

STATEMENT OF WORK
Precision Nutrient Management Plan
Ohio

PLANNING

NOTE: A Precision Nutrient Management Plan (PNMP) is to address all land units that the owner and/or operator owns or has decision-making authority over and on which fertilizer will be applied using Variable Rate Technology (VRT). Nutrient application cannot exceed the recommendations contained in practice standard (590) Nutrient Management or the Tri-State Fertility Guide. If manure is to be applied, a Comprehensive Nutrient Management Plan (CNMP) should be developed rather than a PNMP.

Deliverables:

Provide documentation that addresses the following items: (The Ohio PNMP format and the Ohio PNMP Producer Activity Plan generated from the Purdue Manure Management Program (MMP) are to be used.)

Note: The section numbering below is consistent with a Comprehensive Nutrient Management Plan (CNMP) document. Omitted sections do not apply to a Precision Nutrient Management Plan (PNMP)

Section 1. Background and Site Information**1.1 General Description of Operation**

- List the name, address, phone number of the owner or operator.
- In a concise narrative, describe the operation, the goals and objectives of the producer, the resource concerns in any field or zone to be planned.

1.2 Sampling, Calibration and Other Statements

- Develop a brief narrative describing soil test sampling procedure and frequency.
- Develop a brief narrative describing equipment calibration methods.

1.3 Resource related concerns – List and briefly describe:

- Soil erosion, nutrient, quality, compaction concerns
- Water quantity and quality concerns
- Air, odor, drift concerns
- Plants nutrient, health concerns

Section 3: Farmstead Safety and Security**3.1 Emergency Response Plan**

- Listing appropriate local contacts with phone numbers in case of a spill or accident.

3.4 Chemical Handling

- Develop a brief narrative that describes any chemical storage and handling
- NOTE:** This section is required for regulatory permitted facilities. It is optional for non-permitted facilities.

STATEMENT OF WORK
Precision Nutrient Management Plan
Ohio

Section 4: Land Treatment**4.1 Map(s) of Fields and Conservation Practices**

- Conservation Plan (field) maps or aerial photos of all the management zones or grids which will receive fertilizer. Maps should indicate roads, streams, marked setbacks, buffers, waterways, and environmentally sensitive areas, such as sinkholes, wells, gullies, tile inlets, etc. Each field should be identified using management zone or grid number, land use designation, acres in size and spreadable acres in the field. Each map should include a legend, map scale, and tract numbers.

4.2 Land Treatment Conservation Practices

- Identify and list any existing and/or planned land treatment practices for all land receiving fertilizer. Practices should address the resource concerns identified in Section 1.3 and be labeled using NRCS Conservation Practices with brief narratives. List the quantities of each practice and develop a schedule of practice installation.
- At a minimum, this section will contain (328) Conservation Crop Rotation, (329/345/346) Residue and Tillage Management, and (590) Nutrient Management.

NOTE: If the PNMP developer is not a Certified Conservation Planner, a conservation plan developed by a certified planner in Customer Service Toolkit must be inserted here or must be approved by a Certified Conservation Planner.

4.3 Geo-Reference Yield Map(s) of Management Zones or Grids

- Insert geo-referenced crop yield maps used to determine the boundaries of the management zones. Maps should be labeled by year and should include all acres to be considered for VRT nutrient application.

4.4 Geo-Reference Management Zone or Grid Maps

- Insert geo-referenced maps or aerial photos delineating the management zones or grids developed for this operation. Management zones should be no larger than 12 acres in size and grids should be no larger than 6 acres in size,

4.5 Geo-Reference Soil Sample Location Maps

- Insert maps or aerial photos indicating the geo-referenced location of all soil samples taken and used to determine the boundaries of management zones. Soil samples should be taken every two years in a precision nutrient management system. Maps should be labeled by year.

STATEMENT OF WORK
Precision Nutrient Management Plan
Ohio

Section 5: Soil and Risk Assessment Analysis

5.1 Soil Information

- Include soils maps with legends, map unit descriptions, and a soils Inventory.

5.2 Predicted Soil Erosion

- Develop soil loss calculations using RUSLE2 for each management zone or grid receiving fertilizer. List predominate soil types and average slopes. The RUSLE2 tool contained in the Purdue Manure Management Planner is suitable.

5.3 Nitrogen and Phosphorus Risk Assessment Procedure

- Document potential transport risk of nitrogen or phosphorus from zones or grids on a field-by-field basis.

5.4 Additional Field Data Required by Assessment Procedure

- Identify distances to water by management zone or grid, listing the type of water (pond, creek) and identify fields containing tile drainage.

5.6 Special Fertilizer Application Criteria

- List criteria for winter fertilizer application, fertilizer application of fields subject to flooding, liquid fertilizer application on tile drained fields, and minimum ground cover for fertilizer applications.

Section 6: Nutrient Management

6.1 Field Information

- List management zone or grid acres, spreadable acres (if less than zone acres), FSA tract number, predominate soil type and percent slope for each management zone or grid receiving fertilizer.

6.3 Soil Test Data

- List soil test values for all management zones or grids receiving fertilizer. Data should contain at a minimum, percent organic matter, soil test phosphorus, potassium, magnesium, and calcium as well as pH, and CEC. The values should clearly state whether they are in parts per million or pounds per acre. It should also be clearly stated what test was used to develop the values (such as Bray-Kurts P1, or Mehlich 3 ICP) and what testing lab was used

6.5 Planned Crops and Fertilizer Recommendations

- Each crop in the rotation should be identified by field by year listing the nutrients to be supplied by commercial fertilizer.

STATEMENT OF WORK
Precision Nutrient Management Plan
Ohio

6.7 Planned Nutrient Applications

- List by management zone or grid, the month of application, the target crop, and the fertilizer source, the fertilizer application equipment to be used, the application rate by zone or grid, the spreadable acres to be covered, the estimated nitrogen, phosphorus, and potassium needed for zone or grid.

6.8 Field Nutrient Balance

- List by management zone or grid, the nutrients applied, the nutrients removed by the crop, and the net balance of nutrients.

6.10 Fertilizer Material Annual Summary

- List the amount and type of fertilizer used to balance nutrients during the PNMP implementation period.

6.11 Whole Farm Nutrient Balance

- Summarize all the fertilizer nutrients (N-P-K) applied throughout the life of the NMP.

Section 9: Record Keeping

- Provide the producer forms generated from the MMP “Producer Activity Plan” to record application data.
-

REFERENCES

- NRCS National Planning Procedures Handbook (CNMP Technical Guidance) http://policy.nrcs.usda.gov/scripts/lpsiis.dll/H/IpType,toc;H_180_600_E_5.htm#CURR
- NRCS Field Office Technical Guide http://www.oh.nrcs.usda.gov/technical/ohio_eFOTG.html
- NRCS National Engineering Manual <http://www.oh.nrcs.usda.gov/intranet/directives.html#NEM>
- NRCS National Agronomy Manual http://policy.nrcs.usda.gov/scripts/lpsiis.dll/M/M_190_NAM.htm
- NRCS Environmental Compliance Handbook http://policy.nrcs.usda.gov/scripts/lpsiis.dll/H/IpType,toc;H_190_610_Content.htm#CURR
- NRCS Cultural Resources Handbook http://policy.nrcs.usda.gov/scripts/lpsiis.dll/H/IpType,toc;H_190.htm#CURR
- Ohio NRCS Conservation Planning Policy 180- [Conservation Planning and Application](http://www.oh.nrcs.usda.gov/intranet/GenManual/180_gm_cons_plan_applic.html) http://www.oh.nrcs.usda.gov/intranet/GenManual/180_gm_cons_plan_applic.html
- Purdue Manure Management Planner (current version) <http://www.agry.purdue.edu/mmp/>