

Comprehensive Nutrient Management Plan

A conservation plan is required when NRCS provides technical or financial assistance to customer. (GM- 190-405.10 B)

A Comprehensive Nutrient Management Plan (CNMP) is a subset of conservation plans specifically for livestock operations. A CNMP is required for a livestock operations (AFO) to address manure or wastewater handling, storage, or field application. (NPPH 600.60)

Comprehensive Nutrient Management Plans (GM-190-405.3)

(CNMP) -are conservation plans for AFOs that:

(1) Must include the following:

(i) **The production area**, including the animal confinement, feed and other raw materials storage areas, animal mortality facilities, and the manure and wastewater handling systems.

(Production, Collection, Transfer, Treatment, or Storage)

(ii) **The land base of AFO**, including any land under control of the AFO owner or operator, whether it is owned, rented, or leased, and to which manure or process wastewater is, or might be, applied for crop, hay, pasture production, or other uses.

(a) **Conservation practice** to reduce soil erosion (Sheet & Rill, Wind and Concentrated Flow)

(b) **Nutrient Management Plan** that meets NRCS 590 Nutrient Management standard technical criteria

(2) **Meets NRCS Field Office Technical Guide (FOTG) Section III planning criteria for water quality (nutrients, organics, and sediments in surface and groundwater) and soil erosion (sheet and rill, wind, ephemeral gully, classic gully, and irrigation-induced natural resource concerns on the production area and land treatment area).**

(3) Mitigates, if feasible, any excessive air emissions and/or negative impacts to air quality resource concerns that may result from practices identified in the CNMP or from existing on-farm areas/activities.

(4) Complies with Federal, State, Tribal, and local laws, regulations, and permit requirements; and

(5) Satisfies the owner/operator's production objectives.

The National Planning Procedures Handbook is used to develop conservation plans.

<http://directives.sc.egov.usda.gov/>

e-Directives Title 180-Part 600 National Planning Procedures Handbook or

<http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=33234.wba>

The customer must be involved with the Resource Inventory by identifying the current land use and management system, and by identifying their goals and objectives.

A CNMP that is more than 1 year old should be reviewed to verify that it still reflects the agricultural operation and management system. If operational or management changes are identified, the CNMP must be reviewed and revised to reflect the new conditions.

The Screening tools, Assessment Tools, Assessment Levels, and Planning criteria in Section III of the WI e-FOTG must be used during the planning process.

The resource inventories, evaluations completed, alternatives developed, selected (or preferred) alternatives, and all associated practices, must be included in the Customers case file.

Excerpts from the NPPH follow: Title 180 – National Planning Procedures Handbook
(180-VI-NPPH, Amend. 5, January 2013)

- (9) **Assessment.**—The act of assessing the physical condition or extent of management applied.
- (10) **Assessment Level.**—A statement describing the physical condition or extent of management applied that is used by planners to determine if the resource concern planning criteria have been met. There are two levels of assessment:
 - (i) **Screening Level.**—Simple true-false statements of easily observable conditions planners can use to identify sites that have little or no probability of needing additional treatment to address the specific resource concern. If the site meets the screening level criteria, then no other assessment is needed to document that planning criteria are met on this site.
 - (ii) **Basic Assessment Level.**—Criteria used when a site does not pass the screening level or when no screening level criteria are defined.
- (11) **Assessment Methods**
 - (i) **Procedural.**— For some resources, planners use well-defined procedures to acquire data used to determine the resource condition. An example of this approach is determining the ecological health of rangeland using the Interpreting Indicators of Rangeland Health protocol. The summary chart (Figure 600-C6, “Inventory Methods”) lists the procedural method for several resource concerns where a standard inventory and assessment procedures exist. The appropriate discipline handbook or manual may be consulted for more information.
 - (ii) **Predictive.**— The condition of some resources is best assessed using models created to predict the probability of an outcome. Estimating sheet and rill erosion rates using RUSLE2 or WEPS to model wind erosion are examples of predictive modeling tools.
 - (ii) **Observation.**—Where standard procedures to measure or model the condition of resources do not exist, planners often rely on direct observation or information provided by the client through an interview. Classic gully is an example where observation is the accepted method of evaluating resource conditions. Through observation, the planner discerns the stability of side slopes, head-cutting activity, or erosion in the gully bottom. Observation always implies onsite investigation, assistance notes and documentation.
 - (iii) **Deduction.**— When it is impractical to measure, model, or observe resource conditions, planners may rely on reason to deduce the status of a resource. Often, the deductive approach is related to treatment standards. In this case, the planner must assume that a certain condition is met if specific treatment is applied, and, conversely, if the specific treatment is not applied, a less desirable condition will result. Planners must frequently rely on deductive methods to address offsite effects. For example, the delivery of dissolved nutrients to groundwater may not be a practical resource concern to measure, and until predictive tools are readily available, the planner can deduce whether or not a problem exists based on other sources of information. If a client utilizes all reasonable nutrient management techniques and has significantly modified the rate, timing, or both of nutrients applied to a field, the planner may deduce that the field in question is no longer a significant source of nutrients entering the groundwater.
- (12) **Assistance Notes.**—Notes maintained by planners in the case file for each client receiving planning and implementation assistance. These notes are to be a concise, factual, and chronological narrative of significant conservation activities and may summarize progress in planning and implementation. Assistance notes include both planner-entered and system-generated notes and may include text, audio, video, or photographic formats.
- (13) **Benchmark Condition.**—The present condition of identified resource and special environmental concerns that is used as a point of reference to measure changes in resource conditions resulting from conservation treatment. In addition to the benchmark condition, other points of reference are sometimes used for discussion and comparison purposes, especially in an areawide conservation planning situation (i.e., forecasting the resource conditions expected at some point in the future by maintaining current levels of resource management and treatment).
- (14) **Benchmark Narrative.**—A written statement of the benchmark condition. The narrative includes a description of the current conditions, crops, soils, major resource concerns, etc. It includes existing conservation practices that meet NRCS standards and those that do not. For areawide conservation plans, the narrative also includes information on future conditions if the problems are not treated.

- (15) **Benchmark Practices.**—Existing conservation practices included in the current management system for the planning unit. These practices meet NRCS standards and specifications.
- (18) **Case File.**—The record of resource information, decisions, and technical assistance for a specific client. A case file is established and maintained by the NRCS field office for each client that NRCS is providing continuing technical assistance. The case file will be maintained electronically to the greatest extent possible. Information not amenable to electronic format will be maintained in a hardcopy file.
- (22) **Comprehensive Nutrient Management Plan (CNMP).**—Any combination of structural practices, management activities, or land management practices associated with crop or livestock production that collectively ensures that the purposes of crop or livestock production and preservation of natural resources (especially the conservation of air, soil, and water quality) are compatible.
- (32) **Conservation Plan.**—A record of the client’s decisions and supporting information for treatment of a unit of land meeting planning criteria for one or more identified natural resource concerns as a result of the planning process. The plan describes the schedule of implementation for practices and activities needed to solve identified natural resource concerns and takes advantage of opportunities. The plan may include components such as comprehensive nutrient management plan, grazing plan, integrated pest management plan, etc. The needs of the client, the resources, and Federal, State, Tribal, and local requirements will be met.
- (44) **Desired Future Condition.**—A quantitative or qualitative expression of an ecological, economic, or social condition one is attempting to achieve. It is the goal to compare with the predicted outcomes of alternative implementation options.
- (80) **Measurement and Assessment Tools.**—Description of the technology or process for determining if assessment criteria are met.
- (81) **Minimum Level of Treatment.**—The specific conservation treatment NRCS requires that addresses a resource concern to a level that meets or exceeds the planning criteria according to NRCS technical guides.
- (89) **No-Action Alternative.**—The projected future course of action that will occur if NRCS assistance is not provided.
- (98) **Plan Map.**—A photograph, sketch or GIS document of a land area developed during the planning process that shows property boundaries, land unit boundaries, land use, physical features, location of planned and applied practices, and other features that are useful to the client in plan implementation.
- (99) **Planner.**—A person, qualified by training and experience, who effectively assists the client in completing the planning process. (See also “certified conservation planner.”)
- (100) **Planning Criteria.**—A quantitative or qualitative statement of a treatment level required to achieve a minimum level of treatment for a given resource concern for a particular land area. It is established in accordance with local, State, Tribal, territorial, and Federal programs and regulations in consideration of ecological, economic, and social effects. (See also “quality criteria.”)
- (102) **Planning Process.**—The three-phase, nine-step process used by NRCS to help clients plan and apply conservation treatments or make land use and treatment decisions.
- (i) Phase I – Collection and Analysis
 - Step 1: Identify Problems and Opportunities
 - Step 2: Determine Objectives
 - Step 3: Inventory Resources
 - Step 4: Analyze Resource Data
 - (ii) Phase II – Decision Support
 - Step 5: Formulate Alternatives
 - Step 6: Evaluate Alternatives
 - Step 7: Make Decisions
 - (iii) Phase III – Application and Evaluation
 - Step 8: Implement the Plan
 - Step 9: Evaluate the Plan

- (111) **Production Area (CNMP).**—Includes the animal confinement, feed and other raw materials storage areas, animal mortality facilities, and the manure handling containment or storage areas.
- (114) **Quality Criteria.**—A descriptive statement of desired resource condition and management, representing a level of use that is sustainable over the long term. Due to scientific and technical limitations, the establishment of quality criteria for all the NRCS resource concerns is an elusive goal. However, NRCS remains committed to using the latest tools and techniques that will continually move planning criteria in the direction of increased sustainability and the eventual establishment of true quality criteria for all resource concerns.
- (119) **Resource Concern.**—An expected degradation of the soil, water, air, plant, or animal resource base to the extent that the sustainability or intended use of the resource is impaired. Because NRCS quantifies or describes resource concerns as part of a comprehensive conservation planning process, that includes client objectives, human and energy resources are considered components of the resource base. See Exhibit 6 for a list and descriptions of specific resource concerns.

Resource Concerns (31)

SOIL EROSION

- Sheet, Rill, & Wind Erosion
- Concentrated Flow Erosion (Classic Gully & Ephemeral Erosion)
- Excessive bank erosion from streams, shorelines, or water conveyance channels

DEGRADED PLANT CONDITION

- Undesirable Plant Productivity and Health
- Inadequate Structure and Composition
- Excessive Plant Pest Pressure
- Wildfire Hazard, Excessive Biomass Accumulation

SOIL QUALITY DEGRADATION

- Subsidence
- Compaction
- Organic Matter Depletion
- Concentration of Salts and other Chemicals

INADEQUATE HABITAT FOR FISH AND WILDLIFE

- Habitat Degradation (Food, Water, Cover/Shelter, and Habitat Continuity/Space)

EXCESS / INSUFFICIENT WATER

- Ponding, Flooding, Seasonal High Water Table, Seeps, and Drifted Snow
- Inefficient Moisture Management
- Inefficient Use of Irrigation Water

LIVESTOCK PRODUCTION LIMITATION

- Inadequate Feed and Forage
- Inadequate Livestock Shelter
- Inadequate Livestock Water

WATER QUALITY DEGRADATION

- Excess Nutrients in surface and ground waters
- Pesticides transported to surface and ground waters
- Excess Pathogens and Chemicals from manure, bio-solids, or compost applications in surface waters and ground waters
- Excessive Salts in surface waters and ground waters
- Petroleum, Heavy metals, and other pollutants, transported to waters
- Excessive Sediment in surface waters
- Elevated Water Temperature

AIR QUALITY IMPACTS

- Emissions of Particulate Matter (PM) and PM Precursors
- Emissions of Greenhouse Gases (GHGs)
- Emissions of Ozone Precursors
- Objectionable Odors

INEFFICIENT ENERGY USE

- Equipment and Facilities
- Farming/Ranching Practices and Field Operations

Options for Resource Assessment Summary and Schedule of Planned Conservation Practices.

Attach documentation containing conservation practice details and specifications (Job sheet and/or Implementation Requirements).

Summary of Existing Conservation Practices.

Location (field/farmstead)	Conservation Practice	Units	Notes / Attachment (Y/N)

Summary of Identified Resource Concerns and Benchmark conditions.

Location (field/farmstead)	Assessment Tool Used	Resource Concern	Benchmark Condition	Attachment (Y/N)

Complete the Record of Decisions (e-FOTG, Section I, CNMP, Forms) for existing practices and planned practices needed to address the identified resource concerns.

Practice: Code, Name, Narrative	Units: Planning, Reporting	Landuse Code	Planned Land Units: Farm Number, Tracts, Fields	Units of Existing Applied(date) Practices	Units of Planned (date) Practices	Comments