

# NUTRIENT MANAGEMENT PLANS

## What is a Nutrient Management Plan?

A Nutrient Management Plan (NMP) is a tool that identifies the nutrient needs (in terms of timing and amount) of a given crop or crops being planted in order to maximize yields and minimize nutrient runoff. The USDA Natural Resources Conservation Service (NRCS) Standard (590) provides technical guidance to NRCS field staff, producers and others involved in drafting and implementing these plans. Many farms in North Carolina are required to possess certified Nutrient Management Plans while others develop a NMP voluntarily.

## Why develop a Nutrient Management Plan?

The primary reasons for having a Nutrient Management Plan are to:

- Maintain an adequate supply of nutrients for plant production;
- Ensure manure or other organic by-products present are maximized as a plant nutrient source;
- Minimize the pollution of surface and ground water resources from excess nutrients; and
- Manage the physical, chemical and biological condition of soils for future crop production.

In addition to the reasons stated above, having a nutrient management plan in place can be useful from an economic standpoint by helping you manage costs associated with nutrient input from commercial fertilizer and animal manure application. It can also be beneficial in instances where a strategy is needed to deal with excess nutrients present or when nutrient management questions are posed by a visiting regulatory official or neighboring landowner. When developing a Nutrient Management Plan, all potential sources of nutrients should be considered. Common nutrient sources include, but are not limited to:

- Animal manure and other organic by-products;
- Commercial fertilizers;
- Irrigation water and wastewater; and
- Residual or naturally occurring soil nutrients.

## How does one develop a Nutrient Management Plan?

Numerous computer software programs have been developed for producers in North Carolina who are required or who voluntarily wish to create a Nutrient Management Plan for their operation. The North Carolina Agricultural Nutrient Assessment Tool (<http://nutrients.soil.ncsu.edu>) is a phosphorus and nitrogen tracking tool that is used for most fields where animal waste is applied. Other software programs such as the North Carolina Nutrient Management Software (used in writing plans where animal waste and commercial fertilizers are involved) are also available for use. Nutrient Management Plan training is available through the NC Division of Soil and Water Conservation. If you are unsure whether you are required to have a certified NMP or if you need technical assistance developing a plan, contact your county Soil and Water Conservation District Office or the local office of the USDA-Natural Resource Conservation Service. Contact information is provided below.

A thorough Nutrient Management Plan should contain the following:

- ✓ An aerial photograph or map, and a soil map of the field;
- ✓ Information on the current and/or planned crop production sequence or crop rotation sequence;
- ✓ Data from soil, plant, water, manure and/or organic byproduct sample analysis;
- ✓ Yield potentials for crops in field rotation;
- ✓ A list of all nutrient sources present or planned and an estimated quantity;
- ✓ Recommendations on soil and nutrient testing, nutrient rates, method of application and a strategy for the timing of nutrient applications for crop cycle(s) covered under the plan;
- ✓ A map showing designated sensitive areas or resources and the associated nutrient management restrictions for those areas; and

- ✓ An informative section for the producer and his/her employees or family including details on implementation, operation, maintenance, and record keeping, and a complete field-by-field nutrient budget for nitrogen, phosphorus, and potassium for the field rotation or crop sequence.

A statement may also be included in the plan certifying that the plan was developed based on current standards and any applicable Federal, State, or local regulations or policies and that changes in any of these requirements may necessitate plan revisions.

### **Contact the following agencies for technical and/or cost share assistance with developing a nutrient management plan:**

#### **North Carolina**

USDA Natural Resources Conservation Service  
225 Valley River Ave., Ste. J  
Murphy, NC 28906  
(828) 837-6417 x3  
[glenn.carson@nc.usda.gov](mailto:glenn.carson@nc.usda.gov)

Cherokee Co. Soil & Water Conservation District  
225 Valley River Ave., Ste. J  
Murphy, NC 28906  
(828) 837-6417 x3  
[michael.stiles@cherokeecounty-nc.gov](mailto:michael.stiles@cherokeecounty-nc.gov)

Clay Co. Soil & Water Conservation District  
PO Box 57  
Hayesville, NC 28904  
(828) 389-9764  
[glen.cheeks@nc.nacdnet.net](mailto:glen.cheeks@nc.nacdnet.net)

#### **Georgia**

USDA Natural Resources Conservation Service  
185 Welborn Street, Box 3  
Blairsville, GA 30512  
(706) 745-2794 x3  
[doug.towery@ga.usda.gov](mailto:doug.towery@ga.usda.gov)

### **The following web sites provide additional information about nutrient management plans:**

USDA, Natural Resources Conservation Service  
*Nutrient and Pest Management Technical Resources*  
<http://www.nrcs.usda.gov/technical/nutrient.html>

*Technical Reference Documents for North Carolina*  
<http://www.nc.nrcs.usda.gov/technical/TechRef/techref-water.html>

*Job Sheets for Individual Agricultural Practices*  
[ftp://ftp-fc.sc.egov.usda.gov/NC/ECS/Job\\_Sheets/NC\\_Job\\_Sheets.htm](ftp://ftp-fc.sc.egov.usda.gov/NC/ECS/Job_Sheets/NC_Job_Sheets.htm)

Vermont Natural Resources Conservation Service  
*Fact Sheets for Individual Conservation Practices*  
[http://www.vt.nrcs.usda.gov/technical/Conservation\\_Practices/Index.html](http://www.vt.nrcs.usda.gov/technical/Conservation_Practices/Index.html)

North Carolina State University  
*Nutrient Management in North Carolina*  
<http://www.soil.ncsu.edu/programs/nmp/ncnmwg/>

North Carolina Division of Soil and Water Conservation  
*Guidance Documents for Agricultural Nutrient Management*  
[http://www.enr.state.nc.us/DSWC/pages/guidance\\_docs.html](http://www.enr.state.nc.us/DSWC/pages/guidance_docs.html)