

**OPERATION AND MAINTENANCE PLAN  
FOR  
NUTRIENT MANAGEMENT (590)**

Landowner/user:

Date:

Address:

A properly operated and maintained **Nutrient Management Plan** is an asset to your property. Nutrient management plans manage the amount, source, placement, form and timing of the application of nutrients and soil amendments. The plan will: budget and supply nutrients for plant production; minimize agricultural nonpoint source pollution of surface and ground water resources by properly utilizing manure or organic by-products as a plant nutrient source; and maintain or improve the physical, chemical and biological condition of soil.

This practice will require you to perform periodic operation and maintenance to maintain satisfactory performance. The following are some requirements to help you develop a good operation and maintenance program.

**Operation and Maintenance**

Lifespan 1 Year

- Conduct periodic plan reviews to determine if adjustments or modifications to the plan are needed. At a minimum, plans must be reviewed and revised, as needed with each soil test cycle, or a 10% or greater change in manure volume or analysis, crops, or crop management or land base.
- Fields receiving animal manures and/or biosolids must be monitored for the accumulation of heavy metals and phosphorus in accordance with UVM guidance and State law.
- Significant changes in animal numbers, management, and feed management will necessitate additional manure analyses to establish a revised average nutrient content.
- Calibrate application equipment to ensure accurate distribution of material at planned rates.
- Document the nutrient application rate. When the applied rate differs from the planned rate, provide appropriate documentation for the change.
- Records must be maintained for at least 5 years to document plan implementation and maintenance. As applicable, records include:
  - soil, plant tissue, water, manure, and organic by-product analyses resulting in recommendations for nutrient application
  - quantities, analyses and sources of nutrients applied,
  - dates, and method(s) of nutrient applications, source of nutrients, and rates of application,
  - weather conditions and soil moisture at the time of application; lapsed time to manure incorporation; rainfall or irrigation event,

- crops planted, planting and harvest dates, yields, nutrient analyses of harvested biomass, and crop residues removed,
- dates of plan review, name of reviewer, and recommended changes resulting from the review, and
- all enhanced efficiency fertilizer products used.
  
- Additional records for precision/variable rate sites must include:
  - maps identifying the variable application source, timing, amount, and placement of all plant nutrients applied, and
  - GPS-based yield maps for crops where yields can be digitally collected.

Additional operation and maintenance requirements may be required to be developed on a site-specific basis to assure performance of the practice as intended.

Specific Additional Requirements for Your Practice: