



CONSERVATION PLANNING ACTIVITY

Comprehensive Nutrient Management Plan

DEFINITION

A site specific conservation plan developed for an Animal Feeding Operation (AFO) or user of the by-products of an AFO that includes the following two components: (a) The production area including the animal confinement, feed and other raw materials storage areas, and the waste handling containment or storage areas, and (b) the land treatment area, 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 from the production area is, or might be, applied for crop and/or pasture production.

CRITERIA

General Requirements

The Conservation Planning Activity (CPA) documents client objectives, benchmark (current) conditions, resource concerns, alternative actions, the evaluation of alternative actions, and the client's preferred alternative.

Applicable land uses for this CPA are provided in the **DELIVERABLES** section.

The TSP will complete conservation planning steps 1 through portions of 7 of the NRCS 9 step conservation planning process as outlined in the NRCS National Planning Procedures Handbook (NPPH). The steps include identify problems and opportunities (step 1), determine objectives (step 2), inventory and analyze resources (steps 3 and 4), formulate and evaluate alternatives (steps 5 and 6) and document client's preferred alternative(s) (step 7).

The TSP will maintain an ongoing record of CPA related discussions with the client. The TSP will document on a conservation assistance notes form (CPA-6) or other format that includes all components of the CPA-6 (client objectives, dates of assistance, all parties present, notes of significant assistance provided, alternatives considered, and decisions reached). Any correspondence between the TSP and the client related to the development of the CPA will be included in the record.

1. IDENTIFY PROBLEMS AND OPPORTUNITIES (Step 1)

Visit with the client to identify and document existing, potential, and perceived natural resource problems, opportunities, and concerns in the planning area. The identified problems and opportunities as well as the client objectives guide the remainder of the planning process and are the basis for the purpose and need for action that are documented in NRCS Environmental Evaluation.

2. DETERMINE OBJECTIVES (Step 2)

Determine the client's planning objectives by developing an understanding with the client of the desired future condition for the planning area, as compared to the existing conditions. This is the purpose for the client to take action. It includes the desired resource uses,

resource problem reductions, onsite and offsite ecological protection, and production concerns. As resources are inventoried, their interactions are analyzed, and alternatives formulated, objectives may need to be reviewed and modified.

3. INVENTORY RESOURCES (Step 3)

The resource inventory documents benchmark (current) conditions of natural resources in the CPA planning area. The specific inventory documentation requirements and resource concerns to be evaluated are provided in the **DELIVERABLES** section. Inventory documentation required may include such items as:

- Current agricultural or forestry practices and management activities,
- Environmentally sensitive areas (e.g., wetlands, sinkholes, wellheads, gullies, ditches, etc.),
- Soils, climate, topography,
- Equipment and technology currently being used by the landowner,
- Highly erodible land or wetland compliance determinations associated to the planning land unit,
- Pertinent Federal, State, Tribal, and local laws, regulations and policy, and
- Special Environmental Concerns that may be applicable on, or in the vicinity of the planning area. The special environmental concerns to be inventoried include, at a minimum, the following:
 - Clean Air Act
 - Clean Water Act / Waters of the U.S.
 - Coastal Zone Management
 - Coral Reefs
 - Cultural Resources / Historic Properties
 - Endangered and Threatened Species
 - Environmental Justice
 - Essential Fish Habitat
 - Floodplain Management
 - Invasive Species
 - Migratory Birds / Bald and Golden Eagle Protection Act
 - Natural Areas
 - Prime and Unique Farmlands
 - Riparian Area
 - Scenic Beauty
 - Wetlands
 - Wild and Scenic Rivers

NRCS state offices may identify additional state, tribal, or local laws, regulations or ordinances that must routinely be evaluated.

Use NRCS data available in the Field Office Technical Guide (FOTG) Sections 1 and 2, plus Web Soil Survey (WSS) and other helpful resources to support the inventory.

Document any previously installed or implemented conservation practice(s) and indicate whether the existing practice(s) is currently accomplishing the conservation practice purpose indicated in the NRCS conservation practice standard in the state's FOTG, Section 4.

4. ANALYZE RESOURCE DATA (Step 4)

Analysis of a resource inventory will document benchmark (current) conditions of natural resources in the CPA planning area. A comparison between benchmark (current) conditions and planning criteria/quality criteria (desired future conditions) will help identify resource concerns. Analysis and documentation requirements are provided in the **DELIVERABLES** section.

Analysis documentation will include at a minimum:

- NRCS resource concerns identified,
- Benchmark conditions,
- (as applicable) Results of assessment tools, and
- A description of the need for conservation actions.

5. FORMULATE ALTERNATIVES (Step 5)

At a minimum two alternatives will be developed. The first will be a no-action alternative in which current management activities are assumed to continue. The second will be an action alternative identifying a conservation practice or a system of conservation practices and management activities to address CPA identified resource concern(s). Additional action alternatives may be developed to identify different ways of achieving client objectives. Alternatives may include an appropriate mix of structural conservation practices, such as terraces, dams, and waterways; nonstructural conservation practices, such as crop residue management, or livestock exclusion. Each action alternative must meet the client's objectives and comply with Federal, State, Tribal, and local laws, regulations, and policies.

When providing technical assistance to existing organic operations, ensure recommended conservation practices and management activities are consistent with the client's Organic System Plan (OSP) and the National Organic Program (NOP) regulations. If the client's objective is to transition to organic production, use CPA 138 – Conservation Plan Supporting Organic Transition.

6. EVALUATE ALTERNATIVES (Step 6)

The TSP will evaluate the alternatives and describe the environmental effects associated with each alternative. The analysis will be reviewed with the client. The analysis should provide the client with the information needed to select their preferred alternative.

When evaluating the no-action alternative, the TSP will provide information to the client on what will occur if current management activities continue and no new practices are implemented.

When evaluating conservation practice effects, the short and long-term effect on natural resources and the applicability and effect on special environmental concerns identified in Step-3 (Resource Inventory) must be documented. Include recommendations that will avoid or mitigate any adverse effects on soil, water, air, plants, animals (including livestock, fish, and wildlife), energy, or human concerns, as well as on special environmental concerns.

After analyzing the proposed alternatives, prepare the following documentation, at a minimum:

- Documentation of alternatives discussed (CPA-6, correspondence), (as applicable)
- Results of assessment tools,
- Considerations to avoid or mitigate any adverse effects on those unique resources and other soil, water, air, plants, animals (including livestock, fish, and wildlife), energy, or human concerns, as well as on special environmental considerations, and
- An evaluation of the alternative's effects on the client's land use, capital, labor, management, risk, profitability, and public health and safety.

7. CLIENT'S PREFERRED ALTERNATIVES (Step 7)

The TSP will present all alternatives to the client and document the client's preferred alternative.

Technical Requirements

The CPA 102 must be developed by a TSP who meets NRCS Comprehensive Nutrient Management Plan certification requirements.

Minimum technical criteria to be addressed in the development of a the CNMP CPA:

1. Must comply with Federal, Tribal, State, and local laws, regulations, and permit requirements and meet the producer's objectives.
2. Must be developed to assist owners/operators in taking voluntary actions to minimize potential pollutants from animal confinement facilities and the land application of manure and organic by-products.
3. Must utilize applicable resource assessment tools to address and recommend planned conservation practices.
 - a. Water Erosion
RUSLE2 simulation reports for the benchmark and the agreed upon conservation practice changes are included as part of the CNMP-DIA document.
 - b. Wind Erosion
Complete the Wind Erosion Prediction System (WEPS) on all fields to document reduction of wind erosion loss after installation of conservation practices. Include the WEPS simulation report.
 - c. Nitrogen Leaching and Off-site Movement
Completed State approved environmental risk assessment tool designed to assess the potential for nitrogen movement out of agricultural lands via leaching, surface offsite transport and atmospheric loss. The Leaching Index functionality within RUSLE2 may be used when a State N assessment is not available. Report will document the effect of installed conservation practices.
 - d. Phosphorus Assessment/Index
Completed State approved risk assessment showing the installed conservation practice effect on risk of P movement. If using MMP and MMP includes a valid State risk assessment, include the custom report document.
 - e. Air Quality
 1. Prepare a report by the National Air Quality Site Assessment Tool (NAQSAT) to evaluate air quality resource concern on confinement-based animal operations

with a maximum capacity greater than or equal to 300 animal units for the following species: swine, dairy, beef, horse, broiler chickens, layer hens, and turkeys.

2. An updated NAQSAT report must be prepared representing the management of the operation after implementing the potential mitigation options. The NAQSAT is accessible free of charge at <http://naqsat.tamu.edu>.
3. Specify odor management controls for applicable conservation practices that may include:
 - Install visual screen via tree lines or fence rows to contain odors and reduce complaints from neighbors.
 - Clean water will be diverted to help keep the facility dry.
 - A cover will be kept on the silage or it will be kept in “Ag Bags”.
4. Must document landowner(s) decisions.
5. Requires evaluation and documentation of compliance with the National Environmental Policy Act, the Endangered Species Act, the National Historic Preservation Act, and other effects on the environment. This evaluation and documentation process WILL BE COMPLETED BY NRCS.
6. In most situations, a combination of conservation practices and management activities will be required to meet the production needs of the AFO owner/operator and the resource concerns associated with the farmstead and land treatment areas. The Field Office Technical Guide (FOTG) Section III and National Planning Procedures Handbook (NPPH) contain additional information and guidance.

Farmstead (Production Area)

1. Review/Develop plan map(s) showing existing and planned structures (See NPPH Title 180, part 600.31 subpart A for map requirements), and soils map(s) for all fields indicating map units. Note: Provide a brief description of any limitations of the soil for desired use. Appropriate conservation practices, existing or planned, will address the limitations.
2. Record Animal Inventory Information (both existing and proposed) must include such information as type, number, average weight, and number of days confined.
3. Record Manure Storage Information must include type of manure storage, existing storage volumes/sizes (when applicable) and maximum length of storage available. When applicable, document planned imports, exports, and on-farm transfers of manure.

Crop and Pasture (Land Treatment Area)

1. Review/develop plan map(s) showing application fields, soils, application setbacks, existing and planned crop and pasture practices.
2. Review current state of inventory:

- a. Any existing results of approved risk assessment tools for soil erosion, nitrogen and phosphorus.
- b. Identify sensitive area setback distances required for application of organic or inorganic nutrients to protect water quality.
- c. Soil test result data, if available. New or updated soil tests shall be scheduled if analysis exceeds testing recommendations.
- d. Manure nutrient analyses, as well as water, compost, organic by-product, and plant tissue sample analyses applicable to the plan. Schedule any new sampling according to LGU recommendations.
- e. Confirm or update the current and/or planned crop rotation including realistic yield goals for the crops.
- f. Listing and quantification of all nutrient sources, fertilizer recommendations, planned nutrient applications and form.

DELIVERABLES

Two copies (hardcopy or electronic) of the plan must be developed—one for the client and one for the NRCS field office. At the client's request, Technical Service Provider (TSP) can deliver NRCS's copy to the NRCS Field Office. The client's copy must include the maps and preferred alternative, unless the client requests other documents from this section. The NRCS copy must include all items identified herein. An additional electronic copy of the plan should also be uploaded to NRCS Registry (if using MMP, include the ".nat-cnmp.doc" and the .mmp file).

This conservation planning activity applies to farmstead (production area) and crop and pastureland (land treatment areas).

The plan must meet the Natural Resource Conservation Service (NRCS) planning criteria on both the production and land treatment areas for water quality (nutrients, organics, and sediments in surface and ground water), soil erosion (sheet and rill, wind, ephemeral gully, classic gully, and irrigation induced), and air quality (emissions of particulate matter (PM) and PM precursors and objectionable odors).

1. Cover Page

Cover page reporting the technical services provided by the TSP. Cover page(s) must include the following:

- a. Client information: Name, phone number, email, farm bill program, contract number, and contract item number.
- b. TSP information: name, address, phone number, email, TSP number, TSP expiration date; and county of service.
- c. CPA information: CPA name, land use(s), units, and amount.
- d. Statement by TSP that services provided:
 - i. Comply with all applicable Federal, State, Tribal, and local laws and

- requirements.
- ii. Meet applicable program requirements and recommended planned practices are based on NRCS conservation practice standards and specifications.
- iii. Are consistent with and meet the particular conservation program goals and objectives.
- iv. Incorporate alternatives that are both cost effective and appropriate to address the resource issues.
- e. TSP certification statement: signature and date.
- f. Client confirmation: signature and date.
- g. Block for NRCS reviewer acceptance (to be completed by NRCS): signature and date.

2. Conservation Assistance Notes and Correspondence

- a. Conservation Assistance Notes (NRCS-CPA-6) or other format that includes all components of the CPA-6.
 - i. Document the client's objectives.
 - ii. Document each interaction with the client, include notes and results of that interaction, date, and initials of the TSP.
 - iii. Document each site visit, activity in the field, results of each site visit, all parties present, date, and initials of the TSP.
- b. Any correspondence between the TSP and the client relating to the development of the CPA.

3. Maps

- a. Maps to include, but not be limited to:
 - i. General location map of the planning area showing access roads to the location.
 - ii. CPA map (this may consist of several maps to account for the entire planning area). This map will specifically include:
 - Boundary lines for the Planning Land Units (PLUs) with labels (name, number, or both). A PLU is a unique geographic area, defined by a polygon, which has common land use and is owned, operated, or managed by the same client or clients. The PLU is the minimum unit for planning.
 - Land-use designation and any applicable modifiers such as irrigation for each PLU as appropriate.
 - Acreage for each PLU associated with the AFO and all fields which may receive manure.
 - Location of sensitive resources and setbacks, if applicable.
 - Location and description of livestock production facilities.
 - Location of land application areas.
 - Location of filter strips, grassed waterways, designated buffers and no manure application areas.
 - Location of planned and applied conservation practices.
 - If the planning area includes nonprivate lands, such as Federal or Tribal lands, a land status map must be included to display land ownership categories (Private, State Trust, BLM, Tribal, and Territorial, etc.)

- iii. Resource maps of the PLU
 - Soils maps, and other resource maps as applicable.
 - An existing Wetland determination or delineation map.
- b. At a minimum, all maps developed for the CPA will include:
 - i. Title block showing:
 - Map title.
 - Client's name (individual or business).
 - Prepared with assistance from USDA – Natural Resources Conservation Service.
 - Assisted By [TSP planner's name].
 - Name of applicable conservation district, county, and State.
 - Date prepared.
 - ii. Map scale.
 - iii. Information needed to locate the planning area, such as geographic coordinates, public land survey coordinates, etc.
 - iv. North arrow.
 - v. Appropriate map symbols and a map symbol legend on the map or as an attachment.
- c. If available, the Geographic Information Systems (GIS) electronic shapefiles created for the operation.

4. Conservation Plan

A Record of Decisions (planned and applied conservation practices) for the crop and pasture lands where the nutrients will be applied. This includes documentation for all currently applied practices that will be maintained, as well as all the planned practices with schedule of implementation to include month/year of planned application and amount. For practices previously planned and applied with NRCS technical assistance those plans will be in the client case file in the local NRCS field office (engineering plans, job sheets, or implementation requirements).

- a. Farmstead
 - i. PLU label (name, number, or both).
 - ii. NRCS conservation practice name and code for applied and planned practices required for the system.
 - iii. Estimated amount planned or applied.
 - iv. Brief description of the planned conservation practices (practice narratives).
 - v. Dates the planned practices are scheduled to be implemented.
 - vi. Evaluation of existing waste handling/storage structures for integrity and capacity, site feasibility data if needed (such as topographic survey, soil boring or flood zone information).
 - vii. Date any applied practices were completed.

- viii. Description of Animal Feeding Operation:
- Information Table (As planned): Animal numbers, type, average weight, confinement period, percent confinement, and location.
 - Manure storage: Must include storage identification, type of manure storage including the type and adequacy of the liner for liquid storages, existing capacity, volumes and maximum length of storage available, permanent and total storage on farm.
 - For liquid waste storage: document freeboard, 25 yr. 24 hr. storm, available, permanent, and total storage in gallons, volume of sludge stored and available sludge storage, and an estimate of number of years till sludge cleanout will be needed.
 - For each storage period, document the volume (where applicable): Manure collected, bedding volume, wash water volume, silage leachate, runoff, direct rainfall and total volume required for that period.
 - Document all planned imports, exports, and on-farm transfers of manure (when applicable). Include location moved from, location moved to, and volume moved.
 - Narrative description of waste management system and animal mortality management.
- b. Land treatment areas (cropland and pasture and other lands where nutrients from the AFO will be applied)
- i. PLU label (name, number, or both).
 - ii. Planned NRCS Conservation Practice names and codes.
 - iii. Estimated amount to be applied.
 - iv. Brief description of the conservation practice (practice narrative).
 - v. Date the planned practice is scheduled to be implemented.
 - vi. Summary of risk analyses results, including field identification, erosion estimates, nitrogen, phosphorus and any other risks assessed.
 - vii. Manure application setback distances, including field identification, location size, and distance to water.
 - viii. Soil test data, including field identification, date, test type, and result.
 - ix. Manure nutrient analysis, including date, test type, location, and result.
 - x. Existing crop rotation, including year, crop, yield goals, nutrient requirements (N-P-K) and nutrient recommendations.
 - xi. Develop and provide all supporting documentation, including any additional items required by the State Conservationist including any geospatial layers (if available) for the Planning Land Unit (PLU), practices, resource inventory, and another map features.

References

- USDA Natural Resources Conservation Service. National Planning Procedures Handbook.
<https://directives.sc.egov.usda.gov/viewerFS.aspx?hid=44407>
- USDA Natural Resources Conservation Service. Field Office Technical Guide.

<https://efotg.sc.egov.usda.gov/#/>

USDA Natural Resources Conservation Service. National Environmental Compliance Handbook.

<https://directives.sc.egov.usda.gov/viewerFS.aspx?hid=39467>

USDA Natural Resources Conservation Service. Cultural Resources Handbook.

<https://directives.sc.egov.usda.gov/viewerFS.aspx?hid=42752>

USDA Natural Resources Conservation Service. National Agronomy Manual.

USDA Natural Resources Conservation Service. National TSP Website.

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/technical/tsp/>

USDA Natural Resources Conservation Service. National TSP Resources.

<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/technical/tsp/?cid=nrcseprd1417414>