

MEMORANDUM

TO: Commenters on the proposed amendments to N.D.A.C. Chapters 33-16-01,
33-16-03 and 33-16-03.1

FROM: Dennis R. Fewless, Director
Division of Water Quality

DATE: February 1, 2005

In January 2004, the North Dakota Department of Health solicited public comment on the proposed additions, amendments and deletions to existing rules pertaining to Animal Feeding Operations. The rules were subject to public hearings held on March 4, 2004 in Fargo, N.D., March 10, 2004 in Dickinson, N.D., and in Bismarck, N.D., March 11, 2004.

The record of the hearing remained open for written comments through April 12, 2004. Written documents have been submitted into the record.

All public comments were entered into the hearing record for Department review. Public comments both supporting and opposing the amendments to the rules were presented. The major issues identified in the hearing record related to potential water quality impacts to surface and ground water of the state, construction/design standards for containment systems (including enforceability and the procedure for updating the design standards), nutrient management plan requirements, record keeping and reporting requirements, facilities needing permits, costs associated with containment systems, public notice requirements, consistency with federal rules, department implementation of these rules, and potential odor impacts from livestock facilities.

All comments in the record were evaluated by Department personnel for applicability to the amendments to the rules. A written response to all comments is provided. The effective date of the rules and design manual is January 7, 2005.

DRF:dlp

RESPONSE TO COMMENTS FOR THE LIVESTOCK (CAFO/AFO) RULES AND DESIGN MANUAL

Comment 1: We are concerned that many of the recommendations in the design manual are enforceable requirements and would like some assurance that no changes imposed may be more stringent unless that change goes through a formal rule-making process. If the design manual is to be enforced and have the impact of law or rule, it cannot have the flexibility of being changed by the North Dakota Department of Health (to reflect a higher standard) without industry input or the transparency of the legislature or rule-making process.

Response: The *North Dakota Livestock Program Design Manual* (design manual) establishes design, review and permitting guidelines for use by anyone applying for a permit and the North Dakota Department of Health (department). The guidelines are intended to provide design information for concentrated animal feeding operations (CAFOs) and animal feeding operations (AFOs), as defined by North Dakota Administrative Code (NDAC) Section 33-16-03.1-03. Because the design manual is intended to provide guidance to feedlot owners in complying with the law, it does not have the force and effect of law, NDCC § 28-32-01(11)(k). Enforceable statutory and rule requirements for AFOs, which are separate from the design manual are found in North Dakota Century Code (NDCC) Chapter 61-28, NDAC Chapter 33-16-01, and NDAC Chapter 33-16-03.1.

Where the words "shall" or "must" are used in the design manual, the guideline is one where the department believes an enforceable requirement under the relevant environmental statutes or rules will likely occur if this guideline is not implemented. Where the word "should" is used, the guideline is a recommendation of the department that is less critical to avoiding violations of relevant environmental statutes and rules.

Guidance documents are typically used to assist in the interpretation and compliance with the law. Because new CAFO and AFO technologies and management practices continue to evolve, the department anticipates a periodic review and modification to the design manual. The department will solicit public comment and input to the manual prior to amending or updating the manual.

Comment 2: Design manual, Section 2.3 (#13), the manure or livestock manure definition is too broad that includes snow melt and rainwater which is mixed with manure, but is not manure and can be managed differently.

Response: To maintain consistency with Environmental Protection Agency (EPA) rules, the department must also include rain and snow melt in the definition of manure. Under 40 CFR, Part 122.23, #7 (page 383), process wastewater includes any water which comes in contact with any raw materials, products, or by-products including manure, litter, feed, milk, eggs, or bedding. The similar definition is included in the design manual in Section 2.3, Definition of Terms, item #29 and in the rules, Section 33-16-03.1-03, Definitions, item #29.

Comment 3: Design manual, Section 2.3. (#28) “Production Area,” medication pens should not be included in the production area definition since cattle are not kept there for extended periods of time.

Response: To maintain consistency with the Environmental Protection Agency (EPA) rules, the department must also include medication pens in the definition for production area in the rules and the design manual. EPA defines a medication pen as part of the production area under 40 CFR Part 412.2 (h). The medication pens are mentioned in the second sentence of the definition. “The animal confinement area includes, but is not limited to, open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables.” Medication pens located at a completely separate site and that do not meet the definition of an AFO would not be subject to these rules.

Comment 4: Design manual, Section 2.3. (add a new #40), there is a need to have a specific definition for wintering operations. The second and third paragraphs in Section 2.4 should be deleted as it leads to confusion. The first sentence in the second paragraph should be placed in #40 as the official definition for wintering operations. There is also no need to place two sets of definitions in two separate documents; therefore, we would recommend deleting all definitions in the design manual since they already will exist in 33-16-03.1-03. If two sets are needed, the definition of wintering operations needs to be added to the rules. This definition should be: winter feeding operation means where the animals are in areas (e.g., pastures, croplands, or rangelands) that sustain crops or forage growth during the normal grazing season.

Response: Wintering operations were addressed in the previous North Dakota state livestock rules, by the U.S. Environmental Protection Agency and by local zoning ordinances. EPA chose not to define a winter feeding operation but instead chose to address it through the preamble to the federal livestock rules as follows: “First, EPA is reiterating that true pasture and rangeland operations are not considered AFOs, because operations are not AFOs where the animals are in areas such as pastures, croplands or rangelands that sustain crops or forage growth during the normal growing season. In some pasture-based operations, animals may freely wander in and out of particular areas for food or shelter; this is not considered confinement. However, pasture and grazing-based operations may also have confinement areas (e.g. feedlots, barns, pens) that may qualify as an AFO. Second, incidental vegetation in a clear area of confinement, such as a feedlot or pen, would not exclude an operation from meeting the definition of an AFO. Note that animals must be stabled or confined for at least 45 days out of any 12 month period to qualify the operation as an AFO.” The state will follow the same directive to not consider true pasture and rangeland operations as AFOs; however, confinement areas of these operations may qualify as AFOs. These areas may be subject to regulation under NDAC Chapter 33-16-03.1 or NDAC Chapter 33-16-01 and the owner/operator may need to submit an application for a state animal feeding operation permit or obtain a “No Potential to Pollute” determination.

The definitions section of the rules and the design manual are the same. It is repeated to make it easily accessible for reference.

Comment 5: Design manual, Section 2.4 “Application and Permitting Information,” the term “blue line” should be an actual named water course. At the very least, it should be a solid “blue line” vs. a dashed “blue line”.

Response: The term “blue line” was intended to be used as a guide for animal feeding operations which, because they are located within a 1/4 mile of a stream or surface water, must apply for a department permit. To eliminate the confusion, this section of the design manual and rules will be updated. Section 2.2 in the design manual is changed to the following: “Medium AFOs located within 1/4 mile of a stream or surface water that contains water, except for infrequent periods of severe drought, must submit an application for a state determination. Waters completely contained on an owner's property and which do not combine or effect a junction with natural surface or underground waters are not included. This is intended to be measured as a horizontal distance from any portion of the production area of a livestock facility to the nearest point of a stream or surface water of the state. USGS 7½ Minute Quadrangle maps may be used to assist producers in determining if waters are surface waters; however, these are only guides, and the surface water still needs to be assessed to determine its distance from the livestock facility.

Following are some guidelines to help producers determine whether manure or process wastewater from their operation causes or is likely to cause water pollution. If the facility is located on sandy soil, and has a usable well that is less than 30 feet deep, the department recommends that the well water be tested for bacteria and nitrates. If the test indicates high fecal bacteria or nitrates, further assistance may be needed to help determine if the livestock facility is the source.

If a livestock facility is located where manure or runoff from the livestock area reaches an adjacent wash or water way, and if during heavy rains or snow melt, water flows from this water way to a stream or surface water containing water, except for infrequent periods of severe drought, the facility is likely to cause water pollution and needs a state permit. Also if a livestock facility is located such that pollutants are discharged into waters of the state through a man-made ditch, flushing system, or other similar man-made device; or pollutants are discharged directly into 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, the facility is likely to cause water pollution and needs a state permit.”

Comment 6: Design manual, Sections 2.6.2 and 2.7, this producer information should not be available to the general public and would like provisions made to keep it confidential.

Response: The information requested in Sections 2.6.2 and 2.7 are necessary to make a “No Potential to Pollute” determination for a specific facility. This information must be maintained

on file so the department knows what facilities have received a “No Potential to Pollute” determination. The information is kept on file and by law becomes part of the state’s open records. If the department determines that certain information should be accorded confidential status for reason of being a trade secret, the department shall disclose such information upon the owner’s request. The department shall maintain the disclosed information in confidence, unless it is determined that such information, if made public, would not divulge methods of processes entitled to protection as trade secrets. Information relating to owner/operator identity, mailing address, and number of livestock is not eligible for confidential status. (Also see response to Comments 16 and 36 of this docket.)

Comment 7: Design manual, Section 3.2.1 (1a), for consistency in terminology, that “livestock area” either needs to be defined or changed to “production area.” Feed storage area is not needed unless it may be stored silage. Other feed stored is information that does not need to be documented.

Response: This section of the design manual was updated to include “production area” in lieu of “livestock area.” EPA defines raw material (feed storage) as part of the production area under 40 CFR Part 412.2 (h).

Comment 8: Design manual, Section 3.2.1 (2c), it is difficult to note evidence of any past water tables when providing soil borings and should be deleted.

Response: It is common practice to estimate the location of historical water tables by observing mottled or oxidized soils. These conditions are typically noted and have routinely been included in the soil boring log if they are clearly apparent during drilling and sampling.

Comment 9: Design manual, Section 3.2.1 (#5a) this seems to be out of the scope of the Environmental Section of the Health Department. Ensuring a safe work site need not be a part of the permitting system or application process.

Response: The department agrees and item #5(a) in Section 3.2.1 of the design manual will be removed.

Comment 10: Design manual, Section 4.1 “Objective,” although site location is important, it is not the most important factor in locating a facility. Management is more important, and not enough credit is given to potential management practices that can be in place to offset many of the costly demands on site location. We would prefer to have the poorest site and the best manager than the best site and poorest manager. If management options were given more credibility, many of the costly construction and testing requirements in this manual could be eliminated.

Response: Proper management and site selection are considered by the department as important elements of any agricultural operation. They often times complement each other and can save

the producer money. However, even the best management practices may not be sufficient to eliminate or adequately minimize adverse environmental impacts which are the result of a poor site. Management can change over time; however, the site conditions remain the same. The department review takes into consideration the level of management required to maintain a site and the consequences if it is not properly managed.

Comment 11: Design manual, Section 4.2.2 “Additional Considerations” - The words “minimize visual impacts” should be removed since it has nothing to do with whether or not an operation is in compliance. Gauging “visual impacts” is subjective and difficult to regulate.

Response: Based on past experience of the department, questions and objections are minimized if a livestock facility is built or located at a site less visible and off the main transportation routes. It has been our experience that producers need to consider this when planning new facilities or upgrading their facilities. Efforts to reduce visual impacts also can lessen the impact of pollutants on the environment (e.g., trees encourage air dispersion and use nitrate as a food source).

Comment 12: Design manual, Section 4.3.3, last paragraph - There is concern with requiring soil borings to be plugged according to NDAC 33-18-20. Soil borings are not usually drilled into the aquifer as are water wells. These kinds of provisions add tremendously to the cost of a system that are unnecessary. Only when the borings enter a usable aquifer should this requirement be made.

Response: Sections 4.3.3 and 4.3.2 in the design manual have been incorporated in a new Section 4.3.2. This new section (4.3.2) has been rewritten to indicate that only soil borings drilled into an aquifer must be abandoned according to NDAC Chapter 33-18-02. The third paragraph of Section 4.3.2 has been changed to: “All soil borings that extend into an aquifer shall be completed and abandoned according to the requirements established in NDAC Chapter 33-18-02 (Ground Water Monitoring Well Construction Requirements). As defined in NDAC Chapter 33-18-01 (Water Well Construction and Water Well Pump Installation), an ‘aquifer’ means a water-bearing formation that transmits water in sufficient quantities to supply a well. Soil borings completed above an aquifer must be abandoned according to the requirements of NDAC Chapter 33-18-02, Section 10 (Borehole and Monitoring Well Abandonment). Excavated or disturbed areas resulting from the use of alternative soil evaluation methods shall be filled with compacted soil to achieve permeability equal to or less than the surrounding geologic formation.”

Comment 13: Design manual, Section 5.2 (#1) - There is concern with requiring 270 days storage when, in the past, 180 days has been sufficient. We recommend the option be given to the producer in consultation with the engineer to make the size determination based on the producer’s management strategy and its location and distance to a named watercourse. The 270-day storage also appears on page 22, #6a of the rule. We are also concerned with the term “manure” instead of “runoff that comes in contact with manure.”

Response: The storage requirement was implemented for states that experience extended periods of time when cold weather/frozen conditions are present. In the northern states like North Dakota, this can be in excess of 180 days. NDAC Section 33-16-03.1-08 (6a) requires 270 days of storage because of the small “window of opportunity” for manure application in the state. This is consistent with neighboring states like South Dakota, and Minnesota. Because of weather conditions and more continuous cropping of land, many producers are not able to apply more than once a year. Longer storage times and once-a-year application help reduce the potential for odor generation from storage of manure. The department is finding that many of the new or updated systems are being built with a year’s storage because a large runoff pond improves the operator’s ability to manage the system. The department has also received requests to increase the storage to 270 days or more so the cost share programs will have to cost-share ponds for this amount of storage. As defined in the federal rules and is included in the design manual and state rules, water that comes in contact with manure becomes part of the manure runoff, as discussed in response to Comment 2 of this docket.

Comment 14: Design manual, Sections 5.1 through 5.3.8 - Offers very little flexibility for new technology. We feel there needs to be the ability to use other sources of impervious materials such as fly ash or hard-packed manure for pond liners. They have proven successful in other Midwestern states. Clay liners are not always available or cost-effective. Vegetative buffers can be the most cost-effective method of addressing runoff. We are also disappointed that more flexibility isn’t given to alternative technology measures that can be used to replace expensive construction. EPA and the U.S. Department of Agriculture (USDA) are working to identify several of these measures, and flexibility would be appreciated in adopting these new technologies.

Response: The department continues to examine new technologies for animal waste systems. There are some proposed studies and current investigations on the use of other products for pond liners such as synthetic liners, bentonite liners, and concrete tanks. More research on vegetative buffers in this climate is needed. What works in other regions and states may not necessarily work in North Dakota. Section 5.8 of the design manual indicates other manure treatment or manure-handling systems will be evaluated on a case-by-case basis. The department believes that the design manual has sufficient flexibility to allow for the review of new or alternative technologies. If a new technology can be shown to meet the requirements of the rules, it will be acceptable to the department.

Comment 15: Design manual, Section 5.7 “Water Spreading,” last paragraph - We disagree with the statement “coarse-textured soils with high percolation rates are not acceptable for water-spreading systems.” They are allowed in other industries (irrigation). The soil types at the surface may not indicate the potential for nutrients to reach a water table that could be impacted. Subsoil types may prevent nutrients from reaching subsurface water, and subsurface water may be at such a depth that it may never be impacted anyway. Don’t place restrictions on one industry that is not consistent with the regulation of other industries.

Response: The intent of this section of the design manual was not to completely eliminate water-spreading systems over coarse-textured soils. However, there are areas in the state where water spreading will not be allowed because of site-specific conditions. The wording in Section 5.7 of the design manual has been updated to clarify this issue.

Comment 16: Design manual, Section 6.6, the annual reporting requirements should also be kept confidential and inaccessible to the general public. Most often, this information is used to harass producers and is no one's business except the regulators for enforcement purposes. The department needs to protect the producers' rights by protecting their information.

Response: The annual reporting for CAFOs is a requirement of the federal rules in 40 CFR 122.42, E #4 (pages 394-395). Although this information becomes public record and can be requested through the Freedom of Information Act, the department only receives a handful of requests yearly. There is no fixed annual reporting for livestock facilities covered under a state AFO permit; however, the department may request select information at certain facilities based on site-specific conditions. The department is not aware of any situations where information requested through the Freedom of Information Act has been used to harass producers in North Dakota. (Refer to response on Comment 6 of this docket.)

Comment 17: Design manual, Section 7.4, #2 and #4, duplicate language on heavy metals and salts - Who will make this determination? What feeds will be fed that will indicate a problem? We do not believe that the department has a nutritionist on staff to make this judgment call. This is another test requirement that will cost the producer. It should be removed.

Response: There is no duplication of language in #2 and #4. In Section 7.4, item # 2 refers to sampling the soils, and item #4 refers to sampling manure for metals/salts. Continuous applications of manure that have occurred over a period of time can saturate the soils with salts/metals. This is not a blanket requirement for every facility, but rather a requirement for testing in areas where there is a concern about high salts or metals (e.g., resulting from feed additives). If previous sampling has indicated high levels of salts and metals, the department may request that the producer monitor soils and manure on an annual basis. Some analytical results of feed rations have indicated high concentrations of certain metals. A nutritionist is not required to make these determinations.

Comment 18: Design manual, Section 7, is a repeat in general terms of Section 3.2.2. A general statement concerning the nutrient management plan (NMP) could be made in Section 3.2.2, with the bulk of the information being moved to Section 7, so all of the information is in one place.

Response: The department agrees with this comment, and the design manual will be updated to include this change.

Comment 19: Design manual, Section 8.1, “Objective” (#1), it should not be the responsibility and financial burden of the producer to finance the construction of monitoring wells to define the hydrogeologic characteristics of the site. If current maps are not sufficient, the state or federal government should appropriate the dollars to complete a map that is useable. Also, if a pond is constructed according to specifications, monitoring wells should not be required at all. If monitoring wells are installed, they should be at the useable water level and not any shallower.

With contamination of ground water, it is very hard, if not impossible, to prove the source. It appears the rules are slanted against the producer in all cases by assuming contamination is going to occur without any proof or even a chance it could occur. The assumption is that contamination is going to occur, and the producer is left with the cost of over-constructing to prevent something that may never happen.

Response: The department has not required groundwater monitoring wells solely to determine the hydraulic characteristics of a site. Section 8.1 of the design manual states: “The department may require ground water monitoring at livestock facilities to: (1) define the hydrogeologic characteristics of the site (e.g., ground water elevation, ground water flow direction, ground water quality); and (2) evaluate potential impacts to ground water quality resulting from the facility’s operations.” At sites where groundwater monitoring is required, the department utilizes existing data (e.g., county ground water studies, existing water supply well data) to facilitate the siting of the wells.

The installation and sampling of groundwater monitoring wells (in addition to the installation of a clay liner) is warranted at some facilities, particularly where potential downgradient receptors (e.g., surface water bodies, shallow water supply wells) are located near the facility. Containment structures built where there are no natural conditions to prevent impacts to water, and where waters are in close proximity warrant additional measures to ensure that any detected failures or leaks can be addressed before they impact the environment or public health. Monitoring wells may be required for certain facilities located near sensitive groundwater areas to monitor potential impacts to ground water quality. Groundwater monitoring wells are installed to determine background water quality and to detect contaminants in the aquifer where they are likely to be located. The intent is to detect any contamination before it gets to usable water sources. In this way, steps can be taken before a water source is contaminated, saving time, energy, and money. Section 4.3.1 of the Design Manual lists those facilities where groundwater monitoring may be required due to the type of facility and proximity to sensitive groundwater areas.

At facilities where ground water monitoring wells are required, one well is typically installed upgradient, and two wells are installed downgradient of the manure storage pond. Ground water quality for new facilities is evaluated by conducting a minimum of two sampling events prior to commencement of facility operation and on-site storage of livestock manure (e.g., baseline monitoring). Monitoring wells provide: (1) protection against false claims by supplying water quality information, and (2) early detection of changes in water quality. A comparison of pre-

and post-operational water quality and continued monitoring of upgradient and downgradient water quality are used to evaluate whether or not the pond is a potential source of ground water contamination.

Comment 20: (NDAC 33-16-03.1-05) #2, #3, & #4, all refer to a general statement “likely to cause water pollution.” This language concerns us because there may not be any evidence of past pollution, but a producer will still have to go through a permit process and for no reason. Someone’s judgment of “likely” is too broad. There needs to be some specific test or evidence that waters of the state are impacted based on the operation.

Response: The standard used by the department relates to defining “likely” as reasonable likelihood of contamination based on past experience with similar types of operations and site conditions. North Dakota Century Code (NDCC), Chapter 61-28 (Control, Prevention, and Abatement of Pollution of Surface Waters., Section 61-28-06 states that: “1. It shall be unlawful for any person: (a) To cause pollution of any waters of the state, or to place or cause to be placed any waste in a location where it is likely to cause pollution of waters of the state; and (b) To discharge any waste into any waters of the state, or to otherwise cause pollution, which reduces the quality of such waters below the water quality standards established therefor by the department.” There are many substances and activities that can pollute waters of the state, so the law is broad by necessity. The types of pollutants associated with livestock facilities are for the most part well defined. Soil/water samples can be collected to document water quality impacts from livestock operations.

Comment 21: (NDAC 33-16-03.1-05) add a #5 - We recommend that wording be placed in this section to exempt normal wintering operations from the permit process (e.g., Normal wintering operations as defined are exempt from this permit requirement.) If this section is not the appropriate place for this exemption, perhaps 33-16-03.1-06 or 07 would address it. Regardless, we feel the provision which EPA has recognized needs to be part of the official rules.

Response: EPA did discuss winter feedlot operations in the preamble to its rules; however, EPA did not give a blanket exemption for these operations. To be consistent with the federal rules, the department cannot provide a blanket exemption for wintering operations in the state rules. Winter feeding operations that meet the definition of an AFO may require a permit based on these rules. The main goal is to protect existing water quality from contamination as defined in NDCC 61-28 and NDAC 33-16-03.1. Information relating to true pasture and rangeland operations and winter feedlot operations that was presented in the Preamble from EPA on the CAFO rules has been added in Section 2.4 of the department’s design manual. (Also see response to Comment 4 of this docket.)

Comment 22: (NDAC 33-16-03.1-06) #1, once a determination has been made, there should not be a requirement that a determination be made again in five years unless changes to the operation have been made. The last sentence should be deleted.

Response: Periodic reviews need to be conducted to ensure the requirements of “No Potential to Pollute” are being met. The five-year period was selected to coincide with NDPDES (North Dakota Pollutant Discharge Elimination System) permits which are also five years in length. The department will reevaluate the “No Potential to Pollute” determination at the same frequency as permit renewals. In addition, the department can determine if the conditions at the facility are the same as when the “No Potential to Pollute” was issued or if there have been updates that warrant reevaluation of the facility. The department has proposed this process to be very simple (e.g., mailing). If there have been no changes at the site, the “No Potential to Pollute” will be reissued.

Comment 23: (NDAC 33-16-03.1-06) #3, the language should be changed from “discharge” to “pollute.” The “spring runoff” language is not well defined. It is possible that no livestock operation could qualify because of a broad interpretation of this language. In addition, in #3, the words “potential or” should be deleted. There needs to be more evidence that there is a problem that needs to be addressed through a permit process.

Response: We concur with the language change and deleted the word “discharge” and added “pollute.” We also deleted the term “spring runoff.” In Section 33-16-03.1-07, number 3, we did not delete the word “potential.” Another purpose of the rules is to prevent pollution before it occurs. “Potential” is again evaluated by past experience with similar type operations, scientific evidence and site location. (Refer to response on Comment 20 of this docket.)

Comment 24: In several locations in the rules the department refers to “minimizing odors during land application” (33-16-03.1-07-3b, 33-16-03.1-06-2c, 33-16-03.1-08-5h, and 33-16-03.1-08-10b). We feel these references should be deleted. The producers need to manage and land apply their manure and need to be exempt from the odor standards when they are properly land applying manure.

Response: The “minimizing odors during land application” requirement is consistent with the odor rules (NDAC 33-15-16) and has been included to remind producers that odors from manure spreading can impact neighbors and need to be managed accordingly. Currently, a person is exempt from violating the odor rules while spreading or applying manure or other recycled agriculture material to land in accordance with an Nutrient Management Plan approved by the department. The livestock rules as proposed do not lessen or expand that exemption. The practice of allowing odors to linger for long periods of time after application is not appropriate. The odor exemption does not last indefinitely. NDCC 23-25-11, item 4, lists these exemptions. This section also states that “Notwithstanding these exemptions, all persons shall manage their property and systems to minimize the impact of odors on their neighbors.”

Comment 25: The reference to the design manual continues to be a concern. The manual could easily be changed by the department without the official rule-making procedure.

Response: (Refer to response on Comment 1 of this docket.)

Comment 26: (NDAC 33-16-03.1-07) #5c, it is unclear as to what additional record keeping and reporting would be necessary.

Response: This section of the rules specifies what permit conditions the department may include in state livestock permits. It specifies that the department may impose any conditions upon a state AFO necessary to ensure proper operation of the facility to protect water and air quality, including record keeping and reporting requirements. The actual record keeping and reporting requirements for AFOs with state permits are found in the proposed rules under Section 33-16-03.1-(09). The additional record keeping and reporting requirements referred to in #5c of the state rules are the same requirements found in 40 CFR 122.42, #2 and #4 on pages 394-395 of the federal rules.

Comment 27: (NDAC 33-16-03.1-07) #6, delete “nor likely cause.” This language is similar to the “potential” language in #3 of the same section. Again, the permit requirement needs to proceed when there is a problem to be resolved.

Response: “Nor likely cause” is appropriate language as identified in State Air Quality Law. This phrase is referring to air quality issues which must be addressed and resolved pursuant to Chapter 33-15-16, Restrictions of Odorous Air Contaminants.

Comment 28: (NDAC 33-16-03.1-07) #11, would support language that would require the permit holder to “notify” the department but oppose the mandate of requiring “prior written approval.” The intent should be to keep a mailing list current for the renewal process or to make sure the new owner has correct information on the permit content.

Response: We concur with the comment and have changed Section 33-16-03.1-07 (11) to the following: “The holder of a state animal feeding operation permit may transfer it by notifying the department in writing at least thirty days in advance of the proposed transfer date. The notice shall include a written agreement between the current and new owners or operators and contain a specific date for the permit transfer, and the name and address of the individual responsible for compliance with the permit.”

Comment 29: (NDAC 33-16-03.1-08) (4e), this section should be deleted. It gives the impression that even though we have an understanding as to who must submit NMPs, the department could require any or all operations to submit them.

Response: It is not the department’s intent to have all the medium and small systems submit NMPs. However, if the department identifies water quality concerns or if there are substantiated complaints against a specific producer, the department may: (1) request a copy of the NMP to verify the producer is following the plan; or (2) view the plan for areas that need to be improved. Of those facilities identified in item 3 of Section 33-16-03.1-08, the following facilities must submit a copy of their current nutrient management plan to the department along with their

application and/or design plans. Item (4e) is change to: “Livestock facilities which fail to comply with these rules or permit conditions.”

Comment 30: (NDAC 33-16-03.1-08) #5, we are unsure as to whom this is directed and cannot understand the purpose of the entire section. It should be deleted unless it is directed specifically at certain types of AFOs or CAFOs. (Section 3.2.2 of the design manual #17 and #18 conflicts with this section.)

Response: This section is directed toward those medium and small AFOs that require permits but do not need to submit their NMPs to the department. This section also identifies the minimum NMP information needed by the department, without requiring a copy of the full NMP. Item # 5 in Section 33-16-03.1-08 and Section 3.2.2 in the design manual has been reworded to clarify the intent of this sections.

Comment 31: (NDAC 33-16-03.1-08) 6(f), says “The department may specify additional design or monitoring requirements as needed to ensure facilities will satisfactorily prevent pollution to waters of the state.” We feel this should be deleted. It leaves too much unknown to the producer as to what could be required in a facility. If the requirement is based on sound science, that would be acceptable, but with no strong reasoning except “the department would like it” is not acceptable.

Response: It is the responsibility of the facility owner to protect water quality through the implementation of reasonable and scientifically defensible practices. The type of practice appropriate to address site specific concerns depends on technical practicality, extent/severity of environmental impacts and technical experience. By necessity the list of solutions may be varied and long and can not be all inclusive. Therefore, the department proposes to allow the operator and the department the flexibility to explore innovative options to mitigate pollution if current practices are not sufficient. The North Dakota Century Code requires that the department protect waters of the state. This statement provides for additional improvements necessary to bring a facility into compliance if the facility is proven to be adversely impacting the environment after implementation of reasonable practices. All facilities have site specific circumstances. While the department addresses the main types of site conditions in the guidelines of Sections 4 and 5 of the design manual, there may be instances where additional measures are required as demonstrated by supporting evidence.

Comment 32: (NDAC 33-16-03.1-10) #4, the words “or is likely to cause” should be deleted. The operation is not in violation, and a subjective determination is unfair to the producer with no proof.

Response: It is the responsibility of the producer to take reasonable steps to prevent pollution before it happens. Proactive approaches tend to be more cost effective than reactive approaches. This will be evaluated based on past experience with similar type operations, scientific evidence

and site location. In response to the phrase “likely to cause”, refer to response on comment 20 of this docket.

Comment 33: (NDAC 33-16-03.1-13) “Public Participation” - Public notices and hearings should only be required if the local governing authority requires them as per its local zoning ordinances. Public hearings for existing operations wanting to upgrade facilities are unnecessary and are invasions of privacy rights. These hearings often result in undue negative publicity yet do not generate any positive management steps to prevent or remedy problems. It is our feeling that Section 33-16-03.1-13 (#1), the wording “significant degree of public interest” is not defined and could be abused. The same is true for #6 of the same section, the wording “deem appropriate” is also a judgment call that could be abused.

Response: Public participation is a requirement of the federal rules and the state rules as per NDCC 61-28-07. Any affected county, state, or interstate agency, or any interested groups, or individuals may request or petition the department for a public hearing, although this is a rare occurrence. Any such request or petition for public hearing shall be filed within the 30-day period prescribed in the public notice for permit and shall identify the interest of the person filing such request and the reasons why a hearing is warranted. We concur with the comment that a public hearing may not be necessary for existing facilities. To address this issue, Section 33-16-03.1-13 (1) has been changed to the following: “If the department determines a significant degree of public interest exists regarding new or expanding facilities, it will issue a public notice requesting comment on applications for both individual permits and general state animal feeding operation permits.”

Public notices and public meetings are intended to address the concerns of those that could be impacted by an operation, particularly neighbors living near a livestock facility location. A public meeting is usually conducted when interested parties have requested a meeting. The public meeting gives the producer, the department, and neighbors a chance to ask and answer questions, and identify issues not previously addressed by the department or producer. Our experience is that this open approach to providing information and addressing issues results in better public understanding and fewer long term complaints or concerns. The terms “significant degree of public interest” and “deemed appropriate” were used to eliminate the need for public notices for every medium and small AFO because these operations rarely generate public concerns. (Also see response to Comments 34, 106, 107, 108 and 177.)

Comment 34: This entire section (33-16-03.1-13) is a zoning ordinance issue and not a function of the department. In most cases, these feedlots are trying to comply with state and federal rules. A hearing will bring only emotion to the table. It serves no purpose, especially to those who already are feeding cattle. The permit procedure needs to be based strictly on science and the environment. Recognizing this as a zoning issue relieves the department of the burden of siting approval based on politics or emotion.

Response: Public participation is a requirement of the NDPDES permitting process. The Health Department rules are different than zoning rules. Interested parties and adjacent landowners have requested public participation be included in the permitting process during new construction and large expansions. (Refer to response on Comment 33 of this docket.) Medium AFOs rarely generate the interest for a public notice process, however it is important and required for addressing valid issues. Although emotion can be part of a hearing, the department evaluation is based on scientific facts and technical guidelines resulting in better public understanding. The department agrees that the permit procedure must be based on science and the environment ; however, it must also be in compliance with federal, state and local law.

Comment 35: Somewhere in the rule, (potentially 33-16-03.1-10, following the last sentence) a procedure should be in place for issuing complaints against a producer. Those complaints should be in writing and made available to the producer upon request. Only citizens who live or own property in the area that may be potentially negatively affected should have standing to make a complaint.

Response: Complaints can be registered by any citizen if he/she feels the environment is being impacted. If a complaint leads to a violation, the fact that the complaint was written, verbal, or anonymous is irrelevant. Current state law does not allow the department to disregard or limit the complaints to which the department will respond. If there are no problems with a facility, this finding will be documented and can be referenced in the future.

Comment 36: Permit information should be confidential and not made available to the general public.

Response: NDCC 44-04-18, Access to Public Records, this subsection of the rules relates to electronically stored information and states: “Except as otherwise specifically provided by law, all records of a public entity are public records, open and accessible for inspection during reasonable office hours....” As noted in previous responses (Comments 6 and 16), there is information that the department requires during the application process. EPA has determined that this information (e.g., producers name, address, number of animals, etc) is not confidential.

Comment 37: It is important to remind the department that a discharge from a livestock production area is only considered a violation when it reaches waters of the state.

Response: The department does realize that when a discharge reaches waters of the state it constitutes a water quality violation. However, there are additional considerations for proper management of a facility. The EPA rules for CAFOs (40 CFR 412.31) specify that discharge is allowed only if: “(1) there is an overflow from a properly designed, constructed, operated, and maintained facility; and (2) the overflow is due to a 25-year, 24-hour rainfall event or a 100-year, 24-hour rainfall event.” The rules also specify in 40 CFR 412.2 (g) that “overflow” means the discharge of manure or process wastewater resulting from the filling of wastewater or manure storage structures to the point at which no more manure, process wastewater, or storm

water can be contained by the structure. Therefore, if a facility has an overflow from other than a 25-year, 24-hour rainfall event or a 100-year, 24-hour rainfall event, or if there is a discharge from the facility other than overflow from the wastewater or manure storage structures, it is improper management and could be considered a permit violation, even if the discharge does not reach waters of the state.

Comment 38: It is the responsibility of the state to prove a violation occurred and that the producer is not automatically in violation until proof is provided. Many producer locations are a long distance from the waters of the state and are being asked to over-construct when there is no indication a violation could ever occur.

Response: State law specifies that the department require permits for entities that handle substances that could impact environmental health. It is the responsibility of the producer to meet the conditions of these permits to ensure impacts to the environment do not occur. The department does not automatically assume producers are not in compliance with state law. At minimum, a site visit would be needed to collect information relating to any potential violations. If the facility is located a significant distance from waters of the state, it may meet the “No Potential to Pollute” designation criteria and not require a permit.

Comment 39: The department staff needs to expedite the permit process and should not spend its time recalculating engineering plans submitted. The process could be streamlined and more approvals completed in a shorter time.

Response: With any design plan, there is variability due to site-specific circumstances, and assumptions that are made to determine certain aspects of the system. The review of engineering design plans is intended to check for errors and also to evaluate the assumptions used in the design development, such as wash water volume, wasted feed or bedding used, runoff curves, etc. The department has minimum requirements for storage and containment, and to ensure these are properly met, the department must review the design plans and calculations in detail. If plans are held up in the permitting process, it is usually due to incorrect or incomplete information.

Comment 40: The rules must reflect the intent of a winter feeding operation that is exempt from the permit process. This could be addressed in 33-16.03.1-06 or 07 with a general statement that there is no potential to pollute for the wintering operation, or place an exemption to Section 33-16-03.1-05 for winter feeding operations.

Response: (Refer to response on Comments 4 and 21 of this docket.)

Comment 41: Rules should be of a standard form and have a blanket issuance on everybody so everybody plays with the same rules, same game. The flexibility is a recipe for a system of favors and abuse. It tends to run toward who you like, and if someone doesn't like somebody it doesn't mean that he is a bad producer. I think that's a little bit of a problem.

Response: Rules are standards that apply to everyone equally. The department has the responsibility to protect water quality. Having flexibility in the program enables the department and producer to address operations in sensitive or more vulnerable areas. Operations in less sensitive areas will likely have fewer or less rigorous requirements. The department bases these decisions on science, site-specific conditions, and the operator's management history. The department makes every effort to work closely with producers to ensure facilities are operated in a manner consistent with state laws. The department does not allow favors and abuses in implementing its livestock rules, as demonstrated throughout the open public review process.

Comment 42: I suggest on the manure NMP rather than going around to every producer and hash out a management plan which can be very extensive, we had to go through it. It took months to do; we get our manure haulers certified so that they can take a lot of the responsibility away, and their processes are certified by you or whatever - give us some protection there. I just want to mention that a feedlot in our area preserves highly erodible land, and since we have to keep cattle out of our feedlot, we've had just horrendous problems with erosion and a drought environment -- we just can't do that again. For that reason alone, feedlots should be held in fairly high regard.

Response: Certification of manure haulers was considered; however, it is not proposed to be implemented at this time. Certification of the manure haulers would not pass the liability of proper application solely to the haulers. It is still the responsibility of the producer to ensure they have adequate land for manure application and the manure is properly applied. In a feedlot setting, the area used by the cattle is continuously kept "black" and without vegetation. To control sediment runoff into the ponds, current practice has been to construct a sediment basin or solid separator within the dirty water diversion to reduce the sediment flows into the pond. Wind erosion can be a concern if livestock are not kept on the lots over the summer months and manure is removed. Other measures may be needed to control wind erosion in these circumstances such as wind breaks or placing straw in the empty lots.

Comment 43: Fines should be described in fairly decent detail so that you feel like you are getting fined the appropriate amount for whatever it is that is said to have been done. Again, the flexibility isn't there so that your leverage to fine is just outrageous. I think the livestock numbers in our situation are being micro-managed by the state, and I think this results in bad decisions. Again, it leaves the producer without the kind of control he would like, and it's absolutely the wrong approach to use.

Response: State law sets maximum penalties that can be issued for various violations. The department uses many factors to determine the extent of the penalty issued. This is called a penalty matrix. There is great variability in the types of violations that occur and their environmental impacts. The department works to implement fines or penalties that are appropriate, and consistent across the program, taking into account the site specific nature of each facility and environmental impact where violations occur. The rules indicate that a fine may be assessed up to a certain amount (e.g., \$10,000 dollars per day of violation). This allows

the department and the courts the flexibility to consider the merits of the notice of violation. In cases where a producer does not agree with the alleged violation or proposed fine, the decision by the department can be appealed through the appropriate administrative review process as provided by state law in NDCC Chapter 28-32 Administrative Agencies Practice Act, or NDCC Chapter 33-22 Environmental Law Enforcement.

Comment 44: The “Expiration of Permits and Renewal of Permits” section of the rules should be changed. I recommend that this section be changed to say that, when reviewing the permit, if an operator is not undergoing any significant expansion or any expansion and is in compliance, it would call then just for a renewal of that permit and not have to go through the entire process again. This will save considerable time and effort on the part of not only the producer but your office as well.

Response: The expiration and renewal of permits are governed by both state and federal requirements. NDPDES/CAFO permits cannot exceed five years in length. If a facility has been in compliance with its permit, the process of reissuing the permit for a new five-year period can be simple. If there have been problems with a facility, the renewal process provides an opportunity for the department to make changes and require the necessary upgrades to bring the facility into compliance. For example, a compliance schedule that includes action items with dates for completion can become a condition of the new permit. (Also see response to Comment 77 of this docket.)

Comment 45: The State has not adopted the federal revisions to 40 CFR 122.28, which address information requirements for general permit applications (i.e., Notice of Intent). The State’s NDPDES regulations authorize the use of general permits and provide for issuance and administration in accordance with "applicable requirements of Chapter 33-16-01." State regulations do not expressly require that CAFO general permit applications include the same data specified in the revised federal regulations. It is not entirely clear which requirements are "applicable" in this context. Thus, it is not clear whether the State requires the same information in a general permit application as it requires in an individual permit application. Please clarify this issue.

Response: 40 CFR 122.28 has been adopted by reference into NDAC Chapter 33-16-01-26.1, item 3.

Comment 46: The design standards, operating procedures, and nutrient management planning provisions in the State’s technical standards generally appear to be consistent with the federal CAFO effluent guidelines. However, the State’s setback provision (Chapter 7.6.2) allows injection or incorporation of manure as a compliance alternative to the required setback (Federal rules require a 100-foot setback, a 35-foot vegetated setback [buffer], or an alternative equivalent to the 100-foot setback.). Under this standard, manure apparently could be injected or incorporated into soil that is immediately adjacent to downgradient surface waters. The federal regulations do not provide this exception. Unless the State can show, under 40 CFR

§412.4(c)(ii), that this procedure “will provide pollutant protections equivalent or better than the reductions that would be achieved by the 100-foot setback,” the State’s provision may be less stringent than federal requirements. Please provide rationale on how this compliance alternative is equivalent to the 100-foot setback.

Response: Allowing the use of injection or incorporation into the soil has been removed in Section 7.6.2 of the design manual. This section is now consistent with the federal rules.

Comment 47: In general, the State should be aware that by adopting federal requirements and maintaining State CAFO regulations (in AFO rules), certain provisions are duplicated (e.g., definitions, requirements, etc.). This creates a potential for inconsistency between parallel requirements (although no significant inconsistencies have been identified at this time) and may result in confusion in implementation. The State rules do not indicate that the most stringent provisions should be applied.

Response: By implementing the effluent guidelines by reference, there is some duplication. However, the department has made the state rules consistent with the federal guidelines. Rules shall be no less restrictive than federal rules; where conflicts arise, the federal rules should apply unless the department can show the need to be more stringent.

Comment 48: Some provisions in the AFO regulations do not specify whether they apply to CAFOs or AFOs. For example, the NMP requirements at 33-16-03.1-08.5 do not indicate whether they apply to AFOs, CAFOs, or both. This should be clarified, given that the AFO regulations include provisions that independently address AFO and CAFOs.

Response: The department has thoroughly examined the state rules and specified in each section whether they apply to AFOs, CAFOs, or both.

Comment 49: NMP Element/Production Area: 122.42(e)(1)(iii) Ensure that clean water is diverted from the production area (to the extent applicable). Section 5.6 includes standards for diversions, however, it does not appear to require diversions (except for those constructed/expanded after 4/14/04). This element only appears to be required by incorporation of 40 CFR 122.42.

Response: Section 5.6 of the design manual has been updated to be consistent with the federal rules.

Comment 50: NMP Element/Production Area: 122.42(e)(1)(iv) Prevent direct contact of confined animals with waters of the United States (to the extent applicable). This element is not listed in North Dakota’s Design Manual and, therefore, only appears to be required by incorporation of 40 CFR 122.42.

Response: This wording has been added to Section 5.2 of the design manual.

Comment 51: NMP Element/Land Application Area: 412.4(c)(1) Base plan on a field-specific assessment of the potential for nitrogen and phosphorus transport. Section 7.5.4 requires assessment of potential for Phosphorous transport. Section 7.9.13 applies to NMPs which require state review, but it is not clear if this is applicable to CAFOs. The equivalent requirement for all CAFOs through NMP requirements is found in Section 7, but specifically required only by incorporation of 40 CFR 412.

Response: Section 7.5.4 of the design manual has been updated to include nitrogen in the field-specific assessment.

Comment 52: NMP Element/Land Application Area: 412.4(c)(5) Do not apply manure, litter, or process wastewater within 100 feet of any downgradient surface water, open-tile line intakes, sinkholes, agricultural well heads, or other conduits to surface waters or implement one of the compliance alternatives. Section 7.6.2 of the design manual appears to be less stringent due to allowing incorporation as a compliance alternative. Please clarify.

Response: To be consistent with the effluent guidelines, allowing the use of injection or incorporation into the soil has been removed in Section 7.6.2 of the design manual.

Comment 53: NMP Element/Record-keeping: 122.42(e)(2)(ii)412.37(c) Maintain on site a copy of the NMP. This element is not listed in North Dakota's Design Manual, Section 7.7.1 and, therefore, only appears to be required by incorporation of 40 CFR 122.42.

Response: Section 7.7.1 of the design manual has been updated based on this comment.

Comment 54: NMP Element/ Manure Transfers: 122.42(e)(3) Large CAFOs must retain records of the date, recipient name and address, and approximate amount of manure transferred. Section 7.7.3(c) appears to be less stringent than federal requirements because it does not require the CAFO to keep records of the date of transfer. Please clarify.

Response: Section 7.7.3 of the design manual has been updated based on this comment.

Comment 55: In the versions of the North Dakota Design Manual and NDPDES regulations provided, we cannot find any language incorporating 40 CFR part 412 (or any section within that part) by reference.

Response: With the exception of part 403, 40 CFR Subchapter N is incorporated by reference in NDAC 33-16-01-31.

Comment 56: Section 6.4 (Dead Animal Disposal) does not expressly include the prohibition against disposing of animal mortalities in a storm water treatment system that is not designed for such disposal, as is required by 40 CFR §122.42(e)(ii). Section 6.4 does say, "Dead animals shall be disposed of in a manner that will not cause a detrimental impact to waters of the state

and air quality.” Likewise, Section 6.4 does not include the prohibition in 40 CFR 412.37(a)(4) against handling mortalities in such a way as to prevent discharges to surface water. The State’s omnibus prohibition does not call attention to a prohibition against disposal in storm water treatment systems or the prohibition against discharges and may therefore be less stringent than federal requirements.

Response: Section 6.4 of the design manual has been updated to read as follows: “Dead animals shall be disposed of in a manner acceptable to the Board of Animal Health and in accordance with NDCC Section 36-14-19 (attached). Dead animals shall be disposed of in areas that will not discharge into waters of the state and where they will not detrimentally impact air quality. Dead animals shall not be disposed of in any structure used to store or treat liquid manure, process wastewater, or storm water unless the department-approved system is designed for such a purpose.” Also, NDAC Section 33-16-03.1-12 “Prohibited Activities” under item 3 has been amended to read: “It shall be unlawful for any person: To dispose of an animal carcass along or in any stream, lake, river, or other surface water, or to bury the carcass near any such surface water, or to dispose of a carcass where it will discharge into waters of the state, or to dispose of a carcass in any structure used to store or treat liquid manure, process wastewater, or storm water unless the department-approved system is designed for such a purpose, or to dispose of a carcass in a manner that is in violation of a North Dakota Administrative Code Chapter 33-20, or with North Dakota Century Code Chapter 36-14.”

Comment 57: Section 6.2.4 states, “Chemicals or other contaminants handled on site shall not be disposed of in a manure storage or treatment structure unless it is specifically designed for that purpose.” 40 CFR §122.42(e)(1)(v) requires NMPs to ensure that chemicals or other contaminants handled on site are not disposed of in any “manure, litter, process wastewater, or storm water storage or treatment system” unless it is specifically designed for such treatment. The State’s prohibition does not appear to be as broad as the federal requirement

Response: Section 6.2.4 of the design manual is updated to be consistent with the EPA rule and reads as follows: “Chemicals or other contaminants handled on site shall not be disposed of in a structure used for storage or treatment of manure, process waste water, or storm water unless it is specifically designed for that purpose;”

Comment 58: Section 7.3.6 only states, “Best management practices (BMPs) shall be implemented to manage nutrients as efficiently and effectively as possible.” An electronic search of the technical standards for the words “once a year” and “nutrient” and “analyze manure” did not result in locating a state technical standard section equivalent (or similar) to 40 CFR §412.4(c)(3), except Section 5.7, which allows “water spreading” as “an alternate method of containing and utilizing runoff from open-lot livestock operations.” Section 5.7 goes on to say that, “The soils within the water-spreading area shall be sampled for nitrogen and phosphorous prior to installation of the system. Soils shall be sampled at a minimum of once every three years of operation to determine if there is an excess buildup of nutrients in the soil.”

So, this portion of the state's program is as stringent as the requirements of 40 CFR §412.4(c)(3), at least with respect to soil sampling, not manure sampling.

Response: Item 6 in Section 7.4 of the design manual is equivalent to 40 CFR §412.4(c)(3). It states that "Livestock facilities identified by the department as needing nutrient management plans shall have their manure and the soil where manure is being applied tested in accordance with items 1-5 once every three years. CAFOs shall have their manure and the soil where manure is being applied tested in accordance with items 1-5 each year."

Comment 59: I would be pleased if you could make these regulations simpler, shorter, and less burdensome for different sizes (small vs. medium) of AFOs.

Response: The regulations have been developed to include the federal requirements and comprehensive information on how a facility can meet the requirements. Most of the updates to the state livestock rules are to provide additional explanation, definitions for terms, and conditions for permitting.

Comment 60: The proposed regulations for medium and small AFO will place financial burdens on the producers. In many cases, these regulations will be unnecessary and unrealistic and present problems where there is truly no scientific evidence that the environment will be harmed. We suggest that the department contact NDSU and find out if the financial burdens of the proposed regulations can be spread out over the number of animals in an operation without putting the operation out of business.

Response: EPA has examined this issue for several years. Federal evaluation of the environmental damage and contaminated runoff associated with AFOs, resulted in part, in the adoption of the new regulations. The preamble to the updated EPA rules contains numerous cases of environmental harm associated with AFOs. Depending on site conditions and the location in the state, AFOs may not need constructed containment systems to be in compliance with the rules. The department will continue to work with NDSU and other groups to meet the environmental requirements, and it is hoped that new technologies or solutions will arise to help lessen the financial burden. The department has added options in the design manual that may help facilities achieve the requirements of the regulations. There is also a "No Potential to Pollute" option for which some facilities may qualify reducing the financial burden on their facility.

Comment 61: When issuing permits, the facts given by the person or entity applying need to be checked out more thoroughly, and if any false information is given, the permits should be refused or revoked when it is shown that there is a discrepancy.

Response: The department thoroughly reviews the information received regarding permits and permit applications. If discrepancies occur, the person or entity is contacted to resolve the discrepancies before the permit will be considered for approval.

Comment 62: Sites should not be allowed to be located so close to coulees and aquifers. The maps on slides shown by NDSU indicated red coulees on either side of both sites near Cando. Your office must have seen these maps, and still you issued permits for these areas. An aquifer is located within the circle where the manure is to be spread.

Response: The department discourages new operations from locating directly near major water bodies or directly over glacial drift aquifers. The department works with existing facilities located near major water bodies or directly over glacial drift aquifers to prevent environmental impacts. There are numerous facilities located near a drainage; however, the purpose of containment ponds and manure handling systems is to prevent manure and manure runoff from reaching a drainage. Application of nutrients over aquifers is not a concern if it is done properly and nutrients are applied at agronomic rates. This is one of the reasons the department requires NMPs for regulated livestock facilities in the state, so the application rate of manure and nutrient application can be monitored to ensure appropriate environmental protection.

Comment 63: The manure should be spread in the spring immediately prior to planting instead of in the fall as that would shorten the interval between application and the time the manure is used by the crop. This lessens the chance of erosion and movement in the soil.

Response: Some facilities spread their manure in the spring. Some facilities spread manure twice a year to ensure they have proper storage through the winter. A majority of the newer facilities have constructed their ponds for a year's storage, allowing them to pump the ponds once a year. Spring application is recommended, but not normally required. Based on the weather conditions in North Dakota and the ability for facilities to manage manure, the department has not observed the need to mandate this as a requirement. If manure is properly land applied, it should pose little threat to water quality regardless of whether it is applied in the spring or the fall.

Comment 64: Your inspections need to be done more often without informing the operators that you are coming.

Response: The department will be inspecting large CAFOs annually. Multiple inspections of a particular facility may occur within the same year. Inspections can be conducted with or without prior notification. Medium AFOs will be inspected on "as-needed basis" with at least one inspection every five years.

Comment 65: Producers should have enough cropland to spread the manure on ahead of time with signed papers from any landlords saying that they are allowed to spread the manure on their land prior to them being given a permit. These signed papers should be on file at the county auditor's office and the North Dakota Department of Health office and should have to be done yearly.

Response: An NMP is required during the application review process before a facility is built or expanded. The department evaluates the amount of land that will be needed to: (1) utilize the nutrients in the manure generated by the livestock on site and (2) ensure the facility has access to adequate land to utilize the nutrients. A permit will not be issued until the applicant can show they have access to adequate land to apply manure. (Also see response to Comment 68 of this docket.) Department policy has been to ask the producers to sign agreements with the individuals who farm the land when applying manure to land they do not own or lease. A majority of large facilities have signed agreements with landowners and have provided copies, along with their NMPs, to the department. The department cannot require the county auditor's office to keep land-spreading agreements. This would have to be implemented as a requirement by the county.

Comment 66: It should be mandatory to have on file annually in the North Dakota Department of Health office a plan approved at least six months prior to application of manure and applied in accordance with recommended amounts of nitrogen, phosphorous, potash, etc.

Response: AFOs and CAFOs, which require permits under these rules, are required to develop and follow NMPs for utilization or disposal of the manure. These plans must: (1) be specific enough to indicate the form, source, amount, timing, and method of application, and (2) have specific requirements on the rate at which manure can be applied. The facilities must also identify the precautions used to prevent impacts to waters of the state and to minimize odors to residences. The facilities must have nutrient analyses of the manure and the soil to which the manure will be applied. Records must be maintained regarding the land application of manure from these facilities. The comprehensive plan must contain adequate detail to ensure a producer knows how to properly land apply the manure, and the required records provide adequate verification that manure is applied properly. Requiring a new plan be submitted every six months before manure is applied would result in an excessive amount of time and paper work for the department and the operators. The department believes the proposed requirements provide adequate controls to ensure the proper land application of manure.

Comment 67: It should be mandatory to leave a buffer strip between land application of manure and any stream, coulee, man-made drainage, or surface water, etc.

Response: The use of buffer strips can reduce loading into rivers and streams. However, relying entirely on buffer stripes for prevention of water pollution is not appropriate. Factors like vegetation and slope as well as method of application must also be considered. Buffer strips are addressed in the design manual under Section 7.6, #2 which states: "On land controlled by the operator, manure shall not be applied closer than 100 feet to any downgradient surface waters, open-tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface waters, unless: "(a) The facility uses a 35-foot-wide vegetated buffer on which there are no applications of manure; (b) The facility's owner/operator demonstrates that a setback or buffer is not necessary because implementation of alternative conservation practices or field-

specific conditions will provide pollutant reductions equal to or greater than the reductions achieved by the 100-foot setback.”

Comment 68: All earthen manure storage lagoons, holding ponds, etc, should be constructed so they will not leak or seep more than 1/56 inch per day.

Response: The department has adopted a maximum seepage limit of 1/16 inch per day. This is based on best professional judgement and is consistent with industry standards used by other states. (Refer to response on Comment 172 of this docket.)

Comment 69: Odor emissions standards should be more stringent than they are at the present.

Response: Control of odor is identified in both state law (NDCC chapter 23-25-11) and rule (NDAC chapter 33-15-16.) It is not the intent of these CAFO rules to change the odor standards as defined in these statutes.

Comment 70: Changing from animal units to actual numbers is a good idea as most people are not familiar with animal units, and it is very confusing for them.

Response: The department acknowledges the comment.

Comment 71: Section 2.4 of the draft manual says “blue lines on 7 ½-minute USGS quadrangle maps may be used to locate surface waters of the state.” Does this mean all blue-line waters (both solid and dashed)? Or is there a distinction between solid and dashed lines?

Response: This section of the design manual has been changed. (Refer to response on Comment 5 of this docket.)

Comment 72: Section 4.3.2 of the draft manual says that “Soil borings shall be advanced to at least 25 feet below ground surface or at least 10 feet below the base of the manure storage structure, whichever depth is greater.” Should all manure storage structure areas have to be bored to this depth, even if an adequate layer of clay (verified by a certified engineer) has been reached at a depth shallower than 25 feet?

Response: Sections 4.3.2 and 4.3.3 of the design manual have been combined into a new Section 4.3.2. This section also includes new language relating to use of alternative soil evaluation methods that have to be approved by the department prior to site assessments and eliminates the 25 foot below ground surface requirement for soil borings. The department believes that a minimum boring depth of 10 feet below the base of the manure storage structure is necessary in these specific situations to adequately characterize subsurface soils. North Dakota geology is very heterogeneous, and significant soil changes can occur over short horizontal and vertical distances. All facilities with manure storage structures must have

adequate site assessment information including soil borings as per section 4.3.2 in the design manual.

Comment 73: We feel that a greater amount of publicity should have been given to this issue and the scheduled hearings before they were held. Public notice in a small ad in the paper may be enough to satisfy legal requirements for notice, but is not always seen by many who would have attended and commented at a hearing.

Response: The public notice for these rules was placed in all 52 county newspapers in North Dakota. In addition, a news release regarding the three public hearings was published in the eight regional papers. Several groups were invited to be actively involved and provide comments on development of the new rules. The department did go beyond the legally required measures to notify people of these rule changes. With the limited resources available, the department tries to find a balance in notifying parties who may be affected by any proposed rules. During the permitting process for new facilities and major upgrades to existing facilities, the department also places a public notice in the major regional paper that is circulated in the immediate area where a particular facility will be located. County and local zoning boards are also notified during the permitting process.

Comment 74: Proponents of large hog operations claim these farms are environmentally safe and boost the local economy. Let's get real with this world and realize this so far has not happened.

Response: The department works to ensure these facilities are meeting state requirements for protecting the environment. This includes protecting water and air quality, and properly handling any solid waste. The remaining portion of this comment goes beyond the scope and intent of these rules.

Comment 75: Large hog facilities need to be sited away from coulees (surface water) and not over shallow groundwater. What happens to our water and air quality as the result of these large operations? The producers feel there is no danger. We beg to differ with that.

Response: The department requires livestock facilities be designed and operated to contain manure and prevent adverse impacts to waters of the state. All rules and regulations must be met before a permit is issued. The department informs the operators of new facilities of any environmental concerns associated with a site. The department also conducts routine inspections once facilities are built to ensure they are operated in a manner that will protect waters of the state.

Comment 76: In the design manual, Section 2, (Definitions) "*Waters of the state* means all waters within the jurisdiction of this state including all streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, and all other bodies or accumulations of water on or under the surface of the earth, natural or artificial, public or private, situated wholly or partly

within or bordering upon the state, except those private waters which do not combine or effect a junction with natural surface or underground waters just defined.” Are all wetlands included in this definition? Are producers who are not polluting when waters are at normal levels in violation in years when high water levels occur, if runoff gets into these production areas? We believe the rules should provide clarification during years of extremely high water levels.

Response: The term “waters of the state” is defined in the North Dakota Century Code 61-28-02.11, in the definitions section of the rules (33-16-03.1-03 (39) and in Section 2.3 (39) of the design manual. Wetlands are considered waters of the state, except those waters located entirely on private property which will never leave said property. The laws or rules do not differentiate between high and low levels of surface waters as referenced in this comment. The department will work with producers who are dealing with abnormally high water situations; however, they are ultimately responsible to take appropriate steps to prevent impacts to waters of the state from their livestock facilities.

Comment 77: Section 33-16-03.1-06, “*Control of Pollution from Animal Feeding Operations,*” “The permit shall be valid until its expiration date as long as the animal feeding operation is not materially changed, or waters of the state are not impacted pursuant to Chapter 33-16-03.1. If an operator plans to change the type or increase the number of animals or change the facility (including expanding barns or pens or changing manure storage or water pollution control structures), the operator shall inform the department in writing prior to implementation of these changes.” The expansion of pens or barns should not require approval as long as the producer constructs them within the containment area and does not exceed animal numbers allowed by the permit.

Response: Federal requirements dictate that a permit cannot extend for more than five years. At that time, the permit can be reissued with minimal effort by the department and the permittee if no substantial changes to the operation have occurred. However, if the permittee has violated any of the permit conditions, the department may use this time to modify the permit and bring the facility into compliance. If the violations are repetitive and cause significant environmental damage, the department may take the appropriate steps to revoke the permit under provisions of existing law. The expansion of pens and barns can change the amount of manure or runoff going to a containment system, and the system needs to be evaluated when these changes occur to ensure it still is adequately sized to meet the storage requirements. For example, if a well-vegetated area is converted to a feedlot, the amount of runoff coming from this area will significantly increase. Even if the runoff from the vegetated area was already collected by a runoff pond, the increased amount of runoff due to lack of vegetation may result in more runoff than the pond is designed to hold. These types of changes need to be reviewed by the department.

Comment 78: The *North Dakota Livestock Program Design Manual* should be included as a component in the North Dakota Administrative Code 33-16-03.1 “Control of Pollution from Animal Feeding Operations.” This would ensure that the design manual could not be changed

without going through the legislative or rule-making process. This would allow all individuals affected by any change in the manual the opportunity to be heard before changes are implemented.

Response: (Refer to response on Comment 1 of this docket.)

Comment 79: The department needs to insert the definition of “winter feeding operations” from the design manual into North Dakota Administrative Code 33-16-03.1.

Response: This section of the design manual is for informational purposes to describe what is considered a wintering operation. It is not written as a comprehensive definition for a wintering operation. (Refer to response on Comments 4 and 21 of this docket.)

Comment 80: When monitoring wells are required, usable existing wells should also be considered as monitoring wells instead of requiring new wells to be drilled.

Response: The potential use of existing wells is acknowledged in Section 8.4 of the design manual. The last sentence of Section 8.4 reads, “With prior department approval, ground water monitoring can be conducted by using existing on-site wells that supply water to the facility, provided information is available to evaluate whether or not the wells were constructed in a manner that will accomplish the objectives of this section.” The location and placement of monitoring wells at a site is critical. If existing wells are not adequate in construction or location, additional monitoring wells may be needed. The location and number of monitoring wells needed must be evaluated on a site-by-site basis.

Comment 81: “Medication pens” or handling facilities should be excluded from the production area as long as animals are not confined for more than 45 days in these facilities.

Response: (Refer to response on Comment 3 of this docket.)

Comment 82: The department should develop example criteria so that livestock producers will better understand some of these situations.

Response: The department will work with livestock producer groups and other entities that provide technical assistance to producers to help explain the rules and facility design and operation requirements. The department is currently coordinating with NDSU Extension Service and other groups in developing educational and training materials to assist producers.

Comment 83: The department needs to err on the side of common sense as it interprets and applies these rules. These rules could place a tremendous financial burden on livestock producers who will be required to install animal waste containment systems without adequate state or federal cost share. As a result, some livestock producers may not be able to meet regulatory compliance and may be forced out of business.

Response: The department has and will continue to use a common-sense approach to the permitting of AFOs. The department does acknowledge the financial impacts a livestock waste system may have on a producer. The department has drafted these rules and design manual to provide adequate protection of waters of the state acknowledging that site specific circumstances, can provide for some flexibility in their implementation. For example, in-situ liners and water-spreading systems are options that can be used where applicable.

Comment 84: The department and livestock industry have worked well together to keep our environment clean and to prevent animal waste from polluting our waters. I hope this relationship continues with the implementation of the new rules.

Response: The department agrees and has worked with the livestock industry and other interested stakeholders on issues relating to animal waste systems and water pollution. The department would like to continue this relationship with the implementation of the new rules.

Comment 85: Section 33-16-03.1-02: Why is this document limited, in both scope and purpose, to maintaining beneficial uses and preventing degradation of quality of the waters of the state? What about air quality?

Response: The rules being updated, NDAC 33-16-03.1 and NDAC 33-16-01 are specifically related to protecting water quality. Facilities covered under these rules must be in compliance with the existing air quality rules, which are found in the Administrative Code (NDAC 33-15-16 and NDAC 33-15-02).

Comment 86: Section 33-16-03.1-03 “Definitions” #3: Why are the BMPs defined to only protect water quality? What about degradation of soils from excess nutrients? What about air quality? Isn’t North Dakota responsible for enforcing the Clean Air Act?

Response: The rules being updated, NDAC 33-16-03.1 and NDAC 33-16-01 pertain specifically to protecting water quality. The application of nutrients to soil is outlined in Section 7.5 of the *North Dakota Livestock Design Manual*, but this only applies to permitted systems, not agricultural practices in general. Facilities which are not covered under NDAC 33-16-01 or NDAC 33-16-03.1 are allowed to manage their operations in any manner not in violation of NDAC 33-20 (solid waste regulations.) North Dakota has regulatory authority to enforce the Clean Air Act through Administrative Rules NDAC 33-15-02 and NDAC 33-15-16.

Comment 87: Section 33-16-03.1-03 “Definitions” #4: Why are two operations under common ownership considered one (for purposes of animal unit numbers) only if the facilities are adjoining or if they utilize a common area or system for waste disposal? What if only a road divides their facilities? What if the facilities are in different townships, counties, states, or countries? The larger the number of animals in one area, whatever the ownership is and whatever the political jurisdiction is, the larger the pollution potential will be. All facilities in a

given area should be taken into account when permitting, monitoring, and siting an operation, no matter what the political jurisdiction.

Response: The reasoning behind this definition is mainly to prevent an owner/operator of a large CAFO from trying to claim it is actually two medium AFOs in order to avoid the federal permit requirements. The design of a livestock manure handling system is site specific, and most livestock facilities utilize land near the facility for the application of manure. This definition allows the department to permit AFOs or CAFOs in certain locations with requirements appropriate for those locations. It also allows the department to have a separate permit, site-specific design plan, and NMP for each different site. If only a road divides the site, it would typically be considered one site because the two portions are adjoining each other, and often these sites use a common system for handling manure. If two sites adjoin each other and are in different townships or counties, they would still be permitted as one site. The department has not seen a situation where a facility is located in two states or countries; however, the department does have operations with manure storage facilities in adjoining states. In those instances, the manure storage areas are permitted by the state in which they are located. If there are multiple facilities located in close proximity to each other, each will be evaluated based on its site-specific conditions, and the NMPs will be evaluated to ensure: (1) each facility has acquired adequate land to apply the manure, and (2) the same land is not being used by more than one facility.

Comment 88: Section 33-16-03.1-03 “Definitions” #13: Why does the definition of “manure” or “livestock manure” include the vague phrase “and raw or other materials” which is open for interpretation? By this definition, manure could include parts of or whole carcasses, garbage of any form, and leftover antibiotics or antibiotic-laden feed.

Response: A portion of the definition of manure comes from the EPA definition which is as follows: The term “manure” is defined to include “..manure, bedding, compost, and raw materials or other materials commingled with manure or set aside for disposal.” If another material is commingled with manure, it is considered manure. However, if a waste material that must be land-filled is mixed with manure, then the product must be handled in a manner that meets the most stringent regulatory requirements for the materials being disposed.

Comment 89: Section 33-16-03.1-03 “Definitions” #20: Where are the full requirements for a NMP to be found? Certainly, the North Dakota Department of Health has limitations for nutrient application, nutrient testing requirements, and application timing regulations. Where are they?

Response: The detailed conditions that must be included in an NMP are found in Section 33-16-03.1-08, Facility Requirements, with additional clarification found in Section 7 of the *North Dakota Livestock Program Design Manual*. This includes detailed criteria for nutrient application and nutrient testing, and guidelines related to the timing of manure application.

Comment 90: Section 33-16-03.1-03 “Definitions” #20: Why is air pollution (including odors) only addressed in the NMP, when it is also an issue for other parts of the operation? Where are the requirements for limiting air pollution (including odors) found?

Response: The odor rules apply to all facilities and must be followed. The rules are found in NDCC 23-25-11: Chapters 33-15-16 and 33-15-02. (Refer to response on Comment 24 of this docket.)

Comment 91: Section 33-16-03.1-03 “Definitions” #23: Since when can a corporation own or control a farming operation in North Dakota? Only corporations allowed under the North Dakota Corporate Farming Law shall be allowed.

Response: Since family corporations are the only farm corporations allowed in North Dakota, they are the only ones that could be permitted as CAFOs or AFOs. If there is a question as to what constitutes a corporate farm, the Attorney General would be called on to make this determination.

Comment 92: Section 33-16-03.1-07, “Permit Application Content and Procedures” #4f: What sort of guarantee does the public have that waste will be spread at the proper rates if the applicant does not own and control all of the land necessary to spread wastes at current approved agronomic rates? If the applicant does not own and operate the entire acreage where manure will be spread, written documentation should be provided to the state indicating ownership of the number of acres available for spreading, the number of years contracted, type of waste to be spread, method of spreading, and the person who will apply the waste. This should be in the form of a notarized or other legally binding agreement between the landowner/operator and the facility. This agreement should be provided to the North Dakota Department of Health for each parcel where waste is to be spread and be good for the life of the facility or the permit.

Response: The facility has to follow the NMP to ensure manure is applied at a nutrient rate not to exceed that utilized by the crops grown. Soil tests must be conducted on the land to which manure is applied to verify appropriate application rates. If soil tests indicate that more nutrients are being applied than are being used by the crops, the facility will be required to spread the manure on other land. If the facility spreads manure on land not owned or leased, they must demonstrate that they have access to land for the application of manure. The department may require that a facility have signed agreements showing they have access to adequate land for application of manure. The NMP must indicate the number/location of acres where manure is spread, methods of spreading, and the party responsible for application (contracted applicator or facility operator.) Records must be maintained regarding application rates and location of the land where manure is applied. The department believes that soil and manure testing, along with records of land application which are required, are sufficient to verify the manure is being applied at appropriate rates.

Comment 93: Section 33-16-03.1-03-07, “Permit Application Content and Procedures” #5a: Why does this not specifically include water quality monitoring? Who is to pay for any monitoring, testing, and sampling at a facility or adjacent to a facility? What about groundwater testing/monitoring downgradient from a facility? Who will do the monitoring? Where are the raw results sent? Who will interpret the results of any studies? Where and when will the results of monitoring and tests be made available to the public? How long will monitoring continue?

Response: The department has the authority to require ground water monitoring within a permit when deemed necessary to protect the environment. Section 33-16-03.1-07 has been changed to reflect this authority. Item 5a (Permit Conditions) has been changed to read, “sampling, testing, and monitoring at or adjacent to the facility or of manure, process wastewater, groundwater, or runoff.”

Generally, expenses related to ground water monitoring well installation and sampling are the responsibility of the producer. If a facility collects its own samples, it must follow a sampling plan to ensure the samples are collected and handled in such a manner that they will not be contaminated. The department can collect check samples at facilities that are required to do groundwater monitoring to verify their sample results. On a case-by-case basis, the department may conduct additional monitoring and when it does, may share some of the associated costs. Sampling of ground water downgradient of the facility is generally not conducted unless there are reasons to believe groundwater contamination is occurring from the facility. For example, if samples collected from wells installed in the vicinity of the manure storage pond indicate potential ground water contamination, additional testing may be conducted farther downgradient of the facility. As indicated in Section 8.6.2 of the design manual, all ground water sample data must be submitted to the department by the last day of the month following the month the samples were collected. All sampling data is part of the public record and can be obtained from the department in accordance with the Freedom of Information Act.

The length of time that sampling is required is dependent on the results of the samples. Generally, ground water sampling must be conducted two times per year while the facility is operating. The frequency of sampling may be reduced after two years of monitoring if requested by the producer and approved by the department. The department will evaluate all groundwater monitoring data prior to making such a determination. (Also refer to response on Comments 94, 101 and 102 of this docket.)

Comment 94: Section 33-16-03.1-07, “Permit Application Content and Procedures” #5a: Certainly, a hydraulic gradient study would be done before a facility is constructed, so test wells can be properly placed. Who will conduct a hydraulic gradient study of the site before test wells are installed? Who will pay for the study? Who will analyze the results? Will these results be available to the public for review?

Response: At facilities where groundwater monitoring is required, the department utilizes existing data to aid in the siting of the wells. The goal of the ground water sampling program is

to place one well upgradient of a manure storage structure and two wells downgradient of the structure. The department typically works with a producer or consultants hired by a producer to determine the ground water gradient and also the appropriate well locations.

Generally, expenses related to ground water monitoring well installation and sampling are the responsibility of the producer. All sampling data is submitted to and reviewed by the department. Producers may also have a private consultant review this data. All sampling data is part of the public record and can be obtained in accordance with the Freedom of Information Act.

Comment 95: Section 33-16-03.1-07, “Permit Application Content and Procedures” : Why is a permit not reviewed each time a facility changes ownership? New ownership may change many of the ways a facility is run, and the permits should be reviewed at these times. Changes in livestock type, numbers, manure storage or water pollution control structures, and adding barns all have the potential to impact water and air pollution, as well as local social and economic impacts. A new permit should be required when a facility changes ownership.

Response: The department is required to be notified of any change in ownership. The holder of a state animal feeding operation permit may transfer it by notifying the department in writing at least thirty days in advance of the proposed transfer date. The notice shall include a written agreement between the current and new owners or operators and contain a specific date for the permit transfer, and the name and address of the individual responsible for compliance with the permit. If major changes are planned in the facility structure or operation, the department will review these changes to ensure the facility is constructed or updated to handle the changes. Any changes relating to manure handling or new locations for land application of manure can require a new/updated NMP. The department does not have the jurisdiction to address local social and economic impacts. These would fall under the jurisdiction of local zoning.

Comment 96: Section 33-16-03.1-07, “Permit Application Content and Procedures” #12: Why should each facility not have its own permit? A general permit should be reserved for very small operations only!

Response: General permits can be issued to facilities that have similar conditions and requirements. The department can issue either individual or general permits for select facilities. Both types of permits must reflect conditions and requirements outlined in the federal rules. Regardless of whether a facility has a general or individual permit, the department reviews facility design plans and related information. All requirements must be met, or the facility is in violation of state law and subject to enforcement actions by the department. The use of general permits has been used in other state environmental programs as well as by EPA.

Comment 97: Section 33-16-03.1-08, “Facility Requirements” #3: Why does the North Dakota Department of Health not want to see a facility’s NMP? Writing a plan just to file it with the operation does not encourage the production of a quality plan, nor does it give the department a

chance to comment on its completeness or monitor if the plan is being followed. Facility requirements should also be filed with any jurisdiction having zoning authority, such as townships and cities with extraterritorial authority.

Response: CAFOs will be required to submit NMPs. A medium or small AFO with a state permit needs to submit a NMP if it land applies manure in the winter, has high phosphorous levels on the land where it will apply manure, plans to daily spread manure, or if it fails to comply with these rules or permit conditions; otherwise, the NMP can be maintained on site. Facilities that are not required to submit their NMPs must submit certain information from the NMP to verify proper land application of manure. The full NMP will be checked during periodic site inspections by the department. The department does not have the authority to require filing of NMPs at the local level. This is left to the discretion and authorities provided to the local jurisdictions.

Comment 98: Section 33-16-03.1-08, “Facility Requirements” #3(a): What sort of guarantee does the public have that waste will be spread at the proper rates if the applicant does not own and control all of the land necessary to spread wastes at current approved agronomic rates? If the applicant does not own and operate the entire acreage where manure will be spread, written documentation should be provided to the state indicating ownership of the number of acres available for spreading, the number of years contracted, type of waste to be spread, method of spreading, and the person who will apply the waste. A notarized or other legally binding agreement between the landowner/operator should be provided for each parcel where waste is to be spread; these agreements should be on file with the North Dakota Department of Health.

Response: (Refer to response on Comment 92 of this docket.)

Comment 99: Section 33-16-03.1-08, “Facility Requirements” #3(a): Why are soil nutrient tests not required for each parcel, each year, to assure that excess nutrients (especially phosphorus and nitrogen) do not build up in the soils? Where will manure be spread if excess nutrients are found to be building up in the soils?

Response: Soil tests are required for CAFOs prior to land application of manure for that year. AFOs covered by a state permit must have soil samples that are not more than three years old. Nutrient concentrations from manure application to soils has a tendency to build up gradually over time. Requiring large facilities to sample annually and smaller facilities to sample at least once every three years enables the producer and the department to gauge any trends in the nutrient content of the soil. Producers can determine if nutrients are increasing and steps can then be taken before excessive build-up or environmental damage occurs. Many facility operators and landowners that spread manure on their land test the soils yearly. If it is determined through soil sampling that manure is being applied at a rate where nutrients are not being used by the crops and are building up in the soils, additional land will be required for land application purposes.

Comment 100: Section 33-16-03.1-08, “Facility Requirements” #4(b): What types of manure can be applied to frozen ground, and under what circumstances can manure be safely applied to frozen ground? If the manure cannot be immediately incorporated into the soil, odors will become extreme, and the chances increase of nutrient-laden runoff contaminating water.

Response: The manure that is most commonly applied to frozen ground is solid manure from cattle operations. This is done during periods of warm weather when the manure is not frozen and can be hauled out on to cropland or grassland. There are some brief times in the early fall (e.g., when the soil starts to freeze or is frozen only a few inches) during which liquid manure can still be applied and injected into the soil. The frozen ground surface provides enough stability to get good traction, but still allows the implement to pierce the frozen soil so manure can be injected. Manure can only be applied to areas where there is no likelihood of runoff (e.g., sites that have slopes of less than 6 percent, where there is stubble or vegetation, and less than 8 inches of snow). This is covered in Section 7.6 #4 of the *North Dakota Livestock Program Design Manual*. Regardless of when manure is applied, the operator must take precautions to prevent excess odors during the land application of manure and from manure that has been land applied.

Comment 101: Section 33-16-03.1-08, “Facility Requirements” #6(b): Who will scientifically design and implement the groundwater site assessment for manure storage structures? Who will pay for these studies? Who will interpret the results? Will the North Dakota Department of Health see the results?

Response: (Refer to response on Comments 93 and 94 of this docket.)

Comment 102: Section 33-16-03.1-08, “Facility Requirements” #6(f): Who will pay for additional design or monitoring, if required, by the North Dakota Department of Health? Who will perform the studies? Who will interpret the results? Can the public view the results?

Response: Generally, the producer would be responsible for costs associated with additional design or monitoring requirements requested by the department to satisfactorily prevent or identify pollution to waters of the state. At times, the department may collect samples to verify water quality. The owner of a facility must provide a copy of all monitoring results to the department. The department reviews all data for completeness and water quality trends. Facilities can also review and interpret results or hire someone to help them do this. (Also refer to response on Comments 93 and 94 of this docket.)

Comment 103: Section 33-16-03.1-08, “Facility Requirements” #8: What sort of guarantee does the North Dakota Department of Health give nearby residents that the air quality will not be degraded? What sort of responsibility does the facility have to not reduce the value of nearby land and structures? How long does the facility need to make an effort to control odors? Are chemicals to reduce human olfactory sensitivity to be used? Will nearby residents be notified if sensitivity-reduced chemicals are being used?

Response: The department requires that facilities be operated in a manner so they will not exceed the standards in the air quality regulations. However, emissions that do not exceed the air quality limits can be noticeable. Therefore, the department cannot guarantee that odors will not increase. In regards to the length of time a facility needs to control odors, odors must always be controlled so they do not exceed air quality standards. The department is not aware of any chemicals that reduce human olfactory sensitivity being used, or available for use in the livestock industry. The department contacted researchers who are working on livestock odor issues, and they are not aware of any such chemicals being used. There are chemicals called masking agents, which are intended to cover up the offensive odor by having a more powerful, but supposedly pleasant odor. These are not used often as they do not work very well. The most common chemicals used are ones that reduce the actual odors from livestock facilities. The department does not have authority to address land quality issues related to property value.

Comment 104: Section 33-16-03.1-08, “Facility Requirements” #10(a): Who will design and install monitoring wells at a facility? Who will take samples? Who will analyze the results? Will the public and the North Dakota Department of Health have access to the results? For how long will monitoring take place? Who will pay for these tests?

Response: (Refer to response on Comments 93 and 94 of this docket.)

Comment 105: Section 33-16-03.1-12, “Prohibited Activities” #3: How “near” to surface water is it illegal to bury carcasses? “Near” is a very vague term.

Response: The term “near” is included in NDCC 36-14 and NDAC 33-20. The department realized that this term can be interpreted as vague; however, this is necessary as there are a variety of site specific conditions that must be evaluated when determining if a site is appropriate for the burying of dead animals, including soil type, geology, groundwater, ground slope and topography. Depending on these conditions, the acceptable distance from a surface can vary considerably. In addition to the requirements mentioned above, the department uses best professional judgement and Division of Solid Waste guidelines to derive a distance from surface waters at which animals can be buried. However, the responsibility still lies with the producer to ensure no violation of water quality standards occur.

Comment 106: Section 33-16-03.1-13, “Public Participation” #1-3: How does the North Dakota Department of Health determine “if a significant degree of public interest exists” if there is not first an issue of public notice requesting comment? Public notice and comment periods should be provided on all applications for both individual permits and general state AFO permits. Information should be made available in all of the available county newspapers, (dailies, weeklies, and general delivery papers) to assure that all residents know about the proposed facility and have an opportunity to comment. If a facility is on the border of, or near, two townships/counties/states/or countries, all residents (on both sides of the border should be notified. Residents and landowners within a certain radius (e.g., 3 miles) should be notified directly by mail and be given ample time to comment to the North Dakota Department of Health.

Response: Section 33-16-03.1-13 is intended for medium or small AFOs which are covered under state permits. Based on comments received in the past, significant public interest is typically generated regarding the location of a proposed facility in relation to neighboring residences or public areas. Many medium and small AFOs are located in remote areas away from residences or public areas. If there are neighbors within a mile or so, they are contacted to inform them of a proposed project and to address any concerns they may have. If a public notice is needed for a new or expanding facility, it will be published in the local county paper and, depending on proximity, the closest regional paper. A 30-day comment period will be held to allow people to provide comments to the department. The department may also post information on a proposed facility in a public building (e.g., post office or auditor's office in the community closest to the proposed facility).

In the NDPDES rules which apply to CAFOs, there are public notice requirements for both individual and general permits with conditions that are basically the same. These include publishing a public notice for general NDPDES permits in the 10 regional papers and publishing a public notice for individual NDPDES permits in the local county paper and, depending on proximity, the closest regional paper. A 30-day public comment period is held for all new individual and general permits, as well as when these permits come up for renewal or reissuance every five years. Facilities meeting the requirements of a general permit can solicit the department to be added to that general permit. Facilities not meeting the requirements of the general permit will be issued an individual permit and must follow the public notice requirements for individual permits. (Refer to response on Comments 33 and 73 of this docket.)

Comment 107: Section 33-16-03.1-13, "Public Participation" #3: Who will pay for the public notice?

Response: If the department requires a public notice as a part of the permitting process, the department will pay for the public notice.

Comment 108: Section 33-16-03.1-13, "Public Participation" #5: Townships should receive notice as well as counties. If the facility is within 3 miles of another jurisdiction (county, state, township, city, country), the notification should be provided to that jurisdiction as well.

Response: The public notice will be sent to the governmental entity which has jurisdiction over the facility. That local entity may release the information to whomever they wish. The public notice will also be placed in the official county newspaper or the weekly newspaper circulated in the area of the proposed animal feeding operation. (Refer to response on Comments 33, 73, and 106 of this docket.)

Comment 109: Where are the requirements for a closure plan? Who is responsible for proper closure, including management of manure, final cleaning of buildings, and the emptying and proper disposal of manure from all manure storage structures? If a facility ceases operation, it

should submit, prior to closure, a closure plan prepared by a registered professional engineer, including the following:

- Closures may be postponed for a period of 12 months if the property is posted for sale; however, pollution hazards must be corrected immediately.
- Manure storage structure closure shall include the removal of sludge from the facility and its proper, legal disposal.
- All wastes from the operation and its waste control system must be removed and disposed of in some manner which is legally permissible as soon as practical in order to promote and protect public health.
- If an operation is sold and the new owner has obtained the proper permits and will continue to operate the facility, closure shall not be required.

Response: The requirements of a closure plan are not addressed by the federal CAFO rules nor by the state regulation, but the department does have sufficient authority in state law (NDCC 61-28) to require closure activities as needed at a site. The owners of a facility are responsible for the proper recycling and/or disposal of manure, which must be done in a manner not to pollute waters of the state, when they no longer house animals at their site. The department's legal counsel has studied this issue and determined that the department has no authority in this program to include bonding and/or post-closure plans.

Comment 110: What sort of bonding requirements does the North Dakota Department of Health have for AFOs? The public does not need to be responsible for the financial costs of cleanup of a facility.

Response: There are no bonding requirements in these rules. The department's legal counsel has studied this issue and determined that the department has no authority in this program to include bonding. (Refer to response on Comment 109 of this docket.)

Comment 111: What sort of requirements does the North Dakota Department of Health have for abandonment? Owners and operators of feedlots should have joint and severable liabilities for cleanup, closure, or remediation of abandoned feedlot sites, including cases of neglect. Abandoned live animals should be assessed for health by the state veterinarian, and costs of disposal should be assessed against the bond.

Response: A facility owner has the responsibility to ensure a site does not impact waters of the state, now or in the future regardless if animals are present at the facility. (Refer to response on Comment 109 of this docket.) The State Veterinarian has requirements for humane treatment of animals, and if there are abandoned animals, the state veterinarian can require appropriate steps to address this situation.

Comment 112: Who will monitor a site after a facility closes? Who will be responsible for the monitoring and its costs?

Response: The facility owner is responsible for maintaining a site in compliance with state requirements including making sure there are not impacts to waters of the state. This is true even after animals are removed from the site or after closure of a site. (Refer to response on Comment 109 of this docket.)

Comment 113: Who is responsible for siting AFOs? Does the North Dakota Department of Health have the option of turning down a site? What are some examples of poor sites?

Response: The local authorities have the ability to site the facilities through zoning. The department typically works with a producer regarding facility siting issues. The department can give guidance on proposed sites, and it does have the option of rejecting a site. Examples of poor sites include: (1) sites located directly over sensitive glacial drift aquifers with adjacent potential receptors; (2) sites located in close proximity to nearby residents; (3) sites near a rural housing development, edge of a city, or public area, and (4) sites near city wells.

Comment 114: What is the North Dakota Department of Health's definition of an "engineer"? Would not "registered professional engineer" or "agricultural engineer" be better terminology?

Response: The department defines an engineer as "a professional engineer registered to practice in the state of North Dakota." A professional engineer is defined under NDCC 43-19.1 as follows: "'Professional engineer' means a person who, by reason of special knowledge or use of the mathematical, physical, and engineering sciences and the principles and methods of engineering analysis and design, acquired by engineering education and engineering experience, is qualified to practice engineering, and who has been duly registered and licensed by the state board of registration for professional engineers and land surveyors." An agricultural engineer is not necessarily a professional engineer. Agricultural engineering is a specific discipline within the engineering field. An engineer does not have to be an agricultural engineer to design an agricultural waste system as long as he/she is qualified to do such work.

Comment 115: Does the North Dakota Department of Health check to make sure all applicable township and county permits are granted before finalizing its own permits?

Response: In the past, the department has provided assistance to township, county, and local zoning authorities on issues related to animal feeding operations. However, the department has no zoning authority. The Health Department permit does not exempt a facility from having to meet all other applicable federal, state or local requirements, including all local zoning requirements. The department does provide the proposed permit information to local jurisdictions as a courtesy.

Comment 116: Why are waste lagoon requirements, including construction, operation, and closure, not codified? By not codifying requirements, the North Dakota Department of Health is inviting abuse of the system.

Response: (Refer to response on Comment 1 of this docket.)

Comment 117: Why are most of the “regulations” found in the design manual instead of in the statute? In order to be effective, the State needs to insert within the regulatory language all the requirements in the design manual that are enforceable standards. To leave them solely in the design manual is leaving a loop hole; the standards could be changed to non-enforceable standards without having to go through a public rule-making hearing and allowing public comment.

Response: (Refer to response on Comment 1 of this docket.)

Comment 118: Applying nutrients from these facilities on the landscape may impact wetlands and waterways that serve as important wildlife habitat. As a result, nutrient loading into a body of water may provide a suitable environment for the transmission and occurrence of disease in wildlife. Diseases and agents that may occur, specifically in water-dependent migratory birds, include salmonellosis, avian cholera, avian botulism, algal biotoxins, and others. It is imperative that NMPs for AFOs be written so the manure applications are not being discharged into surface waters. Vegetative buffers should be installed along all wetlands and watercourses within the impact area of an AFO to ensure that any runoff will be filtered. Adjacent surface water sources should be regularly monitored by the North Dakota Department of Health to ensure biological integrity.

Response: Over-application of nutrients, whether in the form of fertilizer or manure, can lead to water quality impacts in surface waters. To reduce the potential for impacts, a permitted operation must have an NMP specifying that manure be applied at rates where nutrients will be utilized by the plants being grown and applied in a manner where it will not reach waters of the state. Not only is the amount of land available for manure application a major component of the NMP, it is also a significant consideration during the review process for new and upgraded animal feeding operation permits. The Surface Water Quality and Monitoring Program in the Division of Water Quality monitors surface waters (lakes, rivers, streams) on a regular basis. In addition, the Section 319 Nonpoint Source Pollution Management Program is designed to assess and help better manage watersheds in the state in cooperation with local soil conservation districts. (Refer to response on Comment 67 of this docket regarding vegetated buffers.)

Comment 119: The new rules do not appear to address wetland conservation related to the construction and installment of agriculture waste systems. Currently, unless there is federal funding involved, a wetland can be degraded or obliterated for the purpose of constructing an agriculture waste system without mitigation or compensation of the lost functions. The North Dakota Chapter of the Wildlife Society (NDCTWS) supports the National Environmental Policy Act (NEPA) and the process of sequencing to uphold the “no net loss of wetlands” policy. The Bush Administration recently (December of 2003) reiterated their commitment to upholding this policy as well, which should encourage states to follow suit.

Response: The department will comply with all requirements of the Clean Water Act. If the Corps of Engineers takes jurisdiction on wetlands issues, the department will not issue water quality certification (401) until all requirements of the Corps are met. If unavoidable losses occur, mitigation will be required for the site.

Comment 120: The North Dakota Department of Health should be commended for its efforts in revising the rules for control of pollution from (AFOs). Compared to the old rules, the new rules will significantly improve the protection of North Dakota's surface water sources.

Response: The department acknowledges the comment.

Comment 121: We ask that the North Dakota Department of Health respect and acknowledge the large financial impact that a permitted system can have on a producer and that the most cost-effective and practical solution be considered to construct a permitted animal waste system.

Response: The department does acknowledge the financial impacts a livestock waste system may have on a producer. The department does not require more than what is necessary to ensure that water quality is protected. For example, in-situ liners and water-spreading systems could be used where applicable.

Comment 122: We strongly support the "No Potential to Pollute" determination if a facility is not polluting or impacting water of the state.

Response: The department acknowledges the comment.

Comment 123: Need clarification on the term "potential to pollute." Technically, every operation and person have the potential to pollute, but do they?

Response: It is the department's opinion that a facility will have no potential to pollute if: (1) the facility is located and operated such that runoff from the facility is not reaching, or is not likely to reach a surface water or groundwater, and (2) the facility is properly handling manure. (Refer to response on Comment 20 of this docket.)

Comment 124: Need clarification on the terms "significant contributor" and "likely to cause," which are included in the designation of CAFOs. What is *significant* and *likely to cause* the majority of the pollution? Is it a specific numerical amount of pollution?

Response: The most significant pollutants for livestock operations are organic loading, nutrients and bacteria. To determine if they are causing pollution, samples will be collected and the results compared to the water quality standards. (Refer to response on Comment 20 and 123 of this docket.)

Comment 125: Need clarification on the term "animal wastes." Does this include wildlife?

Response: Wildlife waste is included as “animal waste” if animals are domesticated and kept for the purpose of breeding, slaughter, or by-products (e.g., a farm which raises domestic elk for the purpose of selling meat or antlers).

Comment 126: It is important that the North Dakota Department of Health have exact proof, through water samples, that a specific operation is, in fact, polluting waters of the state before penalties or action is enforced. How many water samples will be taken to prove pollution or impacting? A one-time, spring runoff sample that may show pollution may not prove that an operation is a “significant” contributor to the pollution.

Response: The department has not issued a notice of violation without proof of the violation. The department only requires one sample to prove a violation, although the department will work with the producer to bring the operation into compliance before enforcement actions are taken. Because of the significant potential for manure to cause pollution to waters of the state, livestock operations that require a permit under the state or NDPDES rules have a duty to meet the requirements to contain the manure and runoff from their facilities and to manage their facilities in a manner that will not impact waters of the state.

Comment 127: Winter feeding operations are present on virtually every cattle operation in our district; therefore, the designation of these operations as CAFOs will have a huge impact. A practical and common-sense approach should be taken in regard to winter feeding operations. Many of these operations can be improved through management and low-cost solutions to become permitted systems.

Response: A facility that confines 1,000 or more cattle on site for more than 45 days per year is considered a large CAFO and is required to obtain an NDPDES permit under the new EPA rules. The rules target feeding operations, with a focus on large facilities and those close to waters, because they have a greater potential for impacting waters of the state. The department is allowing facilities to take advantage of various options (based on site-specific conditions) to meet the requirements. The department also allows operators to use innovative facility design and management to minimize the extent to which these rules will affect their operations. However, regardless of whether a facility is an AFO, CAFO, or winter feeding operation, a livestock feeding facility polluting waters of the state is violating NDAC 33-16-03.1 and NDCC 61-28, and steps must be taken to abate the pollution. Facilities implementing improvements in management and low-cost solutions may be eligible for a “No Potential to Pollute” designation, which would exempt them from having to get a permit.

Comment 128: We strongly support the use and construction of water-spreading systems. They are a low-cost solution to contain “dirty” water from reaching waters of the state and a way to utilize runoff and nutrients in forage/crop production.

Response: The department concurs with the use of water-spreading systems provided they are properly designed, located, and operated.

Comment 129: “Complainers” should be required to make signed, written statements, not anonymous phone calls or letters. The producer referenced in the complaint should receive copies of the written complaint.

Response: (Refer to response on Comment 35 of this docket.)

Comment 130: With increased regulations on AFOs, there appears to be no clear boundary drawn for producers as to who will be required to have a permit. The new proposal leaves too much judgement control to the Health Department as to compliance.

Response: The department has tried to make it easier to determine if an AFO needs a permit by specifying the following criteria. An operation must apply for a permit if: (1) it is a CAFO; (2) it is a medium AFO that is within ¼ mile of a stream or surface water that contains water, except for infrequent periods of severe drought; (3) it is a medium AFO that is impacting or is likely to impact a waters of the state; or (4) it is a small AFO where the department has determined the facility is impacting or is likely to impact a waters of the state. Since the department has been given the responsibility of ensuring waters of the state are not polluted, it must make the judgments of whether or not facilities are complying with state water pollution control laws. In order to have good, sound bases for its decisions and make fair and consistent judgments; the department follows state laws as well as department rules and policies in its decision making. In doing this the department bases its decisions on scientific analyses, published water quality standards and best professional judgment. Owners/operators always have the opportunity to review and comment on the department’s determination and appeal a department decision pursuant to state law.

Comment 131: We feel the regulations pertaining to monitoring wells for ground water contamination are overkill, as long as the producer meets the pond liner requirements. Once producers put forth the effort to meet the department’s regulations, they should no longer have to worry about noncompliance issues relating to their permitted systems. This again gives the department too much judgmental control.

Response: (Refer to response on Comments 19, 80, 93, 94, 101, 102, 104 of this docket.)

Comment 132: Residents who do not live near the lot or who are not negatively impacted by the feedlot should not be allowed to file a complaint. Complaints should be made available to the producer along with the name of the person making the complaint.

Response: (Refer to response on Comment 35 of this docket.)

Comment 133: The section of the rules pertaining to visual impacts should be removed as it has no correlation to the intent of the regulations and the control of surface runoff.

Response: (Refer to response on Comment 11 of this docket.)

Comment 134: There is concern with the regulatory use of solid blue lines on a topography map as they pertain to the distance a feedlot is located from waters of the state. Only solid blue lines, not dashed lines, should be used on a topography map for measuring to a feedlot. Solid blue lines are waterways that hold water throughout the year. Dashed lines indicate waterways that only have water running during spring thaw and heavy rain events. Runoff from feedlots will go through a filtering effect while traveling in a dashed-line stream as they are vegetated year-long.

Response: (Refer to response on Comments 5 and 71 of this docket.)

Comment 135: The North Dakota Department of Health should be complimented on the readability of the “Draft Rules” and the *North Dakota Livestock Program Design Manual*. Both documents are well organized and cross-referenced. Considerable effort has been made to make both of the documents user-friendly.

Response: The department acknowledges the comment.

Comment 136: Section 3.2.5 of the design manual requires that design plans be stamped by an engineer registered in North Dakota. We have no doubt that the planning of water pollution control structures constitutes the “practice of engineering and practice of professional engineering” as regulated by North Dakota Century Code (NDCC) Chapter 43-19.1. As stated in NDCC 43-19.1-31, it is the duty of all duly constituted officers of the state, and of all political subdivisions thereof, to enforce the provisions of this chapter.

By placing the requirement on design plans that they be stamped by an engineer registered in North Dakota, the North Dakota Department of Health has shifted the burden of registration compliance from the department to the permit applicant. This has serious ramifications on the technical assistance delivery system provided by the Natural Resource Conservation Service (NRCS) staff. We use the services of engineers who have been determined to be competent to carry out the delivery of our technical assistance on animal feeding operations. In some instances, those engineers are not registered in the state of North Dakota. By placing the registration requirement in the permitting process, your agency will significantly reduce the ability of NRCS to assist program participants in addressing the permitting process for animal feeding operations. Correspondence titled “Exemption of Federal Engineers for State Registration, Florida,” dated February 1993, referring to *Johnson v. Maryland*, 245 US 51, is submitted as background information on the issue of exemption of federal employees from state registration requirements.

Response: The North Dakota State Board of Registration for Professional Engineers and Land Surveyors mandates that all designs which require engineering must be signed by the engineer who developed them or the engineer under whose supervision the plans were developed. It is the responsibility of all parties offering engineering services in the state to ensure they meet this requirement. The department wants to ensure that the designs received are in compliance with the regulations of the state board of registration.

The department visited with the state board of registration in regard to an exemption for federal agencies that provide engineering services. The board indicated that, in its opinion, federal NRCS employees that are working within their job status are exempt from the state rules regarding professional engineering registration (NDCC 43-19). The department accepts this interpretation dealing with “registration of engineers.”

Comment 137: Section 4.3.2 of the design manual establishes minimum requirements for advancing soil borings for site assessments. The minimum depth of 25 feet for bore holes and a method of borings that retrieves a relatively undisturbed sample cannot be achieved with any of the field equipment currently used by the NRCS in North Dakota to perform site investigations. The proposed requirements will necessitate the use of private drilling contractors to obtain the soil information. The costs to complete this effort are additional. Considering NRCS current and future year budgets, our ability to cover additional costs may be limited or nonexistent.

Response: The department combined Sections 4.3.2 and 4.3.3 into the new Section 4.3.2. The new section indicates that data regarding subsurface soil types shall be obtained by advancing soil borings, using a method that retrieves a relatively undisturbed soil sample, or by an alternative soil evaluation method that is approved by the department prior to site assessment. Subsurface soils shall be evaluated and logged to at least 10 feet below the base of the manure storage structure.

Comment 138: The third paragraph in Section 4.3.2 in the design manual indicates that all soil borings shall be completed and abandoned according to the requirements in NDAC Chapter 33-18-20, “Ground Water Monitoring Well Construction Requirements.” This statement is misleading, as boreholes above an aquifer for the purpose of determining local stratigraphy are excluded from these provisions. Perhaps this paragraph could be rewritten to clarify that only those holes that extend below the surface of an aquifer are to be abandoned in compliance with NDAC Chapter 33-18-02 (not 33-18-20, as shown in the draft).

Response: (See response on Comment 12 of this docket.)

Comment 139: Section 5.3.1 of the design manual establishes a minimum of 2 feet of freeboard on ponds where the greatest length of surface water is 300 feet or more. This additional foot of freeboard requirement seems excessive and will add considerable cost to a significant percentage of ponds constructed to control runoff from feedlots. The cost of a pond cover, which would be required instead of additional freeboard, would also be excessive. NRCS standards have required a minimum of 1 foot of freeboard on these types of installations for many years. We are unaware of any problems associated with this method of design.

Response: The department will update this section of the design manual. The guidelines will include criteria that a minimum of 2 feet of freeboard be maintained on manure storage ponds where the greatest length of surface water is 300 feet or more. All other manure and runoff ponds have a minimum of 1 foot of freeboard.

Comment 140: Section 5.3.4 of the design manual establishes some moisture requirements for compacted clay liners. Permeability tends to decrease with moisture content. We have used construction specifications that required an optimum plus moisture percentage and not established a top range for the moisture percentage as long as the density can be achieved.

Response: The ability to compact the clay liner decreases with additional moisture. A minimum moisture level is needed to enable the clay to be worked and kneaded, and an upper limit is used to ensure the clay does not become so wet that it can no longer be compacted adequately.

Comment 141: Section 5.3.5 of the design manual details requirements for constructed clay liners. There seems to be significant disparity in the levels of testing when comparing the number of tests required for compaction and density versus laboratory testing for permeability. On a typical pond, the requirement for four tests for each lift placed and testing on at least two sidewalls (assume the requirements are the same, one per each lift) would require 24 density and moisture tests to be completed. This method of testing would also require the testing firm to be present throughout the placement of the liner as tests would be conducted as the liner is constructed; or once the liner is constructed, the testing firm would be present for any excavation into the liner to expose covered layers. The testing for permeability only requires one tube per acre of pond surface area or a minimum of two per pond. This provides quality control on two samples rather than the 24 required by the density and moisture testing. This testing will also be done when the liner is completely placed, and no changes in compaction methods or moisture control are possible to correct the in-place density.

Response: The department agrees that there appears to be some disparity in the amount of testing done and has reevaluated the density testing needed for clay liners. The department updated the third paragraph of Section 5.3.5 regarding moisture and density testing to include the following sentence.... “A minimum of four tests for the first acre of pond surface area must be completed on each lift for density and moisture. For each additional acre of liner, 2 additional tests must be completed on each lift for density and moisture. A maximum of two lifts can be tested at one time. Test shall be randomly distributed over the entire liner area.” The department does allow for density testing to be conducted on two lifts at one time, such that the density test can be conducted on the top lift, followed by a test on the second lift.

Comment 142: Sections 5.3.7 and 5.3.8.2 of the design manual both require laboratory testing of soils classified as CL or CH to verify in-situ soils below manure storage ponds and runoff ponds. The qualifications of the individual conducting the investigation should be adequate to preclude the need for laboratory testing to determine the unified classification or permeability of the materials when a site is located in a nonsensitive ground water area. It would also be difficult to determine when samples for these laboratory tests are required to be taken, as most ponds are not designed before the on-site soil testing is conducted. So pond depth, pond volumes, etc., have not been calculated. These sections also reiterate the requirement of design under the supervision of a registered professional engineer.

Response: The department is allowing the use of in-situ soils as liners in certain situations. This requires additional quality controls to ensure the in-situ material meets department specifications. While the department realizes that there are many people who can field-classify soils accurately, having a laboratory determine the soil types provides independent verification and quality control. See response to Comment 136 of this docket regarding the guidelines for a system being designed under the supervision of a registered professional engineer.

Comment 143: The section of the rules that outlines expiration and renewal of permits should be modified. If a person has an operation and it is not undergoing any significant expansion and is in compliance, then the rule should call for just a renewal of that permit rather than going through the entire process again, which would save considerable time and effort on the part of not only the producer but your office as well.

Response: (Refer to response on Comments 22 and 77 of this docket.)

Comment 144: The introduction section of the design manual includes language stating the owner/operator will be required to make corrections to prevent detrimental impacts regardless of whether the approved design manual was followed. We understand the importance of correcting any detrimental problems. Language should be added to ensure that the owner/operator is not considered in violation if the fault is with the design plan and not with implementation of the plan or the BMPs employed. No citations or penalties should be imposed if the owner/operator addresses concerns in a timely manner. Further, language should be included indicating that technical and/or financial assistance is available to the owner/operator to make the necessary corrections. Contact information for the funding agency(ies) should also be provided.

Response: The owner or operator is the responsible entity and is therefore responsible if the facility is not in compliance with state law. The department policy is to work with a producer, taking into account the reason(s) for any system failure or noncompliance. If a system does not work as designed (through no fault of the owner), the department works with the owner to bring the facility into compliance. While it is the department's policy to use enforcement only as a last resort, it cannot issue blanket exemptions. The department does not provide financial or technical assistance; however, it will provide facilities with information on available sources of technical or financial assistance.

Comment 145: The design manual provides the department with the latitude to institute more stringent requirements if appropriate. While the department may view this provision as allowing flexibility, we are concerned that it provides the opportunity to change the rules without any input from those affected. Consistent rules that operators know and understand are necessary to provide an environment in which animal agriculture can thrive, or at least exist. It is inappropriate and an overreach of government to have the latitude to change rules without a hearing process or comment period. Provisions for recourse or appeal by the involved owner/operator must be made a part of the standards.

Response: (Refer to response on Comment 1 of this docket.) Owners/operators always have the opportunity to review and comment on the department's determination and appeal a department decision pursuant to state law.

Comment 146: In the Introduction section of the design manual, we encourage further language be added to the paragraph following the bold section to read: "If appropriate, the department may institute more stringent requirements to protect water quality and air quality on a case-by-case basis. The department shall provide information to the owner/operator describing the problems and suggested corrective measures. The department shall not institute the more stringent requirements until interested parties have an opportunity to comment on the appropriateness of the requirements."

Response: This section of the design manual is intended to be an introduction to the document and not a regulation. It provides general information on the design manual and department policy. The department's policy is to evaluate facilities on a site-by-site basis, and if site-specific conditions warrant additional requirements, the department will inform the owner/operator of its reasons. Owners/operators always have the opportunity to review and comment on the department's determination and appeal a department decision pursuant to state law.

Comment 147: Section 2.4, "Application and Permitting Information," indicates that a permit is required of a medium AFO if it is located within ¼ mile of a surface water of the state, and "blue-line" waters may be used to locate surface waters. Most producers do not understand this terminology. We believe named watercourses or bodies of water should be substituted for the blue-line waters. This encompasses most, if not all, appreciable waters of the state.

Response: (Refer to response on Comment 5 of this docket.)

Comment 148: In many cases, BMPs such as buffer areas will filter runoff and prevent contaminants from reaching surface waters even at distances much less than ¼ mile. It would be more judicious to consider BMPs when determining the necessity of a permit.

Response: The department is always open to technologies that can be used to prevent impacts to waters of the state. If there is specific information to substantiate that buffers will work in all circumstances, including during spring runoff, the department will evaluate the information and determine if the conditions are applicable to facilities in North Dakota.

Comment 149: We are encouraged by the language in Section 2.4 of the design manual regarding wintering operations. We believe this coincides with the intent of the EPA language on the subject.

Response: The department acknowledges the comment.

Comment 150: We disagree with “expanding the production area” of an existing operation as a requirement for submitting an application for a permit under Section 2.5, first paragraph, Item 2(b). A facility may expand the area without changing the number of livestock or affecting any aspect of the environment. We recommend removing item 2(b) from this section.

Response: In open-lot systems, the amount of runoff from the lots is calculated by the acreage of land on which they are located. If the acreage is increased, the amount of runoff becomes greater, thereby shortening the time frame for storage capacity and possibly creating a discharge. There is more runoff from a feedlot surface than from a vegetated area such as pasture or grassland, so converting pasture land into lots (even when it is all contained) will cause additional runoff. Therefore, the department needs to ensure these types of actions do not change required storage capacity or, in general, do not adversely impact the appropriate operation of the facility. (Also see response to Comment 77 of this docket.)

Comment 151: We support the provision to allow the operation to maintain the NMP on site as described in Section 2.6. This provision must apply to all classes of CAFOs and AFOs. We recommend, however, that the five-year review be enacted only when changes have been made to the facility.

Response: Because of the large volume of manure generated by CAFOs, a complete NMP must be submitted to the department to ensure there is an appropriate plan for the land application of manure. Other facilities that are required to submit the full NMP are those where the application of manure must be closely monitored and evaluated. When a permit is renewed, the NMP information must also be reviewed; however, if the NMP is still adequate, it will not have to be updated. (Refer to response on Comments 22 and 77 of this docket regarding five-year reviews of permit.)

Comment 152: We feel the “No Potential to Pollute” criteria needs clarification regarding the definition of “shallow, unconfined, beneficial use aquifer.” Parameters used to determine those terms and who makes the determination should be included in the manual.

Response: The department has removed the term “shallow, unconfined, beneficial use aquifer” and replaced with the wording “sensitive groundwater areas” (found in the Definitions sections of the rules (33-06-03.1) and design manual). The design manual explains that the department will make this determination based on a site inspection and details the factors considered by the department in making this determination.

Comment 153: Section 2.6.2, Item 10, details information that must be kept regarding the NMP, including who developed the plan and the organizational affiliation of that individual. We believe a program should be developed to train and certify an owner/operator to develop a NMP. An owner/operator could then write his/her own NMP and BMPs. In those instances, there would be no organizational affiliation necessary. A provision for this scenario should be included wherever this requirement is addressed.

Response: The department does not have any requirements for who must develop the NMP, only for what must be included in the NMP. The department does request the name of the individual or entity who developed the plan for purposes of tracking the information. It is acceptable for a producer to develop his/her own plan, as long as it meets the requirements identified in the rule. The department would be willing to work with entities, such as the Extension Service, 319 Coordinators or NRCS, to develop a class or training on how to develop a NMP.

Comment 154: We believe the NMP requirements for the use and composition of manure is unjustified. Commercial fertilizer applications may be made without any regulation. This places a discriminatory and financial burden on the livestock industry.

Response: The NMP requirements for the use and composition of manure is part of the federal rules, and the department cannot deviate from the minimum standards. The nutrient management requirement is to ensure manure is beneficially used as fertilizer rather than just disposed of as a waste. There are also guidelines for the proper use and application of commercial fertilizer. Misuse of commercial fertilizer, resulting in adverse environmental impacts can result in use restrictions or regulatory enforcement action. (Refer to response on Comments 97 and 118 of this docket.)

Comment 155: We oppose inclusion of the location and size of feed storage areas of the livestock facility as described in Section 3.2.1.1e. Feed is not defined as either manure or a pollutant. Therefore, feed storage areas should not be required in the design plan. Feed storage areas are often moved for convenience and efficiency. We recommend removal of this criterion.

Response: (Refer to response on Comment 7 of this docket.)

Comment 156: We recommend the removal of Section 3.2.1, Item 2(c), as it is already covered in Section 3.2.1, Item 2(g).

Response: This department concurs and has adopted the proposed change in the design manual.

Comment 157: The necessary NMP information includes precautions to be taken to prevent manure-related odors from exceeding air quality standards. The state odor laws exempt the odor standard during land application. Therefore, Section 3.2.2, item 14 must be removed or changed to reflect the state laws.

Response: (Refer to response on Comment 24 of this docket.)

Comment 158: We reiterate our belief that NMPs must be kept at the facility and not in department records. This is to provide a level of protection for the owner's/operator's personal records.

Response: (Refer to response on Comments 22 and 77 of this docket.)

Comment 159: Site assessment should include NMPs and BMPs as part of the criteria. Management should be recognized for the vital role it can play in the protection of the environment. Full consideration of the management practices should be implemented in the siting assessment.

Response: The department concurs with your comment. (Refer to response on Comment 10 of this docket.)

Comment 160: The required 270-day manure storage time is unwarranted. We strongly encourage 180 days of storage be implemented.

Response: (Refer to response on Comment 13 of this docket.)

Comment 161: The operation, maintenance, and inspection requirements for CAFOs are too restrictive. The daily and weekly requirements are not practical and are unenforceable. We recommend changing these provisions to monthly requirements. Including provisions for major storm events would be much more workable.

Response: The operation, maintenance, and inspection requirements are part of the federal (EPA) rules and are considered the minimum standard for compliance. The department is not provided flexibility to allow requirements less stringent than the federal rules.

Comment 162: The keeping of CAFO NMP records for five years is excessive. Three years would be sufficient; two years would be better.

Response: The record keeping requirement for CAFOs is part of the EPA rules, and the department cannot change this requirement. However, it is the department's experience that once a good method of record keeping is developed, operators will often keep the records longer than required because the records provide a valuable reference resource for tracking various activities at the facility.

Comment 163: We feel Section 9.2 of the design manual is unnecessary. The unplanned release of manure to ground surface is not a violation and should not be treated as such. Anyone employing BMPs will address the issues referenced in this section.

Response: The unplanned release of manure to the ground surface may not be a violation of water quality rules; however, if it is not contained and cleaned up, it can range from a potential pollution concern, to a safety hazard, health concern, or public nuisance concern. This section of the design manual outlines general guidelines for handling spilled manure.

Comment 164: The emergency action plan needs only to address unplanned releases that pose a threat to surface or ground water or pose an immediate danger to human health. Therefore, the action plan should only be required to address those situations.

Response: As indicated in the response to Comment 163 of this docket, there can be health, safety, and nuisance concerns even if manure is spilled in a location where it may not be a direct threat to waters of the state. As livestock operations become larger and maintain increased volumes of manure concentrated in small areas, it is appropriate that they have established procedures in the event there is an unplanned release or spill. Developing an emergency action plan is not a requirement of all facilities, but is only required if specified by the department. Some facility operators have asked the department to identify criteria for an emergency action plan to address all appropriate environmental and public health concerns.

Comment 165: Applicable water quality standards mentioned in NDAC 33-16-01 (definitions) should include language relating to the Antidegradation Policy.

Response: Section 33-16-01-01 (3.b) was incorporated from the federal rules into the state rules. There is no need to change this definition to include the Antidegradation Policy, since antidegradation is already considered in the State Water Quality Standards (33-16-02.1 (Appendix IV)).

Comment 166: The definition for “discharge” in 33-16-01 should be updated to include additional wording and clarification.

Response: The term “discharge,” defined in the North Dakota Century Code (Chapter 61-28-02-(3)) and North Dakota Administrative Code (Chapter 33-16-01-01 (3e and 3f)), is consistent with EPA’s definition.

Comment 167: Chapter 33-16-01 needs to include a definition for surface waters.

Response: There is no need to include a specific definition for surface waters in Chapter 33-16-01. “Waters of the state” is defined in NDCC chapter 61-28-02-(11) which includes both surface and ground water. State rules (Chapters 33-16-01 and 33-16-03.1) are written to protect “waters of the state.” The terms “surface waters” and “ground waters” were removed and replaced with the term “waters of the state” in select sections of Chapter 33-16-03.1.

Comment 168: In Chapter 33-16-01, the state needs to incorporate requirements regarding 1) when a CAFO must apply for an NDPDES permit, 2) the federal requirements regarding “New Sources,” and 3) the environmental impact statement that needs to be completed at the proposed facilities.

Response: When a CAFO must apply for an NDPDES permit is included in Chapter 33-16-03.1-07. The department’s NDPDES rules are consistent with the federal rules, including

requirements regarding “new sources.” However, the requirements associated with new sources target those livestock programs regulated directly by EPA, not programs administered by agencies which have the regulatory authority to do so in their respective states such as in North Dakota. The requirement for environmental impact studies (per the federal definition) is for EPA-implemented programs, not state-administered programs. In North Dakota, potential environmental impacts from a facility are evaluated during the design and permit review process.

Comment 169: Record retention for CAFOs are to be maintained for five years, not three years as described in Chapter 33-16-01 of the proposed rules.

Response: Additional conditions applicable to specified categories of NPDES permits, [40 CFR 122.42], as they existed on February 12, 2003, are incorporated into Chapter 33-16-01-12-(3) of the proposed rule (including the five-year record retention requirement for CAFOs).

Comment 170: The state has failed to address a number of issues which should be considered before allowing the use of general permits. The following need clarification and expansion in Chapter 33-16-01: (1) no attempt to differentiate between CAFO types, (2) no differentiation between wet/dry manure systems, (3) differences in geographical and demographic makeup within a political boundary, (4) effluent limitations between select CAFOs need not be the same, and (5) the state should rely on individual permits and not general permits.

Response: Items 1-4 in this comment relate to the variability that is associated with different types of livestock and locations/sites. The department recognizes that there will be some variability between sites based on the number and type of livestock on site, the manure-handling systems, and site-specific information related to the geology and topography of the production and land application sites, and to some extent, the demographics of the area in which the facility is located. This is why the department requires site-specific design plans and NMPs. Regarding item 5 in the above comment: if it is determined during the department’s review that a facility can operate in a manner to protect the environment by following the standard operating conditions in a permit, it should be allowed to operate under a general permit.

Comment 171: There are a number of additional definitions that the state should implement in Chapter 33-16-03.1-03. Also, we suggest several revisions or updates to the existing definitions be incorporated into the proposed rule.

Response: Several of the your suggested new definitions are not mentioned in the federal rules and as such are not required to be included in the state rules. We do not believe they provide additional clarity to the rules. However, the department did incorporate changes/updates to several definitions in the state rules, among them “concentrated animal feeding operations,” “earthen storage pond,” and “seepage.” EPA has left it up to the states to define a “hydrological sensitive area.” The targeting and prioritizing of aquifers in North Dakota, completed by the department in February 1997, has been approved by EPA. “New source,” as defined by the federal rules, is incorporated into Chapter 33-16-01. However, the requirements associated with

new sources do not apply to regulatory agencies that implement the NPDES program in their respective states. They only apply to state programs directly implemented by EPA .

Comment 172: The effective date of these rules must be April 14, 2003. Also, the department has not gone far enough in the proposed rules as they relate to Section 33-16-03.1-08, "Facility Requirements," regarding allowable seepage rates, groundwater modeling, loading impacts from impoundments and liner requirements.

Response: See response to Comment 209 of this docket regarding the effective date of the rules. A seepage rate of 1/16th inch/day is an industry standard used by several states. The department is not aware of any instance in the state where a properly constructed, sited and maintained storage structure built to this standard has caused widespread adverse impacts to water quality. However, if such a circumstance should arise, the department has the authority to require that additional steps be taken to protect waters of the state. Groundwater modeling has not typically been conducted. Due to the cost and uncertainty in modeling results, the department has found that establishing siting requirements, a liner seepage rate, and requiring a site investigation with soil borings at all sites and groundwater monitoring at sensitive groundwater sites provides a cost effective method to protect the environment.

Comment 173: Section 33-16-03.1-09, "Record Keeping and Reporting Requirements." Records must be maintained at all CAFOs for a minimum of five years.

Response: The department agrees, and this section of the rules has been updated. Facilities other than CAFOs that will be permitted under the state livestock program will be required to maintain records for a minimum of three years.

Comment 174: Section 33-16-03.1-10, "Enforcement and Compliance." If a facility has discharged in the last five years, they cannot apply for a "No Potential to Pollute" and must obtain a permit according to requirements in the federal rules.

Response: The department concurs with the comment. This section of the proposed rules applies to the state-issued livestock permit, not the CAFO permit which is described in Chapter 33-16-01.

Comment 175: Section 33-16-03.1-11, "Department Inspections." The department needs to include language that clearly defines what information must be maintained on site.

Response: Information that must be located on-site is described on in Section 33-16-03.1-09.

Comment 176: Section 33-16-03.1-12, "Prohibited Activities." In Part 3, you need to add that no animals shall be disposed of within 150 feet of subsurface waters. Also, Parts 6a and 6b (exemptions) only apply if the operations have a current NPDES permit with the state.

Response: Part 3 of this section was taken from NDAC 33-20 and NDCC 36-14 which are not open for comment during this rule-making period. No burial of a carcass within 150 feet of subsurface waters is an extreme requirement that exceeds any state burial/disposal regulations. EPA is allowing states to regulate medium and small AFOs under state programs that are functionally equivalent. The exemptions listed in this section are being allowed under state permits as well.

Comment 177: Section 33-16-03.1-13, “Public Participation.” The department should require public notice for all applications of animal waste systems. It is the duty and obligation of the department to look out for the health, welfare, and well-being of all citizens of the state.

Response: The department does not believe it is appropriate to require a public notice for all medium and small AFOs that require a state permit, and there is no specific requirement in NDCC 61-28 that a public hearing must be held prior to issuance of a permit to an applicant. Section 61-28-07 does allow “any person claiming to be aggrieved or adversely affected by actions to request a hearing by the department.” Facilities covered under NDAC 33-16-01 must meet the respective public notice/participation requirements defined in subsections 06 and 07. The state protects the welfare of the general public and environment through the implementation of state and federal protection regulations.

Comment 178: All conditions and requirements within the design manual that are stipulated as a “shall” or “must” requirement must be incorporated into the respective rules (33-36-01 and 33-16-03.1). There are sections of the design manual that also warrant incorporation into the rules. There are a number of areas within the design manual where the guidelines should be more stringent (e.g., housed-swine feeding operations where there is a significantly greater risk of environmental harm.)

Response: Regarding the first part of this comment, refer to the response to Comment 1 of this docket. The potential environmental risk from a livestock facility is related more closely to the form, volume, and storage/handling of manure than to the type of livestock generating the manure. The design manual guidelines address manure handling in both its solid, or liquid concentrated or diluted forms. The department evaluates each site for potential environmental impacts based on site-specific conditions and on the type and volume of manure generated. The review process ensures that adequate safeguards are included in the manure-handling system and NMP to protect the water and air quality of the state.

Comment 179: In the design manual, Section 2.1, Objective; two new paragraphs should be added to this section. (Full comments are included in “Comments 5 Doc.”)

Response: The information that was suggested in the two paragraphs is located in Sections 5 and 6 of the design manual.

Comment 180: In the design manual, Section 2.3, “Definition of Terms.” There are a number of additional definitions that the state should implement in this section. Also, we suggest incorporating several revisions or updates to the existing definitions in the proposed rule.

Response: (Refer to response on Comment 171 of this docket.)

Comment 181: In the design manual, Section 2.4, “Application and Permitting Information.” (1) Animal feeding operations should not be sited in areas where depth to groundwater is less than 100 feet from the surface; (2) You need certification requirements at all facilities; (3) Facilities are to be located out of the floodplain; (4) Designs must be prepared by a registered engineer in North Dakota; and (5) Other information deemed necessary to protect state waters.

Response: Section 2.4 of the design manual has been changed to reflect “True Pasture and Rangeland Operations.” Based on several comments received, the information in Section 2.4 has been updated and moved to Section 2.2, “Operations Requiring a Permit.” Regarding item (1) above: it is over protective and not practical to prevent the construction of manure storage ponds in areas where groundwater is less than 100 feet from the surface, as this would prohibit ponds on all but a few areas of the state. Due to the design, siting, and maintenance requirements, there is not adequate justification to consider this request. Regarding item (2): a certification statement is included on the application forms. Regarding item (3): the department discourages facilities from building in a floodplain; however, for some existing facilities, being located in a floodplain is acceptable provided adequate provisions are in place to protect water quality. NDAC (33-16-03.1-08), Facility Requirements, items 1 and 2, and in the design manual, Section 5, include requirements and guidelines to limit or prevent pollution of, or the discharge of pollutants into waters of the state. This allows the department to evaluate facilities in or near a floodplain. Regarding item (4): the professional engineer requirement is part of state law under NDCC 43-19. Sections 3 and 5 of the design manual reference engineering requirements in a way that is consistent with state law. Regarding item (5): the department has the authority to request other information deemed necessary to protect waters of the state as identified NDAC, Section 33-16-03.1-08, Facility Requirements, items 1 and 2. In addition, every section of the design manual has criteria to protect waters of the state. (Also see response to Comment 201 of this docket.)

Comment 182: Several suggestions are provided for Sections 2.5, 2.6, and 2.7 of the design manual. Among them are misspelled words, clarifications on select terms, additional “No Potential to Discharge” requirements, department inspection frequencies, and use of “surface waters” versus “waters of the state” throughout the document.

Response: The suggestions provided were used in the updates to these three sections. “Waters of the state” replaces “surface waters” and “ground waters” where appropriate. “Process wastewater” was added to several paragraphs. Misspelled words were corrected, etc.

Comment 183: In various parts of Section 3 (design manual), a request was made to add the term “litter” to parts where it talks about handling manure, process wastewater, and runoff; and to add the term “conveyance structures” to areas where it talks about diversions, dikes, and drainages.

Response: The term “litter” is included in the department’s definition of manure. The use of the term “conveyance structures” is confusing as it can imply something more than diversions, dikes, and drainages, which is what the department is referring to in this section.

Comment 184: In the design manual, Section 3.2.1, item 1c, add reference to a 100-year, 24-hour rainfall event.

Response: The department has added this reference to the rainfall event in the design manual.

Comment 185: In the design manual, Section 3.2.1, item 2c, add provision to this section for proper chain of custody for soil tests.

Response: The soil testing firms analyzing samples use various chain-of-custody methods. The department does not require a chain of custody be used for soil testing during a site investigation for the livestock program.

Comment 186: Comments on Section 3 (design manual) about submitting final design plans indicated that the department must provide a list of minimum requirements, items that need to be inspected, and the frequency of those inspections in order to ensure all facilities meet a minimum standard.

Response: Section 5 of the design manual contains design guidelines for various water pollution control structures, including testing needed to verify a properly constructed clay liner. Section 3 identifies the minimum information that must be submitted for the department to complete its design review.

Comment 187: The department must include a statement in Section 3 (design manual) which indicates that all facilities must comply with the NMP requirements in Section 7 of the design manual.

Response: The NMP requirements are clearly explained in Section 7.3, Nutrient Management Information, of the design manual, and in the rules under Section 33-16-03.1-08, Facility Requirements, item 3.

Comment 188: In the design manual, add a condition to indicate that the construction period must not exceed 18 months.

Response: Some systems are implemented in phases over several years. Systems needing upgrades are put on a compliance schedule to ensure construction within an acceptable time frame. A construction schedule is developed specifically for each facility based on site-specific conditions.

Comment 189: In the design manual, references to “surface water” and “ground water” should be changed to “waters of the state.”

Response: The department has added this change to the design manual.

Comment 190: In the design manual, the department’s allowance of 1/16th inch/day of seepage from a facility does not protect groundwater or surface water quality. The department has failed to require any type of environmental assessment or modeling which would provide the data regarding the potential of waste and pollutants to transcend in a vertical and horizontal direction. Therefore, the department has little knowledge of the true impacts a facility has on adjacent land owners, subsurface waters, or wildlife habitats.

Response: The 1/16th inch/day seepage referenced in the design manual is based on historical knowledge, soil testing and groundwater monitoring. (Also see the response to Comments 68 and 172 of this docket.)

Comment 191: In the design manual, the department needs to look at the cumulative impacts of multiple facilities in an area through modeling and an environmental impact assessment to ensure that water quality standards in an area are not threatened or impacted by new or additional facilities in a region. Also, the department must ensure that multiple AFOs are not relying on the same application areas to dispose of their waste.

Response: While there is not a requirement for a full environmental impact assessment as defined by EPA, the department requires an assessment of the site during its design review process. Having multiple locations in close proximity has not been an issue in North Dakota in the past; however, if such a concern arises in the future, the department will take into account the proximity of multiple facilities. The department does evaluate nutrient loading through NMPs and site-specific design reviews. The department will also assess the land where manure is applied to determine if it is being used by more than one facility.

Comment 192: In the design manual, Section 4.2, there was a comment to change the word “should” in the phrase ... “site conditions should be considered” to “shall.”

Response: Section 4.2 of the design manual was updated as per this comment.

Comment 193: In the design manual, Section 4.2, under item 2, there was a comment that the existence of clay layers is irrelevant because faults and fractures in the clay are very common.

Response: The department disagrees with the statement that the existence of clay layers is irrelevant. The existence of clay layers is very significant for siting a livestock facility. The department understands that fractures may be present in clay soils and takes this into account when conducting a site review and developing the design guidelines.

Comment 194: In the design manual, Sections 4.2.1 and 4.2.2, the setback distances from wells and any wells constructed near a facility should meet water well rules.

Response: The listed setback distances of livestock facilities and manure storage structures from wells corresponds with the water well rules. Any well constructed must meet the requirements of the state water well rules NDAC 33-18-01, as per the use of the well.

Comment 195: In the design manual, Section 4.3.1, Scope of Site Assessment, a request was made to add the words “or in close proximity to waters of the state.”

Response: It is not appropriate to include “or in close proximity to waters of the state” in the phase mentioned above. This section of the design manual deals primarily with determining the soil borings that will be needed for a site assessment to properly evaluate a site for a livestock waste system that will protect groundwater. The number and depth of borings needed to make this assessment is dependent on the facility type, size, and depth to groundwater in the area. This includes an evaluation of groundwater hydrologically connected to surface water. By adding the phrase “or in close proximity to waters of the state,” it would require more extensive soil borings if a proposed facility was to be located close to a surface water, even if there was no shallow groundwater in the vicinity. This is not appropriate. In comparison, potential surface water impacts are fairly easy to evaluate because they can be easily seen.

Comment 196: In the design manual, the department should specify a density of animals at a site. A large number of animals on a small area of land pose a greater concern.

Response: The definition of an AFO takes into account the density of animals at a site. It looks at sites where animals are concentrated to the point where vegetation is not maintained. A large number of animals in a small area can pose a concern, and this is evaluated in the site specific design plans.

Comment 197: A comment was received to update the wording in Section 4.3.2 of the design manual by changing the term “site” to “production area or land application area.” This wording change would require the land application area to be considered when determining site assessment requirements.

Response: The department will update the wording from “site” to “production area.” The land application area is addressed by the NMP in Section 7 of the design manual.

Comment 198: In the design manual, Section 4.3.2, it was requested that the department require soil borings 35 feet below the ground surface or at least 25 feet below the bottom of the manure storage pond.

Response: The department's guidelines for soil borings extending 10 feet below the bottom of the pond have proven adequate in the past. In special or unique circumstances, the department may require deeper soil borings if site conditions warrant such an action.

Comment 199: In the design manual, the department was requested to make several updates to Section 5.1 by: (1) rewording the specifications for a liner, (2) requiring modeling of seepage from a manure storage structure, (3) requiring that manure removed from a pond not damage the liner (as certified by an engineer), and (4) requiring that any depth marker be installed such that it will not damage the integrity of the liner. (Full comments are included in "Comments 5 Doc.")

Response: Most of the suggestions in this comment are items already identified in specific areas of Section 5 of the design manual and are not appropriate for Section 5.1 (objectives for a manure system). Some of the suggested wording is already included in the design manual. The liner specifications in this section are adequate and will not be modified. The requirement for modeling of seepage (item 2 above) will not be incorporated (see the response to Comment 172 of this docket). An engineering evaluation of pond integrity after emptying (item 3 above) will not be incorporated. Requiring an engineer to evaluate the pond every time it is emptied is excessive and goes beyond the intent of these rules. The design manual requires that the design plans provide information on how the pond will be emptied without damaging the liner. This information will be reviewed for each site, and if the department has concerns, it can require an engineer certify pond liner integrity. The department requires that a depth marker be installed in a manner to prevent damage to the pond liner (item 4 above). The department has incorporated protection of the pond liner when emptying and installation of a depth marker (items 3 and 4 above) into Sections 5.2 and 5.31 of the design manual.

Comment 200: In the design manual, Section 5.2, part 1, it was requested that evaporation rates from ponds be based on regional or local pan evaporation rates, and in part 2, the last sentence was requested to be changed from "lots" to "production area."

Response: The department agrees and has updated this section to include this wording.

Comment 201: In the design manual, Section 5.3.1, it was requested that storage pond bottoms must be 150 feet above seasonal high water tables, rather than 2 feet, and greater separation distances "shall" rather than "may" be required in sensitive groundwater areas. This is based on that fact that studies in Kansas have indicated animal waste is a significant contributor of pollution to groundwater in wells that are greater than 100 feet deep, and nitrates traced to animal waste were found in wells 121 feet deep. (Full comments are included in "Comments 5 Doc.")

Response: Studies in other regions, although informative, cannot be directly attributed to have the same results in other regions or states due to climate, geology, and institutional controls (i.e., well construction requirements). Manure storage ponds have been used for years in the state, including some with monitoring wells, with no indication of impacts to nearby wells or water quality. The department has no indication that the contamination of wells in the above referenced study was from properly constructed manure storage structures and/or monitoring wells. The request for 150 feet of separation is unrealistic as there are very few places in the state where this could occur, and unreasonable in that it far exceeds what is needed to protect water quality. The department uses discretion in requiring additional separation distance between pond bottoms and groundwater levels in sensitive groundwater areas. However, rather than issuing a blanket condition for a separation of more than 2 feet, the department will consider the option of using greater separation distances on a case-by-case basis.

Comment 202: In the design manual, Section 5.3, it was requested that a minimum of 2 feet of freeboard be required on all earthen storage ponds.

Response: The department specifies a minimum of 2 feet of freeboard for earthen manure storage ponds where the longest length is 300 feet or more. Wave action can cause erosion along the banks of these larger ponds, but this has not typically been a concern for smaller ponds. At this time, there is not enough justification to specify 2 feet of freeboard for all ponds.

Comment 203: In the design manual, Section 5.3.4, part 2f, it is requested that rocks greater than 1 inch in diameter not be allowed in the liner material.

Response: The department specifies a minimum liner thickness of 24 inches or, in some circumstances, where there is no shallow groundwater, 18 inches, to be installed in 6 inch lifts. Rocks 3 inches or less in diameter have not been shown to cause problems with liner construction or integrity. Without further justification, the department does not propose to change this guideline at this time.

Comment 204: In the design manual, there were several comments related to requiring all earthen storage ponds to have installed liners. They include a request that a specific seepage rate be used and measured for each earthen storage pond. Also, allowing in-situ soils to be used without a seepage test is not acceptable. The department should also specify what type of storage structures are acceptable for certain size facilities. Allowing the same type of structures for facilities of all sizes is not acceptable. Numerous studies have highlighted the leakage from animal waste ponds. Some show that manure storage lagoons were leaking faster than standards allowed, and others indicate surface waters are at risk for contamination because groundwater is being impacted. Also, reports have indicated that there is poor maintenance and management practices at many facilities.

Response: The department's experience has been that for there are some facilities at certain sites where there is good clay soils and no vulnerable groundwater, the in-situ clay is adequate to

minimize seepage without requiring a constructed clay liner. In these situations, a soils test is needed to verify the type of soils; however, a seepage test is not required. The department is aware of the concern about surface and groundwater impacts. In the past, construction guidelines for manure storage structures in many states were limited and follow-up inspection on these structures was not as comprehensive. The proposed CAFO rules and design manual are intended to help ensure that systems are designed and operated in a way that will minimize impacts on waters. The standards in the design manual are intended to provide adequate protection of waters of the state. This is accomplished by sighting requirements that take advantage of natural protective conditions as to minimize the rigorous requirements of constructing a manure handling system. However, at sites where there are no natural protective conditions, stricter design, construction, and maintenance criteria must be met to implement a system to protect water quality. The department's intent is to protect waters of the state, rather than mandating the same construction criteria for all facilities. In this way, the type of manure-handling system needed can be determined based on site-specific information.

Comment 205: In the design manual, the department seems to have a problem with synthetic or geosynthetic liners that, by nature, should have minimal to no seepage unless a puncture or tear exists.

Response: The department does not object to the use of synthetic liners; however, we prefer liners with self-sealing capabilities because it is easy for a puncture or tear to occur over time. Since these ponds are agitated/mixed and pumped on a regular basis, a liner with self-sealing capabilities will do a better job of minimizing seepage over the long term. Synthetic liners can be used in conjunction with a self sealing type of liner or leak detection.

Comment 206: In the design manual, non-earthen storage structures should have secondary containment for at least 50 percent of the volume of the storage structure located within the containment.

Response: While this may be beneficial in some instances, requiring this additional storage in every situation is excessive. If the facility is adjacent to a surface water or vulnerable area, the department may require such a condition, but it would be required on a case-by-case basis when there is reasonable justification.

Comment 207: In the design manual, there were requests to add requirements related to conveyance structures (dikes, diversions), including conditions that they are: (1) not to cause an exceedance of water quality standards or impact any drinking water source, (2) shall not be constructed across waters of the state, and (3) be of stable construction. Leakage (4) shall be minimized as much as possible, and (5) a professional entity shall document the leakage, including an analysis of water transport within the vadose zone of the conveyance structure.

Response: The department does not address conveyance structures in general, but does address piping and diversions, which are specific types of conveyance structures. The department will

incorporate in the design manual the condition to prevent diversions from causing an exceedance of water quality standards (item 1 above). The condition regarding the location of structures in relation to waters of the state (item 2 above) does not have broad application; therefore, the department will not include this condition in the design manual, but will consider it on a site-by-site basis where appropriate. The other requested conditions (items 3 and 4) listed above are already addressed in the design manual. Evaluation of a facility's diversions or wastewater plumbing (including seepage restrictions) occurs during the department's design and review process. Therefore, employing a professional to specifically document leakage from diversions or wastewater plumbing is unnecessary.

Comment 208: Several additional items were requested to be added to the design manual in Section 5.8. They include: (1) ensure irrigation application does not exceed soil infiltration rates; (2) avoid significant ponding of livestock manure or cause runoff from the application site; (3) there shall be no runoff due to application on frozen ground; (4) land application shall not occur during rainfall events, unless it is necessary to protect the integrity of the pond; (5) if liquid manure is applied with irrigation equipment, back flow prevention shall be used; (6) annual groundwater testing must be conducted at wells at a facility; (7) construction of earthen storage ponds is only allowed where groundwater is more than 150 feet deep; (8) require retention structures or ponds to have irrigation systems for land application of manure; (9) provide for the department to require post evaluation of manure applications, including testing of soil for BOD, salts, metals, and other pollutants; (10) require all pipes, pumps, diversions, and irrigation equipment be properly maintained; (11) ensure a facility has adequate equipment to land apply manure; and (12) require facilities keep on site a rain gauge with a log of measurable rainfall. (Full comments are included in "Comments 5 Doc.")

Response: The department has incorporated conditions related to using irrigation equipment for land applying manure (items 1, 2, and 4 above) into Section 7, "Nutrient Management," of the design manual. Back flow prevention (item 3 above) and application of manure on frozen ground (item 5 above) are already incorporated in the design manual under Section 5.5, "Inlet, Outlet, and Transfer Facilities" and Section 7, "Nutrient Management," respectively. Groundwater testing (item 6 above) may be required by the department on a site-by-site basis. It is not appropriate to require this at all facilities. The requirements for a 150-foot separation between shallow groundwater tables and pond bottoms (item 7 above) and irrigation systems for ponds (item 8 above) are overly restrictive and unnecessary. (Refer to the response on comment 203 of this docket). Requiring an irrigation system for ponds is overly restrictive because there are other ways to land apply liquid manure from ponds that are environmentally safe and are commonly used. Wording to allow the department to require post-application evaluation of manure (item 9) is also unnecessary; the department has adequate authority to call for such an evaluation if it is determined to be needed at a site. The department does have provisions in place to ensure that pipes, pumps, diversions, and irrigation equipment be properly maintained (item 10 above); and ensure a facility has access to adequate equipment to land apply manure (items 11 above). These are addressed in the design manual in Sections 6 and 7, respectively.

Keeping a rain gauge and a log of measurable rainfall (item 12 above) is a beneficial tool for producers to document catastrophic rain events. Therefore, the department did add a recommendation in Section 6.2 of the design manual that an operator maintain a rain gauge at the production area and record measurable rainfall events.

Comment 209: In the design manual, the effective date of the regulations is April 14, 2003, not 2004.

Response: The effective date of the EPA final rule is April 14, 2003; however, after discussions with EPA, it was concluded that regulations could not be enforced until they were adopted by state law. Therefore, an NDPDES CAFO permit cannot be issued, nor can other regulations be enforced until the effective date (indicated in NDAC 33-16-01 and 33-16-03.1).

Comment 210: In the design manual, additional comments to Section 6.4 pertaining to dead animal disposal include, but are not limited to, a step-by-step description of how mortalities will be stored, transported, and disposed of; the temporary storage required; agreements with renders; and location of dead animal burial. (Full comments are included in “Comments 5 Doc.”)

Response: These additional comments go beyond the scope of NDCC 36-14-19 (State law on Burial of Dead Animals). Since this regulation is adopted by reference, it is not under review at this time. The department can require dead animals be disposed of in such a manner that they will not impact waters of the state; however, it does not have jurisdiction over how animals are disposed of beyond this requirement. This is the responsibility of the Board of Animal Health.

Comment 211: Numerous wording changes and wording additions were requested in Section 6.5 of the design manual.

Response: These changes were accepted into the design manual as appropriate.

Comment 212: Additional comments to Section 6.5 in the design manual, include, but are not limited to, record keeping requirements for CAFOs (including application of manure and process wastewater, weather conditions, test methods and results, calculations, dates, and amounts). (Full comments are included in “Comments 5 Doc.”)

Response: These conditions are addressed under Section 7.7 of the design manual.

Comment 213: The phrase “but not limited to” should be added in Section 6.7 of the design manual to several areas where it indicates that the department may request specific information.

Response: Since this wording is consistent with state law, it was included in the design manual.

Comment 214: In the design manual, the department has not set realistic time frames for manure or soil testing. The characteristics of manure can change dramatically in a short period of time.

Response: The department would agree that the characteristics of manure can dramatically change in a short period of time while in storage; however, it can also change during and after land application. In addition, nitrogen in manure that has been land applied will change from an organic/non-plant-available form to an inorganic/plant-available form over time. NMPs must take all of this into account and include a plan for application of manure where the nitrogen and other applicable nutrients (in all their forms) will be considered and utilized. Testing soils where no manure will be spread is an extra cost to the producer. While this information can be useful to the producer, it does not provide any valuable information that is needed by the department.

Comment 215: In the design manual, additional comments to Section 7.4 include, but are not limited to: compliance monitoring of nitrogen, phosphorous, potassium, sodium, magnesium, calcium, soluble salts, and soil pH; and prohibiting the spreading of manure if rates are in excess of the agronomic rates of the crops to be grown. Soil sampling should be conducted twice a year, once for deep sampling (6 feet for annual crops, 10 feet for perennial crops) and once for shallow sampling to determine agronomical rates. (Full comments are included in “Comments 5 Doc.”)

Response: NMP guidelines were developed based on industry standard practices consistent with NDSU Extension Service and NRCS guidelines. The department’s NMP guidelines will remain consistent with these commonly accepted guidelines, as well as meet the federal requirements. Where manure is applied, the soils need to be analyzed for organic matter, nitrogen, and phosphorous. Manure must be analyzed for nitrogen, ammonia, and phosphorous. The department may require analysis for salts and metals in the manure and soils if there is a concern about these parameters. The rules and design manual already contain adequate guidelines for applying manure at rates at which nutrients will be utilized for crop production and not impact waters of the state. Facilities are required to develop and comply with NMPs which prevent the over-application of nutrients as identified in the rules under Section 33-16-03.1-08, Facility Requirements, item 3; and in the design manual, Section 7.5. Sampling depths are 0-6 inches and 6-24 inches for standard samples; and when deep sampling is needed, the depths are 24-48 inches. These depths are based on industry standard guidelines. Soil and manure samples must be collected annually for CAFOs and once every three years for those AFOs that require an NMP.

Comment 216: Additional wording was requested to specify that manure application must not exceed agronomic rates and to require that swine effluent be tested with the same requirements as that of sewage sludge when land applied.

Response: Requirements for applying manure at agronomic rates are already required in the rule and do not need to be repeated. Federal requirements in the 503 sludge rules (including

specific testing) govern the land application of sewage sludge. The only federal requirements for land application of manure are found in the CAFO rules, which are consistent with the federal CAFO rules. The department can require the testing of manure for metals, similar to what is required by the sewage sludge, if there is a concern that these materials could be impacting the soil or waters of the state.

Comment 217: In Section 7.6, the department only requires odor controls near residences when people are present. This is not right. The department should require precautions to control odors from residences owned by absentee landowners, even when people are not present. Absentee landowners should have the same rights as everyone else.

Response: The odor standard is a nuisance standard and is complaint driven. Nuisance standards cannot be applied if there are no people present to experience the nuisance and file the complaint. However, so there is no confusion where someone may think that people staying at a seasonal residence cannot file an odor complaint, the department has removed the phrase “where people are present.”

Comment 218: Some minor wording changes were requested in Section 7.7. (Full comments are included in “Comments 5 Doc.”)

Response: The wording changes that provided clarification (without duplication) were included in this portion of the design manual.

Comment 219: Comment was received requesting that groundwater monitoring be required at all permitted livestock facilities.

Response: Groundwater monitoring at all permitted facilities is not necessary, as there are many sites with little or no potential for groundwater impacts. The department may require groundwater monitoring based on site-specific conditions (e.g., where there is a vulnerable aquifer that could be impacted by a livestock facility).

Comment 220: In the design manual, there were comments on Section 8.8 pertaining to the abandonment of a facility including a request to add conditions that: (1) manure must be utilized or disposed of within six months, and (2) 5 feet of soil be placed in lagoons and pens after being scraped to bare earth. (Full comments are included in “Comments 5 Doc.”)

Response: The department requires that a facility be operated and maintained to prevent impacts to waters of the state. If a facility is or has the potential to pollute, the department will require measures to prevent impacts to waters of the state. This is true for facilities that are no longer in operation, but that have manure or other materials on site that could impact water.

Comment 221: In the design manual there were comments on Section 9 which pertain to the inspections of a facility, including adding conditions that allow the department to have entry

access to a facility, access to records, access for inspections, monitoring, and observation of practices at the facility. (Full comments are included in “Comments 5 Doc.”)

Response: The authority for the department staff to inspect facilities is found in state law in NDCC 61-28-04. The livestock rules (NDAC 33-16-03.1-11), this subsection covers the departments authority for access to sites for inspections, sampling and access to records. No additional updates are warranted in the design manual at this time.

Comment 222: In the design manual, additional comments to Section 9 pertaining to the spill response of a facility include, but are not limited to, entry, access to records, spill reports, inspections, monitoring, and abatement procedures. (Full comments are included in “Comments 5 Doc.”)

Response: The requirements for entry and access to records are covered by NDCC 61-28-04. The remaining information is covered in Section 9.2 of this chapter. No additional updates are warranted in the design manual at this time.

Comment 223: In the design manual, additional comments to Section 9 pertain to the enforcement, penalties, and fines of a facility which is not in compliance. (Full comments are included in “Comments 5 Doc.”)

Response: These items are covered under NDCC 61-28-07 and NDCC 61-28-08. No additional updates are warranted in the design manual at this time.