



TSSWCB

**TEXAS STATE
SOIL & WATER
CONSERVATION
BOARD**

*Protecting
And
Enhancing
Natural
Resources
For Tomorrow*

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Revised
May 19, 2005

COMPREHENSIVE NUTRIENT MANAGEMENT PLANS

TECHNICAL CRITERIA & PROGRAM GUIDANCE

*For Dairy Operations
in the
North Bosque River
Watershed*

This document was produced under agreement with cooperative effort between the
Texas State Soil and Water Conservation Board
and
Environmental Management Solutions, LLC.
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TEXAS STATE SOIL & WATER CONSERVATION BOARD

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Texas State Soil & Water Conservation Board

MAY 19, 2005

Technical Criteria and Guidance Document Comprehensive Nutrient Management Plans (CNMPs)

For Dairies in the North Bosque River Watershed

BACKGROUND

The TSSWCB adopted Technical Criteria and Programmatic Guidance for Comprehensive Nutrient Management Plans (CNMPs) in the North Bosque River in February 2002. The criteria and guidance was adopted in response to a control measure recommended in the North Bosque River Total Maximum Daily Load (TMDL) Implementation Plan. The Implementation Plan recommended that all Dairy-Concentrated Animal Feeding Operations (CAFOs) in the watershed develop and implement a TSSWCB-Certified CNMP in order to reduce nutrient loadings. The Texas Commission on Environmental Quality (TCEQ) adopted a rule in 2004 that made the TMDL Implementation Plan recommendation for CNMPs a requirement for permitted dairies in the North Bosque River watershed. Based on the TCEQ rule change, this revised document is a set of technical criteria for Comprehensive Nutrient Management Planning, a reference guide explaining the TSSWCB's philosophy on development and implementation, and a guide explaining the steps owners and operators of AFOs need to take in order to get their CNMP certified.

DEFINITION

A CNMP is a resource management plan for animal feeding operations (AFOs). CNMPs contain groupings of conservation practices and management activities that when implemented will help ensure that agricultural production goals are achieved and natural resource concerns such as excess nutrients and their adverse impacts on water quality are minimized. The United States

Department of Agriculture - Natural Resources Conservation Service (NRCS), a conservation partner of the TSSWCB, develops CNMPs for animal feeding operations (AFO) on a nationwide basis. In Texas, the TSSWCB, the NRCS, and soil and water conservation districts (SWCDs) cooperate in a voluntary Water Quality Management Plan (WQMP) Program that has resulted in thousands of plans being developed for AFOs. However, WQMPs are specifically intended for unregulated agricultural operations such as row-crop farming operations and *unpermitted* AFOs. The WQMP Program is not available for concentrated animal feeding operations (CAFOs), or AFOs that are required to obtain a permit in order to operate in accordance with Federal and State law. Although the technical criteria for CNMPs is very similar to that of WQMPs, the North Bosque CNMP Program technical criteria specific to animal waste management and land application has been expanded and specialized to accommodate permitting rules and environmental concerns unique to the watershed. The CNMP Program also includes an enhanced record-keeping requirement that complements the requirements of the permitting program.

APPLICABILITY

The North Bosque River CNMP Program was created to provide a conservation-planning program that would be available for permitted dairy operations in the watershed as a result of the findings of the North Bosque River TMDL. The program is confined to the watershed by TSSWCB rule, however, the rules also permit the agency to

enter into agreements with agricultural industries that allows for the expansion of the program into other watersheds. The TSSWCB has entered into a memorandum of understanding with the Texas Association of Dairymen so that the program is available in the Leon River watershed as well, due to its adjacent proximity to the North Bosque and the fact that it also contains a significant presence by the Texas dairy industry. The overall CNMP program is open to all dairies in both the North Bosque and Leon River watersheds, regardless of whether or not permit coverage is required. However, the TSSWCB strongly recommends that any dairy not required to obtain permit coverage, in either watershed, work closely with the TSSWCB to ensure that the CNMP also meets the technical requirements for a WQMP. Participation in the WQMP Program ensures that an operation is certified as a nonpoint source (NPS) facility and is offered alternatives to compliance and enforcement processes through the TSSWCB. However, under the Texas Water Code and through agreement with the United States Environmental Protection Agency (EPA), the TCEQ ultimately has the authority to protect Texas waters and enforce the provisions of the Clean Water Act.

CNMP DEVELOPMENT

Producers who wish to obtain a CNMP certified by the TSSWCB should contact their local SWCD. The SWCD will determine whether the TSSWCB CNMP Program is available for the producers in that district, and if applicable, provide the producer with a list of NRCS Certified Technical Service Providers (TSPs). The TSSWCB has adopted the NRCS TSP Program as the qualifications system for individuals who wish to develop CNMPs intended to be submitted for TSSWCB certification. The CNMP Program is currently limited to those SWCDs that include lands within the North Bosque or Leon River watersheds.

CERTIFICATION

Not all CNMPs are required to go through the certification process. The United State Department of Agriculture - Natural Resources Conservation Service (NRCS) develops CNMPs for animal

feeding operations nationwide. Also, many animal feeding operations have obtained Water Quality Management Plans to assist them in protecting water quality through a partnership between the TSSWCB, the NRCS, and their soil and water conservation district (SWCD). However, these were conservation plans entered into under a voluntary basis. Certain watersheds may be subject to TMDL driven strategies that strongly recommend owners and operators of AFOs should develop a CNMP or obtain a WQMP certified by the TSSWCB in order to demonstrate their willingness to participate in the TMDL process, as well as their proactive approach to water quality improvement.

The TCEQ rules for CAFOs require a TSSWCB-certified CNMP to be implemented by December 31, 2006 for dairy-CAFOs in the North Bosque River watershed. The TSSWCB will not certify a CNMP that has not been approved by the county NRCS Field Office District Conservationist as meeting the resource management system requirements of the applicable local field office technical guide.

Obtaining a TSSWCB-Certified CNMP

In order to obtain a TSSWCB-Certified CNMP, producers must first declare to their local SWCD their intention to submit a CNMP for the district's approval. This is accomplished by completing TSSWCB Form CNMP 001 (Appendix C) and submitting it to the local SWCD. Locations and meeting times for SWCD's can be obtained from the TSSWCB Website at <http://www.tsswcb.state.tx.us/swcd/swcdmap.html>. The district will assign the CNMP a number and await the submission of the CNMP. After submission, the CNMP will be reviewed by the SWCD and, if approved, forwarded to the Natural Resources Conservation Service and the TSSWCB for review and certification.

INTERACTION BETWEEN CNMPS AND PERMITS

Each permitted CAFO is required to develop and maintain a pollution prevention plan (PPP) by the TCEQ CAFO Rules. A PPP is required to be prepared in accordance with good engineering and

agronomic practices and must include measures necessary to limit the discharge of pollutants into or adjacent to waters in the State. A PPP must describe the operator's implementation of practices that will assure compliance with limitations and conditions of the TCEQ CAFO Rules. In general, a PPP is a document that covers the general requirements of the rules, any structural and non-structural controls, any retention/treatment facilities, land application activities, nutrient management or utilization activities, required best management practices, education and training requirements, inspection and record keeping requirements, and monitoring and reporting requirements.

The TCEQ CAFO Rules state that if a NRCS plan has been prepared for the facility, the PPP may refer to the NRCS plan when the NRCS plan documentation contains equivalent requirements for the facility. When the operator uses a NRCS plan as partial completion of the PPP, the NRCS plan must be kept on site. Because a TSSWCB certified CNMP is based on criteria contained within the NRCS Field Office Technical Guide, it is an "NRCS" plan. However, the act of possessing a TSSWCB certified CNMP does not excuse the producer from maintaining the document in such a way that it continues to meet the requirements of a PPP. The producer ultimately bears that responsibility.

Because CAFO permits are currently being renewed under the new CAFO rules adopted July 15, 2004 it is important that the CNMP reflect the same information for the site. The CNMP will need to address current operations as well as changes in the operation once the new permit is issued. This would include changes in the size of control facilities as well as changes in land application sites. It is important for the CNMP to provide a plan to integrate these changes into the producer's operation. These plans need to be as flexible as

possible to allow for the smoothest transition possible once the new permit is authorized.

Circumstances may dictate a change that involves crops or planned nutrient applications. The plans can be modified to reflect what will actually occur. Care needs to be taken to make sure the changed plans are consistent with good conservation practices and a qualified TSP should be used to make the modifications. During annual status reviews by the TSSWCB these modifications should be reflected in the plan documents. Changes being made will be reviewed at that time to determine if the plan can remain certified.

It is also important to consider additional technical requirements the operation may be legally obligated to meet as a result of an agreement with an adjacent landowner, municipality, or other entity. In most cases, the SWCD, NRCS, and/or the TSSWCB will not be aware of such obligations, therefore the owner or operator of the facility remains responsible for integrating additional technical requirements not included in this criteria and guidance.

STATUS REVIEWS

The TSSWCB has committed to performing "status reviews" on the implementation of CNMPs in the North Bosque River watershed. A status review is not an inspection, however, one of the benefits may be that an operation will become better prepared for an inspection as a result of a status review. For instance, permitted dairy operations are required to perform soil sampling and testing on each field that is undergoing land application of manure or wastewater. If during a status review, the TSSWCB determines that soil sampling has not yet been completed, it could serve as a reminder to the dairy operator. However, in general, status reviews will be limited to the items listed on the CNMP implementation schedule.

TECHNICAL CRITERIA

Introduction

The TSSWCB has customized the technical criteria from within the Natural Resources Conservation Service's (NRCS') existing Draft Comprehensive Nutrient Management Planning Technical Guidance for the purpose of creating a voluntary conservation program for owners and operators of AFOs that will enable them to maximize their ability to prevent nonpoint source (NPS) pollution from effecting the environment while maintaining the economic viability of their operation. The technical criteria within this document is based on the existing NRCS technical guidance pertaining to CNMPs, state and federal water quality laws, and any policies of the TSSWCB that are adopted for the purposes of addressing NPS pollution abatement. Because this customized technical criteria is based on the technical criteria of the NRCS Field Office Technical Guide (FOTG), it is subject to periodic changes as appropriate modifications are made to the NRCS technical criteria. It is an expectation that AFOs of all sizes, including permitted or registered CAFOs, will take advantage of this program if they are located within the Upper North or North Bosque River watersheds (Segments 1226 and 1255).

An up-to-date CNMP accurately and completely describes the physical system and the associated management practices, records and documents implementation of the CNMP, and demonstrates responsible management. Sound planning, design, construction, operation and maintenance of a manure management system will help ensure success of a sustainable livestock operation.

Definitions

A Comprehensive Nutrient Management Plan (CNMP) describes the production practices, equipment and structure(s) that the owner/operator of an agricultural operation now uses and/or will implement to sustain livestock and/or crop production in a manner that is both environmentally and economically sound. It combines conservation practices and management activities into a system that addresses animal production operations from

feed inputs through the use of animal manure (feces and urine) and wastewater (process-generated and runoff) on a Conservation Management Unit (CMU). For the purposes of the TSSWCB CNMP Program, a CMU includes the production area and land application activities which are onsite or are contiguous to the site. The CNMP is a planning tool as well as a record of decisions in that it details the activities that the landowner/operator implements. It also documents all the land (cropland, hayland, pastureland, facilities, etc.), which the landowner/operator owns or has decision-making authority over, on which manure and wastewater will be generated, stored, handled or applied.

The conservation practices and management activities planned and implemented as part of a CNMP must meet Texas NRCS technical standards. For those components included in a CNMP where Texas NRCS does not currently maintain technical standards (i.e., feed management, vector control, air quality, etc), producers must meet criteria established by the Land Grant University (Texas A&M University), Industry, or other technically qualified entities. The Texas NRCS State Conservationist has the authority to approve non-NRCS criteria established for use in the planning and implementation of CNMP components.

CONSERVATION PLANNING PROCESS

Conservation planning is a natural resource problem-solving process. The process integrates ecological (natural resource), economic, and production considerations in meeting both the owner's/operator's objectives and the public's resource protection needs. This approach emphasizes identifying desired future conditions, improving natural resource management, minimizing conflict and addressing problems and opportunities.

Objectives

The objective of a CNMP is to provide AFO/CAFO owners/operators with a plan to manage feed, manure, and organic by-products by combining

conservation practices and management activities into a conservation system that, when implemented, will protect or improve water quality. Defining soil and water goals are critical to reducing threats to water quality and public health.

CRITERIA

This section establishes the minimum criteria that must be addressed during the development and implementation of CNMPs intended for certification by the TSSWCB.

General Criteria

Comprehensive Nutrient Management Plans will meet the following criteria:

- A CNMP is considered developed when it has been certified.
- A CNMP is considered implemented when the last conservation practice/management activity has been completed and maintained for the required duration or reapplied annually. Examples of annual practice/management are: nutrient management, soil and manure tests, etc.
- Provide documentation that addresses the outlined items provided in required format and content.
- Document the consideration of the following CNMP elements (It is recognized that a CNMP may not contain all of the six following elements; however, all six elements need to be considered by the AFO/CAFO owner/operator during the CNMP development process and the owner/operator decisions concerning each must be documented):
 1. Manure and Wastewater Handling and Storage
 2. Land Treatment Practices
 3. Nutrient Management
 4. Record Keeping
 5. Feed Management
 6. Other Utilization Activities

- CNMPs will contain actions that address soil erosion and water quality criteria for the production area and land on which the manure and wastewater will be applied (i.e., as a minimum for land application, the plan would address CNMP elements 1, 2, 3, and 4 listed above). For AFO/CAFO owners/operators who do not land apply any manure or wastewater, the CNMP would only address the feedlot and production areas (i.e., address CNMP elements 1, 4, and 6 listed above).
- CNMPs will meet requirements of Texas NRCS FOTG conservation practice standards for practices contained in the CNMP (Each local NRCS Field Office has a copy of the FOTG specific to the local area).
- CNMPs will meet all applicable local, Tribal, State, and Federal regulations.

Element Criteria

Each of the CNMP's elements will address specific criteria. The degree to which these elements are addressed in the development and implementation of a site-specific CNMP is determined by the general criteria and the specific criteria provided for each element. The elements will address the following specific criteria:

Manure and Wastewater Handling and Storage

This element addresses the components and activities associated with the production facility, AFO/CAFO, manure and wastewater storage and treatment structures and areas, and any areas used to facilitate transfer of manure and wastewater. In most situations, addressing this element will require a combination of conservation practices and management activities to meet the production needs of the AFO/CAFO owner/operator and environmental concerns associated with the production facility. An on-site visit is required to

identify existing and potential resource concerns and identify strategies to address these concerns.

Treatment/storage facilities will comply with the TCEQ CAFO Rules found in Title 30 of the Texas Administrative Code, Chapter 321, Subchapter B: Concentrated Animal Feeding Operations.

A certification that all treatment/storage facilities meet or exceed the capacity required by the operating permit is required. This certification must be made by a licensed Texas professional engineer (or NRCS engineer) and be based on a site visit and work performed for the purpose of developing the current CNMP, or have been based on a site visit and work performed during the 18-months previous to the submission of the CNMP to the SWCD. If the CNMP is being developed for an unpermitted AFO, then the certification must demonstrate that all treatment/storage facilities meet or exceed the design capacity provided in the CNMP.

In cases where the development of the CNMP results in the determination that one or more of the treatment/storage facilities does not currently meet or exceed the capacity required by the operating permit or registration due to management issues such as sludge accumulation, but the original construction was carried out according to the design capacity submitted to the permitting authority, the CNMP implementation schedule must include a description of the corrective activity required to bring the facility into compliance with the permit or registration and a date by which the corrective activity will be completed. In lieu of a certification that all retention control structures are of adequate size and capacity, a certification by a licensed Texas professional engineer (or NRCS engineer) stating that the completion of the corrective activity will result in the required retention capacity may be submitted in order to obtain TSSWCB certification of the CNMP. If it is determined that one or more of the retention control structures was not initially constructed according to the design specifications to meet or exceed the capacity required by the operating permit or registration, the producer must submit a second certification by a licensed

professional engineer (or NRCS engineer) stating that all retention control structures have been modified to meet or exceed the capacity required as a result of the corrective activity. Failure to resolve this specific situation in accordance with these criteria will result in the withdrawal of the TSSWCB certification. Failure to implement any activity by the date provided in the implementation schedule may also result in withdrawal of the TSSWCB certification.

In cases where the development of the CNMP results in the determination that one or more of the treatment/storage facilities was constructed according to the design capacity submitted to the permitting authority, but the original design capacity was not sufficient for the size and characteristics of the facility, the CNMP must include new engineering specifications and a description in the implementation schedule of the construction activity required to cause the facility to meet or exceed the new design capacity.

The TSSWCB does not intend to imply that any current CNMP developer, being different from the original design engineer, is in any way obligated to make a determination regarding the adequacy of a facility's existing waste management system. The TSSWCB is merely acknowledging that situations like this are a possibility, therefore a protocol for obtaining a certified CNMP in this situation should be provided as part of this guidance. The TSSWCB firmly believes this situation should be resolved by the producer, his/her original design engineer, and the permitting authority prior to the development of any new engineering specifications within a CNMP.

To resolve this situation, it is likely that the permit renewal application will need to be amended and re-submitted to the permitting authority. The TSSWCB will certify the CNMP after verification that the appropriate engineering calculations are included in the permit renewal application that has been filed with the permitting authority and after a certification, by a licensed professional engineer (or NRCS engineer), stating that the completion of the corrective activity will result in the increased

retention capacity that has been required by the new engineering specifications submitted within the CNMP. The producer should submit a letter with the CNMP stating that the application has been filed with the TCEQ. The TSSWCB will contact the TCEQ for verification during the review of the CNMP. Failure to resolve this specific situation in accordance with these criteria will result in the withdrawal of the TSSWCB certification. Failure to implement any activity by the date provided in the implementation schedule may also result in withdrawal of the TSSWCB certification.

Note: A facility in the North Bosque River watershed cannot increase the size of waste treatment/storage structures without obtaining prior authorization from the permitting authority. If a facility needs to increase retention capacity for treatment or storage in order to meet a rule requirement, or for any other reason, the owner/operator must file an application for a major amendment to the current permit with the permitting authority. Once the amended permit has been issued, the appropriate sections of the CNMP must be modified and the actual construction of the increased retention capacity must be implemented.

CRITERIA FOR MANURE AND WASTEWATER HANDLING AND STORAGE

- Provide for adequate collection, storage, transfer and/or treatment of manure and wastewater that allows land application in accordance with the Texas NRCS conservation practice standard for Nutrient Management (Code 590).
- Production refers to the amount or volume of manure, organic by-products, precipitation, and barnyard runoff and associated nutrients that have to be managed.
- Collection refers to how manure and wastewater will be gathered for management. This includes points,

method and scheduling of collection, and structural facilities needed. Examples include: solid, stacking, scraping system, flushing system, slotted floors, etc.

- Storage facilities include underground holding tanks, aboveground storage tanks, solid stacking facilities and earthen storage facilities. The storage time, facility size, holding capacity and site location should be identified.
- Transfer occurs throughout the system and may take different forms at different steps in the system. Transfer includes movement between production and collection points, storage facilities, treatment facilities, and land application. The plan should specify the methods, distance, frequency and equipment needs for transfer.
- Treatment of manure and wastewater may occur before, during, or after storage, depending on the system, and can be physical, biological, and/or chemical. Forms of treatment include separation, anaerobic and aerobic lagoons, composting, and methane digesters.
- Collection, storage, treatment, and/or transfer practices shall meet the minimum requirements as addressed in the appropriate Texas NRCS conservation practice standards such as:
 - Waste Storage Facility (Code 313)
 - Waste Treatment Lagoon (Code 359)
 - Manure Transfer (Code 634)
 - Heavy Use Area Protection (Code 561)
- Comply with existing federal, Tribal, State, and Local regulations, associated with the following activities:
 - Disposal of dead animals.
 - Animal veterinary wastes management.

- Disposal of spoiled feed or other nutrient related contaminants that may be regulated.
- Document the following:
 - Types of animals and phases of production that exist at the facility.
 - Numbers of each animal type, average weight, and period of confinement for each phase of production.
 - Type and amount of bedding used.
 - Rainfall.
 - Runoff from and/or onto barnyard/feedlot.
 - Spoiled feed and silage leachate volume going into storage structure(s).
 - Total estimated manure and wastewater volumes produced at facility. Where historical manure and wastewater production volumes are not documented, an estimate may be made using the procedures and tabular data provided in the NRCS Agricultural Waste Management Field Handbook (AWMFH), Chapter 4, "Waste Characteristics."
 - Manure storage type, volume, and length of storage. (For more information on storage and treatment systems, how they function, their limitations, and design guidance see NRCS AWMFH, Chapter 9, "Animal Waste Management Systems", and Chapter 10, "Component Design.")
 - Existing transfer equipment, system, and procedures.
 - Operation and maintenance activities that address the collection, storage, treatment, and transfer of manure and wastewater (including litter bedding, and feed waste), including associated equipment, facilities, and structures.

- Nutrient content, volume, and recipient of manure transferred off-site.
- An emergency action plan to address spills and catastrophic events.
- Animal mortality procedures for methods used (rendering, composting, burial, etc.)

Considerations for Manure and Wastewater Handling and Storage

There are additional considerations associated with CNMP development and implementation that should be addressed.

Air Quality

AFO/CAFO operators/owners need to consider the impact of selected conservation practices on air quality. AFOs/CAFOs are prohibited by state law from creating a nuisance situation as a result of facility emissions. Air quality in and around structures, waste storage areas, and treatment sites may be impaired by excessive dust, gaseous emissions, and odors. Ammonia emissions from animal operations can be deposited to surface waters, increasing the nutrient load. The proper location of structures and waste storage facilities can enhance dispersion and dilution of odorous gases. Conservation buffers placed with regard to prevailing wind patterns can intercept movement of some airborne pollutants. Enclosing waste storage or treatment facility can reduce gaseous emissions from AFO/CAFOs. Refer to the TCEQ CAFO Rules for more information regarding air authorization requirements.

Pathogens

AFO/CAFO operators/owners need to consider the impact of selected conservation practices on pathogen control. Pathogenic organisms occur naturally in animal wastes. Exposure to some pathogens can cause illness to humans and animals, especially for immune-deficient populations. Many of the same conservation practices used to prevent nutrient movement from animal operations, such as leaching, runoff, and erosion control are likely to reduce the movement of pathogens.

Groundwater Protection

CAFOs in Texas are required to demonstrate, through site-specific documentation, that no significant hydrologic connection exists between contained wastewater and waters in the state. Where the owner/operator cannot document that no significant hydrologic connection exists, the ponds, lagoons, and basins of the retention facilities must have a liner which will prevent the potential contamination of surface waters and groundwaters. Liners for retention structures must be constructed in accordance with good engineering practices. Where no site-specific assessment has been done by a NRCS engineer, licensed professional engineer, or qualified groundwater scientist, the liner must be constructed to have hydraulic conductivities no greater than 1×10^{-7} cm/sec, with a thickness of 1.5 feet or greater or its equivalency in other materials. CAFOs in Texas are also required to obtain a certification by a Natural Resources Conservation Service (NRCS) engineer, licensed professional engineer, or qualified groundwater scientist documenting the absence or presence of any recharge features identified on any tracts of land owned, operated, or controlled by the owner/operator. For more information regarding these certifications, refer to the TCEQ CAFO Rules.

Land Treatment Practices

This element addresses evaluation and implementation of appropriate conservation practices on sites proposed for land application of manure and wastewater from an AFO/CAFO. On fields where manure and wastewater are applied as beneficial nutrients, it is essential that runoff and soil erosion be minimized to allow for plant uptake of these nutrients. An understanding of the present and future land use of these fields is essential in developing a conservation system to address runoff and soil erosion.

CRITERIA FOR LAND TREATMENT PRACTICES

- An on-site visit is required to identify existing and potential natural resource concerns, problems, and opportunities for the Conservation Management Unit (CMU).

- Identification of the potential for nitrogen and phosphorus losses from the site.
- At a minimum, the conservation system developed for this element will address the NRCS Quality Criteria for water quality, found in Section III of the FOTG. Typical NRCS conservation practices, and their corresponding conservation practice standard code number, used as part of a conservation system to minimize runoff and soil erosion are:
 - Conservation Crop Rotation (Code 328)
 - Residue Management, No Till and Strip Till (Code 329A)
 - Residue Management, Mulch Till (Code 329B)
 - Residue Management, Ridge Till (Code 329C)
 - Contour Buffer Strips (Code 332)
 - Cover Crop (Code 340)
 - Residue Management, Seasonal (Code 344)
 - Diversion (Code 362)
 - Windbreak and/or Shelterbelt Establishment (Code 380)
 - Riparian Forest Buffer (Code 390)
 - Filter Strip (Code 393)
 - Grassed Waterway (Code 412)
 - Forage Harvest Management (Code 511)
 - Nutrient Management (Code 590)
 - Pest Management (Code 595)
 - Irrigation Water Management (Code 449)
 - Waste Utilization (Code 633)
 - Terrace (Code 600)

Note: The FOTG, Section IV, contains a complete list of NRCS conservation practices and the criteria associated with their design and implementation.

- Compliance with existing federal, Tribal, State and Local regulations or ordinances associated with soil erosion and runoff.
- Document the following:
 - Aerial maps of land application areas.
 - Individual field maps with marked setbacks, buffers, waterways, and other planned conservation practices.
 - Resource concerns (soil, erosion, water quality issues, excess nutrients, etc.).
 - Soils information associated with fields (i.e., features, limitations).
 - Planned and implemented conservation practices.
 - Documentation to show that soil loss levels meet FOTG criteria.
 - Sensitive areas such as sinkholes, streams, springs, lakes, recharge features, oil wells, ponds, wells, gullies, and drinking water sources.
 - A plan schedule showing what, where and amount of conservation practices/management activities to be implemented.
- Other site information features of significance, such as property boundaries.
- Identification of operation and maintenance (O&M) practices and/or activities.
- Acres of land needed based on phosphorus crop removal.
- Nitrogen leaching identification areas.
- Nitrogen leaching management strategies.
- High phosphorus identification areas.
- Phosphorus risk assessment by field using NRCS Agronomy Technical Note #15 (Phosphorus Assessment Tool,

commonly referred to as the Phosphorus Index).

Nutrient Management

This element addresses the requirements of land application of manure and wastewater (e.g., animal manure, wastewater, commercial fertilizers, crop residues, legume credits, etc.) that must be evaluated and documented for each land management unit. This portion of the CNMP must be developed and certified by a Texas Certified Nutrient Management Specialist (CNMS). A list of all Texas CNMSs is available in every local NRCS Field Office.

Land application of manure and wastewater is the most common use of manure because of the nutrient and organic matter content of the material. Land application procedures must be planned and implemented in a way that minimizes potential adverse impacts to the environment and public health.

CRITERIA FOR NUTRIENT MANAGEMENT

Nutrient management refers to managing the amount, source, placement, form and timing of the application of plant nutrients and soil amendments. This includes the implementation of a Nutrient Utilization Plan (NUP) as defined by the TCEQ CAFO Rules for CAFOs that are subject to that requirement.

- Meet criteria in Texas NRCS conservation practice standard Nutrient Management (Code 590).

Soil Sampling

Soil sampling must be carried out in accordance with §§321.31 - 321.47 of Title 30, Texas Administrative Code (TCEQ CAFO Rules), or in accordance with the requirements for general permits issued pursuant to Section 26.040 of the Texas Water Code. Samples must have been analyzed by an appropriate laboratory not more than one year prior to the date the CNMP is submitted to the SWCD. Nutrient management conducted with the use of soil sampling results obtained for other

purposes will not be accepted. If the AFO is unpermitted, the soil sampling should be done in accordance with NRCS Conservation Practice Standard Code 590 (Nutrient Management). If during the development of the CNMP it is determined that it is not possible to develop a nutrient management strategy in accordance with Texas NRCS conservation practice standard Nutrient Management (Code 590) and the requirements for soil sampling regarding Nutrient Utilization Plans without utilizing additional acreage not included in the operating permit or registration, an application for an amendment to the permit must be filed with the TCEQ. If the NUP component of the CNMP submitted to the TSSWCB contains acreage not included in the current permit or registration, a letter indicating an application for an amendment to the permit must be submitted with the CNMP in order to receive certification. The TSSWCB will contact the TCEQ to verify the receipt of the application. If the facility has received approval from the TCEQ to apply waste or wastewater from the dairy-CAFO on third-party acreage, record-keeping consistent with the TCEQ CAFO Rules and any TCEQ guidance must be maintained and included in the CNMP.

- Nutrient management plan will be developed to specify the kinds, source, amount, timing and application method of nutrients to meet crop needs.
- Develop a nutrient budget for nitrogen, phosphorus, and potassium that includes all potential sources of nutrients.
- Document the following:
 - Planned crop types, cropping sequence, and realistic yield goals.
 - Soil test results:

CAFOs – Current soil test results for nitrate (reported as nitrogen in ppm), phosphorus (extractable, ppm, Mehlich III [ICP]), potassium (extractable, ppm), sodium (extractable, ppm), magnesium (extractable, ppm), calcium

(extractable, ppm), soluble salts/electrical conductivity (dS/m - determined from extract of 2:1 (v:v) water/soil mixture, and soil water pH.

AFOs – Current soil test results for nitrogen, phosphorus, potassium, and sodic condition.

- Manure and organic by-product source testing results.
- Form, source, amount, timing, and method of application of nutrients, by field.
- Description of application equipment and method used for calibration.
- Soil sampling for NUP (TCEQ Regulatory Guidance, Resource C).
- Wastewater application rate (refer to job sheet 633 Waste Utilization, Resource B).

Considerations for Nutrient Management

There are additional considerations associated with CNMP development and implementation should be addressed.

Air Quality

AFO/CAFO operators/owners should consider the impact of selected conservation practices on air quality during the CNMP development process. Air quality on land application sites may be impaired by excessive dust, gaseous emissions, and odors. Ammonia emissions from animal operations can be deposited to surface waters, increasing the nutrient load. Soil incorporation of manure and wastewater on land application sites can reduce gaseous emissions.

Pathogens

AFO/CAFO operators/owners should consider the impact of selected conservation practices on pathogen control during the CNMP development process. Pathogenic organisms occur naturally in animal waste. Exposure to some pathogens can

cause illness in humans and animals, especially for immune-deficient populations. Many of the same conservation practices used to reduce nutrient movement from animal operations, such as leaching, runoff and erosion control, are likely to prevent the movement of pathogens.

Salt

Build up of salt in soils can threaten soil productivity and crop marketability. In developing a CNMP, the build-up of salt should be tracked through soil testing. Additional guidance on salt contamination from manure is available in the following:

Note: NRCS Agricultural Waste Management Field Handbook, Sections 651.1103 and 651.0604(b) deal with the salt content of agricultural waste.

Record Keeping

It is important that records are kept to effectively document and demonstrate implementation activities associated with CNMPs. Documentation of management and implementation activities associated with a CNMP provides valuable benchmark information for the AFO/CAFO owner/operator that can be used to adjust his/her CNMP to better meet production objectives. It is the responsibility of AFO/CAFO owners and/or operators to maintain records that document the implementation of CNMPs.

Documentation will include:

- Annual manure tests for nutrient contents (nitrogen, phosphorus, potassium) for each manure storage containment used for wastewater application.
- Crops grown and yield.
- Application records for each application event, including (this also applies to commercial fertilizers that are applied to supplement manure):

- Containment source or type and form of commercial fertilizer.
- Field(s) where manure or organic by-products are applied.
- Maps indicating the presence of floodplains.
- Amount applied per acre.
- Time and date of application.
- Field conditions during application – wet, dry, etc.
- Weather conditions during nutrient application.
- General soil moisture condition at time of application (saturated, wet, moist, dry).
- Application method and equipment used.

- Crops planted and planting and/or harvesting dates, by field.
- Records that address manure and wastewater storage containment structures:

Dates of pumping and staff gauge readings.
Total volume of manure and wastewater pumped.
The presence or absence of recharge features.
Discharge or overflow events, including level before and after event.

- Transfer of manure off-site or to third parties:
 - Manure nutrient content.
 - Amount of manure transferred.
 - Date of transfer.
 - Name of contracted manure hauler.
 - Name and location of site transferred to.
- Activities associated with emergency spill response plan.
- Records associated with any reviews by NRCS, technical service providers, or representatives of regulatory agencies:

- Dates of review.
 - Name of reviewer and purpose of the review.
 - Recommendations or follow-up requirements resulting from the review.
 - Actions taken as a result of the review.
- Records of maintenance performed associated with operation and maintenance plans.
 - Nutrient application equipment calibration.
 - Changes made in CNMP.

Feed Management

Feed management activities may be used to reduce the nutrient content of manure that may result in less land being required to effectively utilize the manure. Feed management activities may be dealt with as a planning consideration and not as a requirement that addresses specific criteria; however, AFO/CAFO owners/operators are encouraged to incorporate feed management as part of their nutrient management strategy. Specific information and recommendations should be obtained from the Land Grant Universities, Experiment Stations, or Cooperative Extension; industry; the Agricultural Research Service; or professional societies such as the Federation of Animal Science Societies (FASS) or American Registry of Professional Animal Scientists (ARPAS); or other technically qualified entities.

Specific feed management activities to address nutrient reduction in manure may include phase feeding, amino acid supplemented low crude

protein diets, or the use of low phytin grain and enzymes, such as phytase or other additives.

Feed management can be an effective approach to addressing excess nutrient production and should be encouraged; however, it also is recognized that feed management may not be a viable or acceptable alternative for all AFO/CAFOs. A professional animal nutritionist should be consulted before making any recommendations associated with feed ration adjustment.

Other Utilization Activities

Utilization refers to the end-use of manure and wastewater. A use (land application, transfer off-site, composting, incineration to generate electricity, etc.) needs to be identified for all of the manure and wastewater, noted in the production phase. Other end-uses may include, but are not limited to, use of composted manure as mulch, soil amendment, or as bedding material.

Using environmentally safe alternatives to land application of manure and wastewater could be an integral part of the overall CNMP. Alternative uses are needed for animal manure in areas where nutrient supply exceeds available land and/or where land application would cause significant environmental risk.

This element of a CNMP should be presented as a consideration for the AFO/CAFO owner/operator in his/her decision-making process. No specific criteria need to be addressed unless an alternative utilization option is decided upon by the AFO/CAFO owner/operator. When an AFO/CAFO owner/operator implements this element, applicable industry standards and all Federal, Tribal, State, and Local regulations must be met.

QUALIFICATIONS OF DEVELOPERS

In the development of a CNMP, as a minimum, certified specialists must develop the Manure and Wastewater Handling and Storage, Land Treatment Practices, and Nutrient Management elements. Because of the diversity and complexity of specific skills associated with each element of the CNMP, most individuals will pursue "certification" for only one of the elements. Therefore, development of a CNMP could require the interaction of three separate certified specialists, each addressing only one of the three elements.

It is envisioned that a certified conservation planner, assisting the AFO/CAFO owner/operator, would facilitate the CNMP development process, with "certified specialists" developing the more detailed specifics associated with the element they are certified to help produce.

Individuals that develop and/or design and implement CNMP Element 1, Manure and Wastewater Handling and Storage; Element 2, Land Treatment Practices; Element 3, Nutrient

Management; and Element 5, Feed Management must meet the minimum requirements established by NRCS for Technical Service Provider (TSP - Refer to National Planning Procedures Handbook, Technical Service Provider process certification section). Individuals that develop and/or design and implement CNMP Element 1, Manure and Wastewater Handling and Storage must be a licensed professional engineer (or NRCS engineer); individuals that develop and/or design and implement CNMP Element 2, Land Treatment Practices must be an NRCS certified conservation planner; individuals that develop and/or design and implement CNMP Element 3, Nutrient Management must be a Texas Certified Nutrient Management Specialist. If one or more components of the CNMP are not developed by individuals certified as a TSP for that respective component because the TSP Process has not yet been established, then the entire CNMP must be reviewed by the local NRCS Field Office and be approved as meeting the requirements of the NRCS - FOTG for a Resource Management System.

CNMP FORMAT REQUIREMENT

Cover Page

Table of Contents

Section 1. Site Information

- Name(s), phone number(s), and address(es) of the operation's owner(s), manager(s), and plan developer(s)
- Location of production facilities: 911 address, driving directions, and latitude/longitude
- Vicinity Map showing location of the site
- Certification Page (Appendix C, Form TSSWCB CNMP 002)
- Certification Request (Appendix C, Form TSSWCB CNMP 001)
- Other SWCD/TSSWCB Forms, as necessary
- Executive Summary
 - Enterprise Overview
 - Resource concerns
 - Goals of the CNMP

Section 2. Land Treatment

- Maps (with scale and legend)
 - Conservation Plan Map (required elements: field #, land use, and acreage)
 - Facility Topographic Map (identify all structural controls)
 - USGS Quad Map (identify fields and boundaries)
 - Soils Map
 - General Soils Description
 - Waste/Wastewater Utilization Map (required elements: sensitive areas, field acreage, buffer acreages and spreadable acreage)

- Proposed new construction
- Map showing buffers for Air Quality considerations
- Other maps as needed

■ Conservation Plan of Operation

- Land Treatment Practices (RMS level of treatment) and Air Quality practices
- Job Sheets if appropriate
- Summary of practices to be applied (field by field and year by year) – Implementation Schedule

■ Recharge Feature

Evaluation/Certification

Section 3. Production Area and Capacity Information

- As-built site survey of production facilities layout and all manure storage (identify run-off controls)
- 100 year Floodplain Map
- Capacity certifications for existing RCSs (Licensed TX Professional Engineer)
- Pond liner certifications for existing RCSs (Licensed TX Professional Engineer or professional geoscientist)
- Sludge volume certifications for existing RCSs (Licensed TX Professional Engineer)
- Verification of Adequacy of Structural Controls (Licensed TX Professional Engineer)
- Animal types, production phases, and length of confinement
- Animal count and average weight for each phase

- Calculated or measured manure and wastewater volumes for this site (Licensed TX Professional Engineer)
- Manure storage type, volume, and approximate length of storage (Licensed TX Professional Engineer)
- Retention Control Structure Design Calculations (Licensed TX Professional Engineer)
 - Facility Description
 - Design Input
 - Design Assumptions
 - Design Criteria
 - Design Summary
 - Existing Conditions
 - Proposed Conditions
 - Staff Gauge Readings
 - Balance of manure produced

TABLES TO INCLUDE

- Animal Waste Generation
- Existing Stage Storage for each RCS
- Proposed Stage Storage for each new RCS and changes to existing RCSs
- Drainage Area calculations for each drainage area
- Monthly input/output for each RCS
- Monthly staff gage reading gauge reading for each RCS
- Treatment volumes required for Air Quality considerations and staff gage readings to reflect that volume
- Others as necessary

Section 4. Nutrient Application Plans

- Risk assessments of nitrogen and phosphorus losses for all fields
- Map of land application areas reflecting P Index levels
- Map of land application areas reflecting current soil test levels for Phosphorus
- Crops, realistic yield goals, and expected nutrient removal

- Current soil test for available nutrients
- Current manure solids and effluent tests for nutrient availability
- Rates, methods of application, and timing of commercial fertilizer planned
- Rates, methods of application, and timing of manure planned
- Nutrient budget of available nutrients and removal potential
- Application equipment needed and incorporation methods
- Application season and time needed to apply available nutrients
- Application amount per acre
- Acres needed to apply manure products within guidelines
- Effect of applying phosphorus at end of planning period
- Effect of incorporation on surface residue and erosion control
- Schedule all treatments by month and year to meet nutrient need
- Nutrient Balance based on Crop Recommendations and Crop Removal

Section 5. Feed Management (optional)

- Record use of feed management techniques and any lab analysis that would document impact on manure nutrients

Section 6. Other Utilization Activities (optional)

- Record owner/operator activities to better utilize nutrients. This could include haul-off, screening, composting, and treatment technologies.

Section 7. Record Keeping

- Copies of written spreading agreements with contact information and maps

- Crop Rotations – Past, Present and Future
- Other records as required for Permit or Authorization
- Blank Forms used to develop records

Section 8. Operation and Maintenance Plans

- Detail operation and maintenance procedures including:
 - Emergency Action Plan
 - Mortality management procedures
 - Monitoring and Sampling procedures
 - Inspection procedures
 - Odor control plan
 - Land application procedures
 - Calibration of land application equipment procedures
 - Schedule to empty storage facilities
 - Methods to transport manure products safely

- Optimum conditions for land application
- Safe operation of manure distribution system
- Observing non-application buffers

- Employee and Dairy Outreach Program Area Training

Section 9. Permits and Certifications

- Federal, state, or local permits and authorizations
- Administrative packet for new permit application
- Technical packet for new permit application
- Notice of Intent for General Permit
- Pollution Prevention Plan
- Closure Plans
- Documents to reflect Air Quality Authorization

APPENDIX A

Conservation Planning Process and CNMP Development

This resource describes the NRCS conservation planning process and shows how a comprehensive nutrient management plan (CNMP) is developed using this established planning process.

Conservation planning is a natural resource problem-solving process. The process integrates ecological (natural resource), economic, and social considerations to meet both the owner's/operator's objectives and public resource production needs. This approach emphasizes identifying desired future conditions, improving natural resource management, minimizing conflict, and addressing problems and opportunities. The NRCS National Planning Procedures Handbook (NPPH) provides guidance in the application of effective conservation planning procedures in the development of conservation plans.

The Comprehensive Nutrient Management Planning Technical Guidance does not replace the NRCS NPPH, nor does it relieve the planner from offering conservation alternatives that address all of the resource concerns: soil, water, air, plants, and animals. Development of CNMPs will rely on the planning process and established conservation practice standards.

Conservation plans are developed with individual clients or with a group of individuals functioning as a unit. These plans are site-specific, comprehensive, and action-oriented. A conservation plan contains natural resource information and a record of decisions made by the client. It describes the schedule of operations and activities needed to solve identified natural resource problems and take advantage of opportunities. A conservation system (CS) addresses treatment needs that meet the NRCS Field Office Technical Guide (FOTG), Section III, Quality Criteria, for each identified natural resource concern. Quality criteria in Section III of the FOTG, are quantitative or qualitative statements of treatment levels required preventing resource degradation and enabling sustained use for identified resource

considerations for a particular land area. Quality criteria are established in accordance with local, State, Tribal, and Federal programs and regulations in consideration of ecological, economic, and social effects. Table 1 contains typical quality criteria as presented in the FOTG, Section III, for soil and water resources, specifically soil erosion and surface water quality.

The scale of planning associated with the development of a CNMP is the Conservation Management Unit (CMU). A CMU is a field, group of fields, or other land units of the same land use and having similar natural resource conditions, treatment needs, and planned management. The planner, to simplify planning activities and to facilitate CS development, defines a CMU. A CMU has definite boundaries, usually natural resource boundaries, such as drainage ways, vegetation, topography, or soils, but can also be land use.

A broad range of technically feasible alternatives should be developed with the client. It is not merely enough to ask the producer what is being done and make a record of that as a CNMP. Alternatives need to achieve the objectives of the client, solve identified problems, and treat the resources to defined quality criteria. Alternatives may include a mix of structural and/or management practices, within restrictions defined by ordinances or regulations. It is important that the client be actively involved in the formulation of these alternatives. The AFO/CAFO owner/operator as the decision maker, selects from the alternatives develops the system to be implemented.

CNMP implementation may require additional design, analysis or evolutions. This is particularly true for structural practices and nutrient management. Dynamics of operations, nature, infusion of real-time measurements or other unknowns may cause changes in amount, size, timing, or distribution of nutrients. These inputs may even cause complete revisions to planned alternatives. It is important to maintain a

relationship with the producer throughout CNMP implementation to address changes or new challenges.

Evaluation of the effectiveness of the CNMP may begin during the implementation phase and not end until several years after the last practice is applied. Follow-up and evaluation determines whether the implemented alternative is meeting the client needs and solving the conservation problems in a manner beneficial to the resources. If the evaluation determines that this is not taking place, adjustments to the CNMP probably will be needed.

The objective of all NRCS planning efforts is the Resource Management System (RMS). A RMS satisfies all the quality criteria for all five resources for sustainability – soil, water, air, plants and animals plus humans (SWAPA + H).

Many times individuals are not ready, willing or able to complete all conservation practices needed to attain a RMS level of management. When this occurs, NRCS proceeds with an individual on a progressive basis; this is called progressive planning.

APPENDIX B

Technical References

USDA/NRCS Agricultural Waste Management Field Handbook (AWMFH)

<http://www.ftw.nrcs.usda.gov/awmfh.html>

USDA/NRCS Electronic Field Office Technical Guide (eFOTG)

Conservation Practice Standards and Technical Notes

<http://www.nrcs.usda.gov/technical/efotg/>

USDA/NRCS Animal Waste Management (AWM) Software

<http://www.wcc.nrcs.usda.gov/water/quality/common/wastemgmt/awm.html>

USDA/NRCS National Planning Procedures Handbook, Draft Technical Guidance for CNMPs

http://www.nrcs.usda.gov/programs/afo/cnmpguide_index.html

Manure Management Planner (MMP) Homepage

<http://www.agry.purdue.edu/mmp/>

Texas Nutrient Management Planning Tools (NUP Software) - Texas A&M University

<http://nmp.tamu.edu/>

Texas Cooperative Extension Soil Sample Information Form

<http://soilcrop.tamu.edu/soiltest/soilwebform.pdf>

Texas Cooperative Extension Water Sample Information Form

<http://soilcrop.tamu.edu/soiltest/waterweb1.pdf>

Texas Cooperative Extension Plant/Forage Sample Information Form

<http://soilcrop.tamu.edu/soiltest/forageweb2.pdf>

Texas Cooperative Extension Biosolid Sample Information Form

<http://soilcrop.tamu.edu/soiltest/biosolidweb2.pdf>

Texas Commission on Environmental Quality Regulatory Guidance: Preparing a Nutrient Utilization Plan

<http://www.tnrcc.state.tx.us/admin/topdoc/rg/374.pdf>

USDA/NRCS - TSSWCB Catastrophic Animal Mortality Management (Burial Method) Guidance Document

<http://www.tsswcb.state.tx.us/reports/burialguidance.pdf>

TCEQ Concentrated Animal Feeding Operations Rule, 30TAC321 Subchapter B

<http://www.tnrcc.state.tx.us/oprd/rules/pdflib/321b.pdf>

APPENDIX C

Forms

1. Declaration of Intent to Request Certification of a Comprehensive Nutrient Management Plan
2. Comprehensive Nutrient Management Plan Certification Form
3. Annual Status Review Form

**DECLARATION OF INTENT TO REQUEST CERTIFICATION OF A
COMPREHENSIVE NUTRIENT MANAGEMENT PLAN**

_____ Soil and Water Conservation District, No. _____

County: _____, Texas HUA No. _____ - _____

Name: _____

Physical Address: _____

City: _____, Texas Zip Code: _____

Mailing Address: _____

City: _____, State: _____ Zip Code: _____

Phone No.: (_____) _____ - _____ Phone No.: (_____) _____ - _____

I hereby declare my intent to request certification of a comprehensive nutrient management plan, as provided by Title 31, §523.8 of the Texas Administrative Code. It is my intention to implement and maintain this CNMP in order to ensure my animal feeding operation is consistent with State water quality standards, State water quality laws regarding animal feeding operations, and the State agricultural and silvicultural nonpoint source management program.

(1) General description and location of all property within this conservation management unit:

Total Acres: _____

(2) The land is controlled and operated by the applicant(s)? () Yes () No If No, explain: _____

(3) Is a written authorization in the form of a water quality permit, registration, or general permit from the Texas Commission on Environmental Quality required for lawful operation of this animal feeding operation? () Yes () No

If Yes, Authorization No.: _____

(4) I understand that my CNMP may be selected for an annual status review by personnel of the Texas State Soil and Water Conservation Board for adherence to its implementation schedule.

Applicant's Signature: _____ Date: _____

District Director's Signature: _____ Date: _____

Note: If you are not currently a cooperator with the soil and water conservation district, a District Cooperative Agreement must be completed and attached to this application.

**COMPREHENSIVE NUTRIENT MANAGEMENT PLAN
CERTIFICATION**

Applicant (Producer)

I (We) concur in the conservation practices and implementation schedules indicated in this comprehensive nutrient management plan (CNMP). I (We) understand that when these planned Conservation Practices are applied and maintained, the Resource Management System will meet the State's requirements for water quality. I (We) agree to notify the local SWCD in the event of deviation from the implementation schedule and that any substitution or changes to the conservation practices or schedules must be in accordance with the Natural Resources Conservation Service – Field Office Technical Guide (NRCS-FOTG), the State Board's Technical Criteria and Programmatic Guidance for Comprehensive Nutrient Management Planning, and the rules and regulations of the State. Failure to comply with this plan and implementation schedule will result in the loss of certification.

_____ Date _____
Applicant (Producer)

Manure and Wastewater Handling/Storage

I certify through field verification that the capacity of each retention control structure equals or exceeds, or will equal or exceed after some corrective action, the capacity required by any written authorizations (permit or registration) applicable to the operation. Any exceptions will be noted in the CNMP along with the determined amount of sludge and the extent of encroachment of the sludge into the required capacity.

_____ Date _____
Licensed Professional Engineer
SEAL >

Land Treatment

All land treatment practices contained within the CNMP are planned in accordance with the NRCS – FOTG.

_____ Cert. No. _____ Date _____
Conservation Planner

Nutrient Management

All nutrient management activities contained within the CNMP are planned in accordance with NRCS Conservation Practice Standard 590 (Nutrient Management).

_____ Cert. No. _____ Date _____
Texas Certified Nutrient Management Specialist

Natural Resources Conservation Service

The CNMP meets the requirements of the NRCS - FOTG for a Resource Management System.

_____ Date _____
NRCS District Conservationist

Soil and Water Conservation District

The CNMP includes the entire conservation management unit and meets the Soil and Water Conservation Districts program, plan, and it's priorities.

_____ Date _____
Approved by: Soil and Water Conservation District

Texas State Soil and Water Conservation Board

The CNMP satisfies the Technical Criteria and Programmatic Guidance for Comprehensive Nutrient Management Planning adopted by the State Board and contains an implementation schedule compliant with Title 30, Section 523.8(j) of the Texas Administrative Code.

_____ Date _____
CERTIFIED by: Texas State Soil & Water Conservation Board

CNMP - STATUS REVIEW

Fiscal Year _____

SWCD _____ County _____

Producer Name _____

1. Progress in applying plan.

2. Follow-up assistance needed to remedy any discrepancies.

3. Is original applicant still in control of CNMP? _____ Yes _____ No

Signed _____ Date _____
TSSWCB Employee

Producer Date _____

Reviewed by: _____ Date _____
Soil & Water Conservation District

APPENDIX D

Contact Information

Texas State Soil and Water Conservation Board (TSSWCB)

State Headquarters

Mailing Address: P.O. Box 658, Temple, TX 76503
Physical Address: 311 N. 5th St., Temple, TX, 76501
Numbers: 254-773-2250; 800-792-3485
Fax Number: 254-773-3311
<http://www.tsswcb.state.tx.us>

TSSWCB Dublin Regional Office

Address: 611 East Blackjack, Dublin, TX 76446-2321
Phone Numbers: 254-445-4814; 254-445-4815 Phone
Fax Number: 254-445-4819

TSSWCB - Comprehensive Nutrient Management Planning

<http://www.tsswcb.state.tx.us/programs/cnmp.html>

TSSWCB - SWCD Locator Map

<http://www.tsswcb.state.tx.us/swcd/swcdmap.html>

Texas Commission on Environmental Quality (TCEQ)

State Headquarters

Mailing Address: P.O. Box 13087, Austin, TX 78711-3087
Physical Address: 12100 Park 35 Circle, Austin, TX 78753
Phone Number: 512-239-1000
<http://www.tceq.state.tx.us>

TCEQ - Agriculture Program (Concentrated Animal Feeding Operations, CAFO Permitting)

Mailing Address: Mail Code - 158, P.O. Box 13087, Austin, TX 78711-3087
Phone Number: 512-239-4671
<http://www.tceq.state.tx.us/permitting/waterperm/wwperm/agri.html>

United States Department of Agriculture (USDA) - Natural Resources Conservation Service (NRCS)

State Office

Address: 101 South Main, Temple, TX 76501
Phone Number: 254-742-9800, Fax Number: 254-742-9819
<http://www.tx.nrcs.usda.gov>

NRCS-County Office Locator Map

http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map

APPENDIX E

Comprehensive Nutrient Management Plan Program Rules

TITLE 31. NATURAL RESOURCES AND CONSERVATION

Part XVII. Soil and Water Conservation Board

Chapter 523. Agricultural and Silvicultural Water Quality Management

§523.8 Comprehensive Nutrient Management Planning in the North Bosque River Watershed

- (a) Policy Statement. In accordance with §519.1 of this title (relating to Technical Assistance Program) and the policy of the State Soil and Water Conservation Board to develop and implement a program to provide technical assistance for the development and implementation of soil and water conservation plans and soil and water conservation measures, §523.8 of this title (related to comprehensive nutrient management planning in the North Bosque River watershed) is adopted.
- (b) Definitions. The following words and terms, when used in §523.8, shall have the following meanings, unless the context clearly indicates otherwise.
- (1) Animal feeding operation - A lot or facility (other than an aquatic animal production facility) where animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and the animal confinement areas do not sustain crops, vegetation, forage growth, or postharvest residues in the normal growing season.
 - (2) Comprehensive nutrient management plan, herein referred to as CNMP, - a resource management plan containing a grouping of conservation practices and management activities which, when combined into a conservation system, will help ensure that both agricultural production goals and natural resource concerns dealing with nutrient and organic by-products and their adverse impacts on water quality are achieved. A CNMP incorporates practices to utilize animal manure and organic by-products as a beneficial resource. To be certified, a CNMP must cover all lands that constitute the conservation management unit.
 - (3) Conservation management unit - for the purposes of this section and regarding comprehensive nutrient management planning, a conservation management unit includes the production area and land application activities which are onsite or are contiguous to the site.
 - (4) Environmental stewardship programs for owners and/or operators of animal feeding operations - any program, administered by a governmental or non-governmental entity, which provides the owner or operator of an animal feeding operation with a mechanism for improving the overall efficiency of the operation, operating in accordance with all applicable state or federal laws pertaining to water quality, and furthers the effective conservation of the state's soil and water resources.
 - (5) North Bosque River watershed – the geographic area consisting of all the drainage area for the two designated water quality segments as defined in the two adopted Total Maximum Daily Loads for Phosphorus in the North Bosque River. The two designated water quality segments are segment 1226, the North Bosque River, extending from a point 100 meters upstream of FM Road 185 in McLennan County to a point immediately upstream of the confluence of Indian Creek in Erath County, and segment 1255, the Upper North Bosque River, extending from a point immediately upstream of the confluence of Indian Creek in Erath County to the confluence of the North Fork and South Fork of the North Bosque River in Erath County.
 - (6) Natural Resources Conservation Service, herein referred to as NRCS, - An agency of the United States Department of Agriculture which includes the agency formerly known as the Soil Conservation Service (SCS).

- (7) NRCS - Field Office Technical Guide, herein referred to as NRCS - FOTG, - The official NRCS guidelines, criteria, and standards for planning and applying conservation treatments.
 - (8) NRCS Technical Service Provider Process - The process by which a technical service provider obtains certification by NRCS to provide technical services including conservation planning, and/or the design, layout, and installation of approved conservation practices.
 - (9) Resource management plan - a site specific blueprint for implementation of soil and water conservation land improvement measures. It includes a record of the eligible person's decisions made during planning and the resource information needed for implementation and maintenance of the plan that has been reviewed and approved by the SWCD.
 - (10) Resource management system - a combination of conservation practices and resource management activities for the treatment of all identified resource concerns for soil, water, air, plants, animals, and humans that meets or exceeds the quality criteria in the Natural Resource Conservation Service's Field Office Technical Guide for resource sustainability.
 - (11) Soil and water conservation district, herein referred to as SWCD, - A government subdivision of this state and a public body corporate and politic, organized pursuant to Chapter 201 of the Agriculture Code of Texas.
 - (12) State Board - The State Soil and Water Conservation Board created under the Agriculture Code of Texas, Chapter 201.
 - (13) Technical service provider - an individual, entity, or public agency certified by the NRCS State Conservationist and placed on an approved list to provide technical services.
 - (14) Texas Commission on Environmental Quality - the state agency created under Title 2, Subtitle A, Chapter 5 of the Texas Water Code (formerly the Texas Natural Resource Conservation Commission).
- (c) Applicability. Any owner or operator of an animal feeding operation that meets the following criteria may submit a CNMP to the State Board for certification in accordance with §523.8 (f) of this title. Owners or operators of an animal feeding operation within the North Bosque River watershed, or owners or operators of an animal feeding operation that has enrolled in any agricultural environmental stewardship program whose administrators have a current memorandum of agreement with the State Board regarding a State Board certification of a CNMP as programmatic requirement.
- (d) Process for obtaining a CNMP. It is the intent of the State Board that all CNMPs be developed by technical service providers certified by NRCS to develop CNMPs or component parts of CNMPs. Owners and operators whose CNMP is developed by persons not certified to develop CNMPs through NRCS' Technical Service Provider process must submit their CNMP to the local NRCS Field Office for approval. Owners and operators of animal feeding operations who meet the applicability criteria set forth in §523.8 (c) and intend to submit a completely developed CNMP to the State Board for certification shall:
- (1) be a SWCD cooperator.
 - (2) declare to the SWCD their intent to submit a CNMP for State Board certification.
 - (3) request to view a list of certified technical service providers who have been certified by the NRCS to develop CNMPs from their local SWCD and/or NRCS Field Office. Owners and operators whose CNMP is developed by persons not certified to develop CNMPs through NRCS' Technical Service Provider process must submit their CNMP to the local NRCS Field Office for approval.

- (4) inform the SWCD that they intend to apply for cost-share assistance, if applicable. All cost-share assistance toward the development of a resource management plan and toward the implementation of land treatment measures contained within the resource management plan, shall be in accordance with §523.6 of this title (relating to Cost-Share Assistance for Soil and Water Conservation Land Improvement Measures).
- (e) Cost-share. In accordance with §523.6 of this title, the State Board may allocate funds to a SWCD for cost-share assistance to landowners toward the implementation of land improvement measures consistent with the purpose of controlling erosion, conserving water, and/or protecting water quality. All cost-share assistance toward the development of a resource management plan and toward the implementation of land treatment measures contained within the resource management plan, shall be in accordance with §523.6 of this title.
- (f) Certification.
- (1) When the following conditions are met the State Board may certify that a CNMP satisfies the State Board's technical criteria and programmatic guidance for comprehensive nutrient management planning with the State's requirements for water quality:
- (A) The owner or operator of the animal feeding operation concurs and understands that the conservation practices and implementation schedules contained within the CNMP, when applied and maintained to form a resource management system will meet the State's requirements for water quality; the owner or operator of the animal feeding operation agrees to notify the local SWCD in the event of deviation from the implementation schedule; and the owner or operator of the animal feeding operation agrees that any substitution or changes to the conservation practices or schedules must be in accordance with the NRCS - FOTG, the State Board's Technical Criteria and Programmatic Guidance for Comprehensive Nutrient Management Planning, and the rules and regulations of the State.
- (B) The CNMP is in accordance with the Technical Criteria and Programmatic Guidance for Comprehensive Nutrient Management Planning adopted by the State Board and contains an implementation schedule pursuant to §523.8 (i) of this title.
- (C) The owner or operator of the animal feeding operation meets the requirements of §523.8(c) of this title (related to applicability).
- (D) The SWCD has approved the CNMP as including the entire conservation management unit.
- (E) The CNMP was developed by a technical service provider certified by the NRCS to develop CNMPs or the NRCS Field Office has approved the CNMP as meeting the requirements of the NRCS - FOTG for a Resource Management System.
- (2) Withdrawal of certification. The State Board may withdraw certification of any CNMP which, in consultation with the SWCD, has been demonstrated to be deficient in one or more of the conditions established under §523.8 (f)(1) or if the holder of the CNMP fails to implement the CNMP in accordance with §523.8 (i).
- (g) Technical Criteria and Programmatic Guidance for Comprehensive Nutrient Management Planning. The technical criteria and specific practice standards considered as components of comprehensive nutrient management planning are based on the criteria in the NRCS - FOTG; however, modification of those practice standards to ensure consistency with state water quality standards, state water quality laws regarding animal feeding operations, and the state agricultural and silvicultural nonpoint source management program will be made by the State Board as necessary. The State Board will adopt and maintain Technical Criteria and Programmatic

Guidance for Comprehensive Nutrient Management Planning to ensure consistency with state water quality standards, state water quality laws regarding animal feeding operations, and the state agricultural and silvicultural nonpoint source management program.

- (h) Environmental Stewardship Programs for Owners and/or Operators of Animal Feeding Operations. The State Board may enter into agreements with entities administering programs who request that participants of such programs receive certification in accordance with §523.8 (f) of this title as a programmatic requirement if the State Board determines that the program is consistent with the state agricultural and silvicultural nonpoint source management program and all other State Board policies.
- (i) Implementation schedule. A CNMP must contain an implementation schedule.
 - (1) The implementation schedule will, as far as is practicable, balance the state's need for protecting water quality with the need of agricultural producers to have sufficient time to implement practices in an economically feasible manner.
 - (2) Highest priority will be given to the implementation of the most cost effective and most needed pollution abatement practices.
 - (3) The State Board in consultation with the local SWCDs will conduct an annual status review of plan implementation.
 - (4) The State Board in consultation with the local SWCDs may withdraw certification of a CNMP that is not being implemented in accordance with its schedule. Prior to certification being withdrawn, a landowner will be notified and be given a reasonable period of time to implement the CNMP according to the schedule or a modified schedule approved by the SWCD.
 - (5) The holder of a certified CNMP shall notify the local SWCD in the event he or she deviates from the implementation schedule.
- (j) Applicability of state water quality standards. To the extent allowed by available technology, CNMP development, approval and certification will be based on state water quality standards as established by the Texas Commission on Environmental Quality.