollutants to surface water.

(5) ~~Practices to~~Minimize manure transport to surface water by:

(a) Locating ~~M~~manure stockpiles away from surface water, and above the 100 year flood plain as designated and approved by CWCB, unless adequate flood proofing structures are provided, and bermed to minimize runoff.

(b) Locating manure stockpiles away from areas where stormwater run-off or normally high stream flow will carry the waste manure into the waters of the state, unless the area is bermed to minimize runoff.

(~~b~~c) ~~Operators of animal feeding operations shall p~~Providing adequate manure storage capacity based upon manure and wastewater production.

(~~c~~d) Removing settleable solids by using solids-settling basins, terraces, diversions, or other solid removal methods approved by the Division. Construction of solids-settling facilities shall not be required where the Division determines existing site conditions provide adequate settleable solids removal. Sufficient capacity shall be provided in the solids-settling facilities to store settled solids between periods of manure and wastewater disposal.

~~(d) Removal of settleable manure and wastewater solids shall be considered adequate when the velocity of waste flows has been reduced to less than 0.5 foot per second for a minimum of five minutes. Sufficient capacity shall be provided in the solids-settling facilities to store settled solids between periods of manure and wastewater disposal.~~

(e) Applying manure to land application sites at an agronomic rate.

(i) For Medium AFOs that land apply manure, ~~T~~ the operator shall keep records demonstrating that manure has been applied to each land application site at an agronomic rate.

(A) Such records shall be maintained on-site for five years from the date they are created.

(B) Such records shall be made available to the Division or its designee, upon request.

(f) Avoid applications on saturated soils and lands subject to excessive erosion.

(g) Operators of animal feeding operations shall use edge-of-field, grassed strips, filter fences or straw bales to separate eroded soil and manure particles from the field runoff.

(h) Collect manure frequently.

(6) Practices to Protect Groundwater.

(a) Operators of animal feeding operations shall locate manure and wastewater management facilities hydrologically downgradient and a minimum horizontal distance of 150 feet from all water supply wells.

(b) When applying manure and wastewater to land, operators of animal feeding operations shall utilize a buffer area around water wells sufficient to prevent the possibility of waste transport to groundwater via the well or well casing.

(c) An impoundment at a Medium AFO shall have a liner that is constructed and maintained such that the seepage rate from the impoundment does not exceed 1 x 10^{-6} cm/sec.

(i) The operator of such a facility shall have documentation prepared by a professional engineer registered in Colorado certifying that each impoundment has a liner that does not allow a seepage rate in excess of 1 x 10^{-6} cm/sec. Such documentation shall be available prior to wastewater entering the impoundment.

~~(A) For an impoundment constructed on or prior to December 31, 2008, such documentation shall be on-site no later than May 30, 2011.~~

~~(B) For an impoundment constructed after December 31, 2008, sSuch documentation shall be available prior to wastewater entering the impoundment.~~

~~(C)~~(ii) The operator shall make a copy of such documentation available to the Division or its designee, upon request.

(d) Where the Division determines that an animal feeding operation, other than a Medium AFO, could adversely affect ground water quality, the operator of such an AFO shall install a liner in all impoundments such that the seepage rate from each impoundment does not exceed 1 x 10^{-6} cm/sec.

(i) The Division shall determine that such an AFO could adversely affect ground water quality by demonstrating that it is in a location where:

(A) ~~Where s~~Significant ground water recharge occurs as determined using the United States Department of Agriculture, Natural Resources Conservation Service's current "Agricultural Waste Management Field Handbook, Part 651, Chapter 7, Geologic and Ground Water Considerations"; or,

(B) ~~Where c~~Contamination from the AFO could cause ground water to exceed the standards adopted by the Colorado Water Quality Control Commission; or,

(C) ~~Where a~~A water source susceptibility analysis results in the AFO having a "medium-high" or "high" potential for contaminating existing or reasonably likely future public drinking water system withdrawals. Such an analysis shall examine the physical setting of ground water and the contaminant threat that the AFO poses to the ground water source. Factors that shall be considered in examining the physical setting include aquifer sensitivity at the water source intake location, depth to the water source, structural integrity of the water system at the withdrawal point, flow of the water source and first draw of the water source. Factors that shall be considered in examining the contaminant threat are migration

potential, contaminant hazard, potential volume and likelihood of contaminant release.

(ii) A liner, ~~W~~where required, ~~the liner~~ shall be installed according to a work plan approved by the Division. ~~The operator shall, in consultation with the Division, develop and submit to the Division within 60 days of receiving written request by the Division the approvable work plan that includes a timeline for installing each liner.~~

(A) The operator shall, in consultation with the Division, develop and submit an approvable work plan that includes a timeline for installing each liner within 60 days of receiving the written request from the Division.

(B) The operator shall implement the plan within 30 days of it being approved by the Division.

(C) The operator shall submit to the Division, within 30 days of each liner having been properly constructed, documentation prepared by a professional engineer registered in the State of Colorado certifying that the seepage rate from each impoundment does not exceed 1×10^{-6} cm/sec.

81.~~10~~9 SEVERABILITY

The provisions of this regulation are severable, and if any provisions or the application of the provisions to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of this regulation, shall not be affected thereby.

81.~~11~~10 – 81.14 RESERVED

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ENVIRONMENTAL AGRICULTURE PROGRAM PROPOSED

81.25 STATEMENT OF BASIS, SPECIFIC AUTHORITY AND PURPOSE: OCTOBER 7, 2013 RULEMAKING, EFFECTIVE DATE OF NOVEMBER 30, 2013

The provisions of sections 25-8-202, 25-8-205 and 25-8-401, C.R.S., provide the specific statutory authority for adoption of the attached regulatory amendments. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

A. BACKGROUND

This hearing was held to consider changes as recommended during the triennial informational hearing for this regulation held on August 13, 2012, and during subsequent discussions with stakeholders and parties to the hearing process.

As a result of this rulemaking proceeding, the Commission adopted the following amendments to this regulation.

B. DISCUSSION OF AMENDMENTS

Typographical Errors, Corrections, and Updates: The Commission corrected typographical errors and inconsistencies in the use of terms found throughout the regulation. The corrections have no effect on the substantive meaning of the regulation.

Introduction: The Commission corrected the date of cited federal references from April 14, 2008 to December 22, 2008 for consistency with Colorado Discharge Permit System Regulation, 5 CCR 1002-61 (Regulation No. 61).

Applicability [81.1]: Reference to Regulation No. 66 was added by the Commission to reflect all permitting requirements for Housed Commercial Swine Feeding Operations.

Definitions [81.3]:

The definition of “25-year, 24-hour” storm was moved to the beginning of the subsection to maintain proper alphabetical order and renumbered accordingly. In addition, corresponding citations were updated to reflect this change. The definition of “Division” was revised to reference the Environmental Agriculture Program as the implementing authority of this regulation.

The definitions of “Freeboard” and “Land Application Site” were revised to match the corresponding definitions found in Regulation No. 61, thereby maintaining consistency across the regulations.

The Commission modified the definition of “Open-lot Wastewater” to include precipitation that comes into contact with feed. Previously all water that came into contact with feed, including precipitation, was considered process-generated wastewater, which requires more stringent management practices. Stakeholders to this rulemaking argued that this was an unnecessary burden on small and medium AFOs that typically do not have the ability to implement the measures required to manage process-generated wastewater. In addition, the Division was unable to find any available documentation that indicates the wastewater resulting from precipitation coming into contact with feed is not anymore detrimental to the environment than sources already considered open-lot wastewater. Therefore, the Commission feels it is appropriate to include feed in the definition of open-lot wastewater and require animal feeding operations to manage this source of wastewater accordingly. As a result, this change reduces the regulatory burden

on small and medium AFO operations, while maintaining the regulatory requirements for operations defined as large CAFOs.

The definition of “Process-generated Wastewater” was reformatted to provide clarity. In addition, water used for cooling or cleaning feed mills (also known as blow-down water) was removed from the definition. Blow-down water was previously considered a non-intermittent, process-generated wastewater, which required any related conveyance to meet a liner seepage rate standard of $1x10^{-6}$ cm/sec. Stakeholders to the rulemaking argued that feed mill blown-down water is basically clean water that poses little risk to the environment and contended that the conveyance liner standard was therefore onerous and unnecessary. The Division evaluated available information regarding feed mill blow-down water and determined that relative small quantities are produced from normal feed mill operations and the potential risk to groundwater is minimal. Therefore, the Commission finds it appropriate to remove blow-down water from the definition of process-generated wastewater. However, the Commission does consider blow-down water to still be a potential source of pollutants and therefore, should be managed in accordance with the regulatory requirements associated with open-lot wastewater.

The definition of “Tank Overflow” was removed from this subsection and incorporated into the definitions of “Process-generated Wastewater” and “Open-lot Wastewater”. Consolidation of this term also eliminates confusion inherent with the definition of “Tank”.

Requirements – Non-Permitted Large CAFOs [81.5]:

The Commission moved subsections 81.7(1), 81.7(3) and 81.7(4), to subsection 81.5(1), 81.5(3), and 81.5(4), respectively, to consolidate the general requirements for non-permitted large CAFOs. The previous contents of subsection 81.5, which addressed the requirement for non-permitted large CAFOs to register with the Division, are now incorporated into the general requirements for large non-permitted CAFOs in subsection 81.5(2).

The Commission revised the language in the new subsection 81.5(3), previously 81.7(3), to require CAFO operators to notify the department’s 24-hour Colorado Release and Incident Reporting Line in the event of a discharge or reportable incident.

Facility Management Plan – Non-Permitted Large CAFOs [81.6]:

The Commission found it appropriate to delete subsection 81.6(1)(a), as it contained redundant requirements currently stated in 81.6(1). Subsequent subsections of 81.6(1) were renumbered as a result of this deletion.

Section 81.6(1)(a)(i) was reformatted by the Commission to add greater clarification.

The term “liquid manure” was replaced with “manure” in subsection 81.6(1)(a)(i)(A) because the previous term is not defined in this regulation. In addition, the Commission found it appropriate to incorporate language from 61.17(8)(b)(iii)(A), which allows a facility to request an alternative freeboard level for wastewater impoundments. Inclusion of this provision provides consistency across both regulations and increased flexibility for producers.

Portions of the language in subsection 81.6(1)(a)(iii), were removed to provide clarity and better understanding of the regulatory requirement for CAFOs implementing filter strips. The Commission determined that the deleted language only restated the surface water protection elements presented in subsections 81.6(1)(a)(i), and 81.6(1)(a)(ii). The section was also reformatted to provide greater clarification. The ability for the Division to approve alternative wastewater management methods was moved from 81.6(1)(a)(iii), to 81.6(1)(a)(v), as a result of the reformatting.

The Commission revised the storm water diversion sizing requirement in subsection 81.6(1)(c), to be consistent with the same requirement found in Regulation No. 61, and to not be more stringent than federal requirements.

The Commission found it appropriate to delete subsection 81.6(2)(a), as it contained redundant requirements currently stated in 81.6(2). Subsequent subsections of 81.6(2), were renumbered as a result of this deletion.

Subsection 81.6(2)(a)(ii)(B) was added by the Commission to the manure, wastewater, and soil sampling and analysis requirements in subsection 81.6(2)(a)(ii). A requirement to annually test land application sites for soil nitrate-nitrogen was added to be consistent with similar requirements found in Regulation No. 61 and to correspond with Colorado State University Extension and USDA, NRCS guidelines. Annual soil testing will also provide greater protection of groundwater. The remainder of the subsection was renumbered accordingly.

The Commission found it appropriate to change Cooperative Extension in Colorado to Colorado State University Extension in subsection 81.6(2)(a)(iii)(C) to accurately represent the referenced agency.

Language in subsection 81.6(2)(a)(iii)(c), was revised by the Commission to be consistent with similar requirements of Regulation No. 61. In addition, reference to the Comprehensive Nutrient Management Plan was removed as it is redundant with the nutrient management planning guidelines already referred to in the subsection.

Subsection 81.6(2)(b)(i)(A) was revised by the Commission to clarify that scoring off-site phosphorus transport risk as ‘low’, ‘medium’, ‘high’ or ‘very high’ is not a function of the screening tool but is a function of the Colorado Phosphorus Index Risk Assessment or other Division-approved method.

The Commission revised subsection 81.6(2)(b)(ii) to be consistent with the most current USDA, NRCS Colorado Phosphorus Index Risk Assessment regarding the application of nutrients to land application sites that are assessed a off-site phosphorus transport risk factor of ‘high’.

The Commission revised subsection 81.6(2)(b)(iii) to be consistent with the most current USDA, NRCS Colorado Phosphorus Risk Assessment regarding the application of nutrients to land application sites that are assessed a off-site phosphorus transport risk factor of ‘very high’.

The Commission found it appropriate to move the language in subsection 81.6(2)(b)(iv), to the new subsection 81.6(4), in order to consolidate the CAFO recording keeping requirements.

The Commission revised subsection 81.6(2)(e), to be consistent with the mortality management requirements of Regulation No. 61.

Language in subsection 81.6(3)(a), was revised by the Commission to include all impoundment related groundwater protection records. Applicable citations were updated accordingly.

Language in subsection 81.6(3)(b), was revised by the Commission to include all Standard Operating Procedure (SOP) records. Applicable citations were updated accordingly.

The Commission felt it appropriate to combine subsections 81.6(2)(b)(iv), and 81.7(2), into a new subsection 81.6(4), in order to consolidate the records non-permitted large CAFOs are required to maintain in their Facility Management Plan.

Additional Requirements – Non-Permitted CAFOs [81.7]: The Commission moved section 81.7 to section 81.5 to consolidate the general requirements for non-permitted large CAFOs.

Ground Water Protection Requirements – Concentrated Animal Feeding Operations (Permitted and Non-Permitted [81.7] (previously section 81.8):

The Commission revised the language in subsection 81.7(2)(a)(ii), to clearly indicate that the liner seepage rate standard of 7.35 x 10^{-6} cm/sec is appropriate only for earthen lined impoundments that collect open-lot wastewater.

Previous subsection 81.8(2)(b)(i), required that a liner certification for an impoundment built prior to June 30, 2004, be available by no later than April 13, 2006. The Commission felt it appropriate to delete this subsection since the compliance date has passed. Evidence of an impoundment liner certification must be made available upon request, as required by 81.7(2)(b)(i).

Previous subsection 81.8(2)(b)(ii), required that the liner certification for an impoundment built after June 30, 2004, and before February 7, 2009, be available prior to wastewater entering the impoundment. The Commission felt it appropriate to delete this subsection since the compliance dates have passed. Evidence of an impoundment liner certification must be made available upon request, as required by 81.7(2)(b)(i).

Language previously found in subsection 81.8(2)(b)(iii), that addressed the liner requirements for impoundments constructed after February 27, 2009, was revised by the Commission and incorporated into subsection 81.7(2)(b).

The Commission deleted the past compliance date of December 31, 2004 from subsections 81.8(3)(c), and 81.8(3)(c)(i). The remaining language of 81.8(3)(c)(i), which requires an SOP to be submitted to the Division within 120 days of animals being placed on the production area, was revised and renumbered as subsection 81.7(3)(c).

The Commission found it appropriate to revise the language in subsection 81.7(3)(d), to clarify the requirements for cleaning, inspecting, and repairing concrete-lined impoundments. The stakeholder comment record shows that stakeholders were often times confused by the regulation's use of the word "certify" when addressing determinations the operator was expected to make regarding liner integrity. Stakeholders felt the language implied a professional engineer must certify the integrity of the concrete lined structures every five years. By revising the language and removing the term "certify", the Commission feels the regulation now appropriately reflects the original intent of this subsection as discussed in the Statement of Basis and Purpose for amendments to this regulation during the April, 2008 rulemaking.

Stakeholders requested that the wastewater conveyance liner standard, particularly for open-lot and intermittent process-generated wastewater conveyances in subsections 81.8(5)(a), and 81.8(5)(b), be reviewed because these regulatory requirements were perceived as onerous, with minimal environmental protection benefit. In discussions with stakeholders, the Division was informed that the compaction of soil required by the standard is often comparable to in-situ soil conditions and adds little in minimizing seepage from conveyances. Furthermore, wastewater is conveyed in these structures for a short period of time, with minimal depth of flow, so little head pressure is present resulting in seepage. During the evaluation, the Commission also determined that the standard, while addressing gravel content, did not address other aspects of soil composition, such as porosity, that can also greatly influence the potential of seepage from a conveyance structure. In addition, the regulations of several surrounding states were reviewed in the course of this evaluation and the Commission found that none contain a similar regulatory requirement.

Based on the information presented above, the Commission found it appropriate to remove the seepage liner standard for minimizing seepage from open-lot and intermittent process-generated wastewater conveyances from subsection 81.7(5). In addition, the Commission clarified that a conveyance structure shall be designed and maintained to convey, but not store, any manure or wastewater. Given that non-intermittent, process-generated wastewater conveyances are in a constant wetted condition where seepage can be greater, the requirement for these types of conveyance structures to be constructed and

maintained to a minimum seepage rate of 1 x 10^{-6} cm/sec was retained in subsection 81.7(5)(a). Language in subsection 81.7(5), was also revised to replace the term “non-intermittently” with the term “continuously” to better clarify when the liner requirement is applicable.

Subsection 81.7(6)(a)(i), required that new or expanded impoundments located where seasonally high ground water level is located within four feet of the bottom of the impoundment liner, be constructed and designed to prevent ground water from contacting the impoundment’s liner. Through discussions with stakeholders and review of NRCS impoundment design guidelines, the Division learned that groundwater contacting the impoundment’s liner may be acceptable provided that the impoundment was constructed and maintained to account for hydrostatic pressure adversely affecting the integrity of the liner. Therefore, the Commission revised the language of the subsection to reflect this finding.

The Commission deleted the acronyms IP and RP in section 81.7(8), previously section 81.8(8), and spelled out “investigation plan” and “remediation plan” to provide better clarification of the plans.

Animal Feeding Operations – Best Management Practices [81.8] (previously section 81.9):

Previous language in subsection 81.8(4)(a and b), was revised by the Commission and combined into subsection 81.8(4)(a), to clarify the requirement that all animal feeding operations must manage process-generated wastewater. During discussions with stakeholders, it was conveyed that the previous regulatory language was confusing and it was unclear if all animal feeding operations were subject to the requirement or only those that met the definition of a Medium AFO. Impoundment sizing requirements for Medium AFOs were consolidated in subsections 81.8(4)(b)(i and ii). The Commission felt it appropriate to reformat section 81.8(4), to better organize regulatory requirements and to add clarity to the regulation.

Language was added to subsection 81.8(4)(b)(iii) by the Commission, to clarify the record keeping requirements for Medium AFOs that land apply wastewater.

The Commission revised language in subsection 81.8(4)(e) to clarify that wastewater retention structures or collection sites be located in areas there is minimal risk of storm water run-off or seasonally high stream flow carrying waste into waters of the state. The Commission found it appropriate to add a similar requirement in subsection 81.8(5)(b), that addresses appropriate locations for manure stockpiles to be protected from stormwater runoff and seasonally high stream flow.

The Commission revised subsection 81.8(5)(d), to simplify the use and implementation of structures used to remove settleable solids from wastewater as a management practice to minimize manure transport to surface water. The spelling of “settling” was also corrected.

Language in subsection 81.8(5)(e), was revised by the Commission to clarify that the requirement to land apply manure at an agronomic rate applies to all animal feeding operations.

The Commission revised the language in subsection 81.8(5)(e)(i) to clarify the additional record keeping requirements for Medium AFOs that land apply manure.

Past compliance dates were removed from subsection 81.8(6)(c), and the language was revised by the Commission to state that Medium AFOs must have and make available, liner certifications for impoundments prior to wastewater entering the impoundment.

Subsection 81.8(6)(d)(ii) was reformatted by the Commission to add greater clarity. Language previously found in subsection 81.8(6)(d)(ii) was moved to subsection 81.8(6)(d)(ii)(A) and the remainder of the subsection was renumbered accordingly.