Design and Implementation Activity

CNMP Design and Implementation Activity

DIA 101

Definition

A site-specific design and implementation activity plan developed for an Animal Feeding Operation (AFO) that includes components for both structural and non-structural conservation practices. This will address the planned practices for land application of manure and nutrients, and the handling, transfer, storage and treatment of animal wastes.

REQUIREMENTS

General Requirements

A Design and Implementation Activity (DIA) assists a participant with implementing their conservation plan by providing site-specific instructions, requirements, plans, or specifications for planned structural and nonstructural conservation practices.

A DIA may involve providing assistance for a single conservation practice or a combination of structural, vegetative, or land management conservation practices, enhancements, and management activities.

Prior to initiation of the DIA, the Technical Service Provider (TSP) will schedule a conference with the participant and Natural Resources Conservation Service (NRCS) field office staff to ensure an understanding of the participant objectives (including practices to be covered by the DIA), required deliverables, and characteristics of the DIA tasks. The meeting between all parties may take place in person or electronically.

The participant and conservation planner have determined which practices a TSP will provide DIA assistance for. The TSP must have certification in NRCS Registry for each practice they will provide assistance for through this DIA. If not certified for a practice(s), a TSP can use a subcontractor who is a certified TSP for the practice(s). If there are no available certified TSPs, then that practice shall be removed from the scope of the participant's DIA.

DIA assistance is based on the participant's conservation plan and applicable conservation practice standards and related technical guidance provided in the state's NRCS Field Office Technical Guide (FOTG). DIA assistance must conform with the conservation practice standards included in FOTG, Section 4 for the state where the practice(s) are to be implemented. A TSP may use conservation practice supporting documents found in the applicable state's FOTG, Section 4 to facilitate delivery of appropriate information to the participant. Examples of conservation practice supporting documents include statements of work (SOW), implementation requirements (IR), practice specifications (PS), standard drawings (SD), General Specifications (GS), Construction Specifications (CS), Material Specifications (MS), and design support tools. The FOTG homepage hyperlink is:. Field Office Technical Guide | NRCS - USDA

Technical Requirements

1) The DIA 101 must be developed by a TSP who meets NRCS Comprehensive Nutrient Management Plan (CNMP) certification requirements.
2) The minimum requirements the TSP must address in the CNMP DIA:
    a) Meet the NRCS planning criteria on both the headquarters/farmstead 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).
    b) Comply with Federal, Tribal, State, and local laws, regulations, and permit requirements and meet the producer's objectives.
    c) Plan to assist participant(s) in taking voluntary actions to minimize potential pollutants from animal confinement facilities and the land application of manure and organic by-products.
    d) Document participant(s) decisions.
    e) The nutrient management plan portion must be developed in accordance with the state Nutrient Management Conservation Practice Standard (CPS) Code 590.
    f) The CNMP Conservation Planning Activity (CPA) and CNMP DIA collectively ensure that the purposes of crop or livestock production and conservation of natural resources are compatible.
3) Planned Conservation Practices on the Farmstead:
    a) For planned storage facilities, the TSP only needs to gather enough information about the site to indicate that it is at least "feasible" to install the planned storage facility at the location shown on the farm headquarters map. Conservation Evaluation and Monitoring Activity (CEMA) 226 Waste Facility Site Suitability and Feasibility Assessment will be used to determine site suitability and feasibility, if needed.
    b) Include a summary and conclusion of results of the National Air Quality Site Assessment Tool (NAQSAT) if identified in the CNMP or conservation plan plus an updated report with conservation practices planned. Refer to the Supporting Documentation section for details.
    c) Confirm inventory of livestock and manure production, and storage and transport are documented in the CNMP CPA. If not developed in the CPA, a new inventory will be developed.
    d) Design and installation specifications for nonstructural conservation practices that address soil, water and air resource concerns are completed as implementation requirement sheets or job sheets in compliance with the applicable conservation practice in the state's Conservation Practice General and Additional Criteria sections.
    e) Design and installation specifications are not required for structural conservation practices.
4) Planned Conservation Practices on Crop and Pasture Acres (Land Treatment Area):
    a) For all planned land treatment conservation practices, complete the implementation requirements specific to each field. Site specific instructions are provided as implementation requirements or completed job sheets. Implementation design instructions are established in compliance with the applicable conservation practice in the state's Conservation Practice General and Additional Criteria sections. All items

listed in the Plans and Specifications and Operation and Maintenance sections of each conservation practice are to be included.

b) The CNMP DIA implementation requirements for applicable conservation practices will include the anticipated change (benchmark and alternative) in risk assessment or the mitigation method to manage risk.

c) The nutrient management portion of the CNMP DIA must comply with all technical criteria contained in the state's Nutrient Management CPS 590 and address the use and management of all nutrients applied on agricultural lands from any available nutrient source (animal manure, wastewater, commercial fertilizers, crop residues, legume credits, irrigation water, organic by-products, etc.). All items listed in the Plans and Specifications and Operation and Maintenance sections of Nutrient Management CPS 590 must be included.

DELIVERABLES

The TSP must provide documentation showing all the tasks indicated in the **General Requirements** section, the **Technical Requirements** section, and the following sections:

Cover Page

The cover page must include the following (when using Manure Management Planner (MMP), the national template cover page will meet these requirements):

1) DIA name and number.
2) Participant information: Name, farm bill program name, contract number (TSP obtains contract number from participant), land identification (e.g., state, county, farm, and tract number).
3) TSP name, TSP number, TSP expiration date, mailing address, phone number, email address.
4) A statement by the TSP that services meet the DIA requirements, such as:

   I certify the work completed and delivered for this DIA:

   - *Complies with all applicable Federal, State, Tribal, and local laws and regulations.*
   - *Meets the General and Technical Requirements for this DIA.*
   - *The planned practices are based on NRCS CPS in the state FOTG where the practices are to be implemented.*
   - *Is consistent with and meets the conservation goals and objectives for which the program contract was entered into by the participant.*
   - *Incorporates alternatives that are both cost effective and appropriate to address the resource issue(s) and participant's objective(s).*

   TSP Signature _____ *Date* _____

5) Participant's acceptance statement indicating:

   I accept the completed DIA deliverables as thorough and satisfying my objectives.

   Participant Signature _____ *Date* _____

6) A designated space for an NRCS reviewer to certify the agency's acceptance of the completed DIA.

   NRCS administrative review completion by:

   Signature _____ *Title* _____ *Date* _____

Notes and Correspondence

1) Provide notes, in date-order that:
   a) Document each interaction with the participant, results of that interaction, and the date of the interaction.
   b) Document each site visit, its participants, the activity completed in the field, and results of each site visit.
   c) Provide name of the note-maker, if more than one person provides the assistance.
2) Provide copies of correspondence between the TSP and the participant relating to decision-making and completion of this DIA. For example, description of alternatives presented for evaluation and decision-making.

Implementation Maps

1) Maps developed from the CNMP CPA 102 can be used for the CNMP DIA 101 if available or include new maps to include, but not limited to:
   a) General location map of the implementation areas showing access roads to the location.
   b) Conservation Plan map (this may consist of several maps to account for the entire implementation area). This map may be obtained from the client.
   c) Other maps, as needed, with appropriate interpretations and as described in the General Requirements section.
2) Maps for a DIA must include these features:
   a) Map title.
   b) Participant's name.
   c) Assisted By [TSP planner's name].
   d) Name of applicable conservation district, county, and state.
   e) Date prepared.
   f) Map scale.
   g) Information needed to locate the planning area, such as geographic coordinates, public land survey coordinates, etc.
   h) North arrow.
   i) Appropriate map symbols and a map symbol legend on the map or as an attachment.

Design or Implementation Details

1) Develop site-specific written instructions for implementing for each planned (non-engineering) conservation practice (including facilitating practices) or activity included in the participant's DIA. Those instructions must:
   a) Include, as a minimum, all items listed in each CPS "Plans and Specifications" section and applicable PS.
   b) Include, as a minimum, all items listed in each CPS "Operation and Maintenance" section. Prepare an operation and maintenance plan for each design that the client will use after implementation of the practices are complete.
   c) Include both visual/photographic and narrative descriptions of the work. Provide descriptive information on the quality of the work to be completed and the quantities of

all materials required for completion of the work.

d) These items may be included in a single document or in multiple documents, as long as specification information is provided.

2) SOW documents in a state's FOTG Section 4 include a design section that lists deliverables needed for the participant's successful implementation.

3) IR documents in a state's FOTG Section 4 may be used to prepare and deliver site-specific conservation practice instructions but are not required to be used.

4) Planned Storage Feasibility.

   a) Planned storage feasibility will be determined using CEMA 226 Waste Facility Site Suitability and Feasibility Assessment. A copy of the deliverables from CEMA 226 will be included in the DIA deliverables.

   b) If NRCS is providing the design of the planned storage facilities, CEMA 226 may not be required.

5) Evaluation of Existing Storage Facility.

   Evaluation of existing storage facilities will be determined using CEMA 227 Evaluation of Existing Waste Storage Facility Components. A copy of the deliverables from CEMA 227 will be included in the DIA deliverables.

Supporting Documentation

Supporting documentation (maps, risk assessments, etc.) can be obtained from an existing Conservation Activity Plan (CAP)102, CNMP, or CPA102, and may be copied from Client Case File Conservation Plan if the client has a signed release form NRCS-CPA-70.

Provide results of design tools, resource assessments, or other analyses that are required to meet the criteria in the state's CPS and PS, including:

1) All items listed in the Plans and Specifications and Operation and Maintenance sections of each conservation practice are to be included.

2) Forms and worksheets used in documenting planned alternatives.

3) Inventory and analysis information, (this would include all resource concern assessments):

   a) Test data results from soil and manure analysis.

   b) Erosion, nitrogen (N) leaching index, phosphorus (P) Index, water quality assessments, air quality site assessment, livestock inventory, manure/waste estimated production, manure imports/exports, manure storage, irrigation assessments.

   c) Evaluation of existing waste handling/storage structures for integrity and capacity, site feasibility data (CEMA 227) if needed (such as topographic survey, soil boring or flood zone information). Where the assistance of a licensed engineer was required for inventory, assessments, plans, etc. shall be signed by the respective licensed engineer.

4) Current and/or planned plant production sequence or crop rotation.

5) Planned crops and realistic yield goals for the crops.

6) Complete nutrient budget, including both field and plan nutrient balance for N, P, and potassium (K) for the plant production sequence or crop rotation.

7) Odors from manure applications will be controlled. Document headquarters odor control practices (existing or planned) based on NAQSAT. Document manure application management to reduce odor risk in fields such as:
   a) Spreading during times when neighbors may be spending time outside, such as on holidays or weekends, will be avoided.
   b) Spreading during hot humid days when the air is heavy and still will be avoided as much as possible.
   c) Surface applied manure will be incorporated immediately or at least within 48 hours of application when possible.
   d) Time applications of manure and incorporation to minimize losses of ammonia and N.
8) Listing and quantification of all nutrient sources, fertilizer recommendations, planned nutrient applications and form.
9) If applicable, include photographs, audio and video files or digital files of these type of documents.
10) Other appropriate supporting documents and local or state required documentation.
11) Engineering Notes, if applicable.
12) Record-keeping forms and guidance, as appropriate.
13) Notes and computations to support all practice design documentation—for computations requiring an engineer's license, the computations are to be signed by the respective licensed engineer.
14) All electronic files used for design and nutrient management planning.

Deliver Completed Work

The TSP must:

1) Prepare and provide their participant two copies of the items listed in Deliverables.
   a) One set is for the participant to keep.
   b) The other set is for sharing with the local NRCS Office. Must also include:
      i) Printed and electronic copy of the complete CNMP document.
      ii) CNMP electric document file (if using MMP, include the ".nat-cnmp.doc" file).
      iii) Nutrient Management planning tool electronic files (if using MMP, include the ".mmp" files); include all information used for design and nutrient management planning.
   c) The TSP may transmit a set of the Deliverables to the local NRCS Office, if their participant has authorized it. It is recommended to provide NRCS field office an opportunity to review the DIA deliverables, prior to asking for its acceptance.
2) Upload electronic copies of all the Deliverables on NRCS Registry. (If using MMP, include the ".nat-cnmp.doc" and the .mmp file).

References

USDA NRCS. Cultural Resources Handbook
NRCS National Cultural Resources Procedures Handbook Subpart C (usda.gov)

USDA Natural Resources Conservation Service. Field Office Technical Guide. Field Office Technical

Guide (FOTG) | Natural Resources Conservation Service (usda.gov)

USDA Natural Resources Conservation Service. 2011. National Agronomy Manual. 190-V. 4th Ed. https://directives.sc.egov.usda.gov/viewerFS.aspx?hid=29606

USDA Natural Resources Conservation Service. National Environmental Compliance Handbook. https://directives.sc.egov.usda.gov/viewerFS.aspx?hid=39467

USDA Natural Resources Conservation Service. National Planning Procedures Handbook. https://directives.sc.egov.usda.gov/viewerFS.aspx?hid=44407