

Nutrient Management Plan Criteria Practice/Activity Code (104) (No.)

1. Definition

Nutrient management plans are documents of record of how nutrients will be managed for plant production. These plans are prepared in collaboration with producer and/or landowner and are designed to help the producer with implementation and maintenance activities associated with the plan.

A Nutrient Management conservation activity plan must:

- a. Meet NRCS quality criteria for soil quality, water quality and quantity, and other identified resource concerns;
- b. Be developed in accordance with technical requirements of the NRCS Field Office Technical Guide (FOTG) and policy requirements of General Manual, Title 190, Part 402, Nutrient Management; and guidance contained in the National Agronomy Manual, Subpart 503C.
- c. Comply with federal, state, tribal, and local laws, regulations and permit requirements; and
- d. Satisfy the operator's objectives.

2. Nutrient Management Plan Technical Criteria

This section establishes the minimum criteria to be addressed in the development of Nutrient Management Plans.

A. General Criteria

The "Nutrient Management Plan" shall be developed by certified Technical Service Providers (TSPs). In accordance with Section 1240 (A), the Environmental Quality Incentive Program (EQIP) program provides funding support through contracts with eligible producers to obtain services of certified TSPs for development of Nutrient Management Plans. The specific TSP criteria required for Nutrient Management Plan development is located on the TSP registry (TechReg) web site at:

<http://techreg.usda.gov/>

B. Nutrient Management Specific Element Criteria

The Nutrient Management Plan shall include, but not be limited to, the following components:

1. Background and Site Information
 - Name of owner/operator;
 - Farm location and mailing address;
 - Soil map units;
 - Conservation plan map;
 - Field names or codes;

- List of crops grown on the parcel, with acreage for each crop
- Description of the concerns related water quality, soil erosion (wind and water) or other local concerns, etc.

2. Land Treatment

Land Treatment shall address the need for and implementation of appropriate conservation practices for land treatment areas. On fields where nutrients (manure, organic by-products, and commercial fertilizer) are applied, it is essential that runoff and soil erosion be reduced to soil loss tolerance (T) levels, and that plant uptake of applied nutrients be maximized to prevent nutrients from reaching surface and/or groundwater or being volatilized to the air. Therefore, the planner must develop a conservation system that will reduce runoff and control soil erosion from the field to the level specified in Section III of the FOTG. Criteria for land treatment practices element:

- (i) GIS Map(s) documenting fields and conservation practices:
 - Aerial maps of land application areas including soil maps;
 - Fields delineated to show setbacks, buffers, waterways, conservation practices planned or other site specific features important to nutrient management planning (risers, inlets, wells);
 - Identification of sensitive areas such as sinkholes, streams, springs, lakes, ponds, wells, gullies, and drinking water sources; and
 - Other site information features of significance, such as property boundaries or occupied dwellings.
- (ii) Land treatment conservation practices planned or applied to meet the quality criteria for soil erosion, air and water quality. Include the practice narrative and the O&M requirements for each practice. Design specifications (job sheets, engineering plans) and information associated with planning and implementation of the included conservation practices shall be maintained.
- (iii) To achieve the desired soil erosion, water and air quality improvements on land treatment areas, adjacent fields may also require conservation treatment.
- (iv) Additional natural resource concerns may need to be addressed to meet an acceptable treatment level for erosion, water quality, and air quality, for example, managing the plant resource on pasture lands.
- (v) If it is determined that excessive negative impacts to air quality resource concerns arise from existing or planned land treatment activities, identified in the plan, then air quality impact mitigation is required in the nutrient plan.

3. Nutrient Management

Nutrient Management plans shall meet the technical criteria for the Nutrient Management conservation practice (code 590) standard, and address the use and management of all nutrients applied on cropland, hayland, or pastureland (animal manure, wastewater, commercial fertilizers, crop residues, legume

credits, irrigation water, organic by-products). Planners shall document the rationale when using custom recommendations in the nutrient plan.

- (i) Some data necessary to develop a nutrient plan will come from chemical analyses of soils, plant tissue, manure, water, and feed. Soil test analyses shall be performed by laboratories successfully meeting the requirements and performance standards of the North American Proficiency Testing Program (NAPT) Proficiency Assessment Program (PAP) <http://www.naptprogram.org/pap/> under the auspices of the Soil Science Society of America or State-recognized program that considers laboratory performance and proficiency to assure accuracy of test results.
- (ii) Manure analyses shall be performed by laboratories successfully meeting the requirements and performance standards of the Manure Testing Laboratory Certification Program (MTLCP) <http://www.mda.state.mn.us/licensing/pestfert/manurelabs.htm> under the auspices of the Minnesota Department of Agriculture, or State-recognized program that considers laboratory performance and proficiency to assure accuracy of test results. States are encouraged to adopt the MTLCP or State Conservationists can establish State proficiency criteria that meet or exceed the MTLCP program criteria.
- (iii) Nutrients from biosolids must be included in nutrient management planning when applied on farms for which nutrient plans are being developed. Biosolids (sewage sludge) applications are regulated by the U.S. Environmental Protection Agency (EPA) and, therefore, shall be applied in accordance with EPA regulations (40 C.F.R. Parts 403 Pretreatment and 503 Biosolids) and other State and/or local regulations regarding the use of biosolids as a nutrient source.
- (iv) Criteria for nutrient plans shall include all proposed applications of manure and other needed nutrients to meet the Nutrient Management conservation practice standard (code 590). This would include all fields that may receive manure applications from any manure source. The plans and specifications shall include the following tables:
 - Field information—identify field names, total acres, and spreadable acres in a table format;
 - Manure application setback distances—identify setbacks for each field on the map and in a table format;
 - Soil test data—soil test data for each field displayed in a table;
 - Irrigation water test data (if applicable);
 - Manure nutrient analysis—document most recent manure analysis in a table;
 - Planned crops and fertilizer recommendations—list fields, crops, yield goals, and fertilizer recommended;
 - Manure application planning calendar—display manure applications planned, when crops are grown, and restrictions that would prevent nutrient/manure applications, for example, winter spreading or high potential for nitrate leaching;

- Planned nutrient applications—the timing, rate, source(s), and methods of application by field;
- Field nutrient balance—the recommended nutrient amounts, nutrients applied, and balance after recommendation, and balance after crop removal;
- Manure inventory annual summary—annual manure production by source and storage facility; and
- Farm nutrient balance (acres planned for nutrient application) – summary of primary nutrients applied from all nutrient sources, by crop, year, and field. The net excess or shortage of nitrogen, phosphorus, and potassium shall be displayed by crop year and field.

C. Associated Practice Standards

The Nutrient Management Plan shall address the resource concerns identified and the conservation practices needed to comprise a conservation system. Document the planned conservation practices, the site specific specifications for the practice, the amount to be applied, and schedule of application. Typical NRCS Conservation Practice Standards to be incorporated in a Nutrient Management Plan may include one or more of the following:

- Conservation Crop Rotation (328)
- Cover Crop (340)
- Contour Farming (330)
- Drainage Water Management (554)
- Residue and Tillage Management, No Till (329)
- Residue and Tillage Management, Mulch Till (345)
- Residue and Tillage Management, Ridge Till (346)
- Grassed Waterway (412)
- Strip Cropping (585)
- Terrace (600)
- Contour Buffer Strips (332)
- Riparian Herbaceous Cover (390)
- Riparian Forest Buffer (391)
- Filter Strip (393)
- Vegetative Barriers (601)
- Vegetative Treatment Area (635)
- Constructed Wetland (656)

- Wetland Restoration (657)
- Wetland Creation (658)
- Wetland Enhancement (659)
- Denitrifying Bioreactor (747)
- Forage Harvest Management (511)
- Diversion (362)
- Field Border (386)
- Grade Stabilization Structure (410)
- Tailwater Recovery (447)
- Structure for Water Control (587)
- Waste Utilization (633)
- Water and Sediment Control Basis (638)

D. References

- USDA Natural Resource Conservation Service National Agronomy Manual, Parts 507 and 503C.
- General Manual, Title 190, Part 402, Nutrient Management

1. Deliverables for the Client – a hardcopy of the plan that includes:

- Cover page – name, address, phone of client and TSP; Total Acres of the Plan, signature blocks for the TSP, producer, and a signature block for the NRCS acceptance.
- Soils map and appropriate soil descriptions
- Resource assessment results (wind and water erosion, water availability, soil fertility, and others that may be needed)
- For management practices. The planned practices and the site specific specifications on how each practice will be applied; when the practice will be applied, and the extent (acres or number) that will be applied.
- For engineering/structural practices. The planned practice when it will be applied and extent, and located on the conservation plan map.
- The following nutrient management conservation practice (code 590) requirements:
 - Field information;
 - Manure application setback distances;
 - Soil test data;
 - Manure nutrient analyses;
 - Planned crops and fertilizer recommendations;

- Manure application planning calendar;
- Planned nutrient applications;
- Field nutrient balance;
- Manure inventory annual summary;
- Fertilizer material annual summary; and
- Farm nutrient balance.

2. Deliverables for NRCS Field Office:

- Complete Hardcopy and Electronic copy of the client's plan (MsWord copy).
- Digital Conservation Plan Map with fields, features, and structural practices located.
- Digital Soils Map.