Nutrient Management Requirements within ATCP50

Cody Calkins

Nutrient Management Policy Specialist

WISCONSIN DEPARTMENT OF AGRICULTURE TRADE AND CONSUMER PROTECTION

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WHAT IS NUTRIENT MANAGEMENT?

- The use of manure and other fertilizers to meet crop nutrient needs, while reducing the potential for them to run off fields to lakes, streams and groundwater
- Assures that crops get the right amount of nutrients – like nitrogen, phosphorus, and potassium, at the right time and place
- Provides benefits to the farmer by improving crop yields, reducing costs, and benefits the environment

NR151 - RUNOFF MANAGEMENT

Establishes runoff pollution performance standards and prohibitions for agricultural facilities and practices designed to achieve water quality standards in [281.16 (3)]

Performance Standards & Prohibitions

1. Sheet, rill, and wind erosion
2. Tillage setbacks
3. Phosphorous index
4. Manure storage facilities
5. Process wastewater
6. Clean water diversions
7. **Nutrient management**
8. Silurian bedrock
9. Manure management prohibition

POLICY OVERVIEW

NR151 (DNR)

- NR151.07 (3) – Manure, commercial fertilizer, and other nutrients shall be applied in conformance with a nutrient management plan.

ATCP50 (DATCP)

- ATCP50.04 (3) - Nutrient Management Plan

Conservation Practices (DATCP/NRCS/Counties)

- NRCS Practice Standards – 590 (Nutrient Management)

SOIL AND WATER CONSERVATION ON FARMS - NUTRIENT MANAGEMENT PLAN [ATCP 50.04 (3)]

- All landowners who apply nutrients to any field, including pastures*
- Written by a qualified planner under ATCP50.48
- Based on soil nutrient tests conducted by a certified lab.
- Must comply with NRCS 590 and WI Technical Note 1
- Recommendations must not exceed those in UW Extension Publication A2809 (2012)

NUTRIENT MANAGEMENT PLAN

- Pasture requirements:
  - Pastures required in a NMP when stocked at an average rate of more than one animal unit per acre during the grazing season.
    - 1000lbs of animal is one animal unit.
  - Pastures are NOT required in a NMP when:
    1. The pasture is stocked at an average stocking rate of one animal unit or less during the grazing season.
    2. Pastures do not receive mechanical applications of nutrients.

A QUALIFIED NM PLANNER SHALL PREPARE OR APPROVE THE PLAN

Who is a presumptively qualified NM Planner?

- Certified Professional Crop Consultant (NAICC)
- Certified Crop Adviser or Professional Agronomist (ASA, Wisconsin certified crop advisers board)
- Soil Scientist (SSSA)

Landowners can be qualified to write their OWN NMP.

- Must complete a department approved training course once every four years to maintain qualification.
- Definition of "Landowner"- a person who owns a parcel of land and or a person who rents, controls, or uses a parcel of land for agricultural purposes.

NMP SHALL BE BASED ON SOIL NUTRIENT TESTS CONDUCTED AT A LABORATORY CERTIFIED BY DATCP

Table 3.1. Analytical procedures for soil tests performed at University of Wisconsin laboratories and Wisconsin DATCP-approved private laboratories.

Soil Test	Procedures[a]
Soil pH	Prepare a 1:1 soil to water mixture and measure the pH with a glass electrode.
Buffer pH (BpH)	Prepare a 1:1:1 soil to water to Sikora buffer mixture and measure the pH with a glass electrode.
Phosphorus (P)	Extract with Bray 1, develop color, and measure colorimetrically using a spectrophotometer.
Potassium (K)	Extract with Bray 1 and measure with atomic absorption, flame photometer, or ICP-OES.
Organic matter (OM)	Loss of weight on ignition at 360°C for 2 hours. OM = 0.07 + 0.89 (LOI)[b]
Calcium (Ca), magnesium (Mg), sodium (Na)	Extract with neutral 1 N[c] ammonium acetate and measure with atomic absorption, flame photometer, or ICP-OES.
Sulfur (S)	Extract with 500 ppm phosphorus in acetic acid, develop turbidity, and measure with a photoelectric nephelometer.
Boron (B)	Extract with hot water, develop color, and measure colorimetrically using a spectrophotometer.
Manganese (Mn)	Extract with 0.1 N phosphoric acid and measure by atomic absorption or ICP-OES.
Zinc (Zn)	Extract with 0.1 N hydrochloric acid and measure by atomic absorption or ICP-OES.
Nitrate-nitrogen (NO_3-N)	Extract soil with 2 N KCl and analyze colorimetrically using a spectrophotometer.
Physical analysis (% sand, silt, clay)	Prepare 50 or 100 g soil with dispersing solution and measure with hydrometer.
Soluble salts	Prepare 1:2 soil to water mixture and measure with conductivity bridge.

[a] Detailed descriptions of the procedures can be found at uwlab.soils.wisc.edu/
[b] LOI = percent weight loss on ignition
[c] N = normal solution

NMP SHALL BE BASED ON SOIL NUTRIENT TESTS CONDUCTED AT A LABORATORY CERTIFIED BY DATCP

Labs that are DATCP Certified:

Laboratory	Website	Contact Info.	Address
Waypoint Analytical Illinois	https://waypointanalytical.com/	(217) 359-7680 supportil@waypointanalytical.com	2902 Farber Dr. Champaign, IL 61822
Wisconsin DATCP certified soil testing laboratories participating in the Manure Analysis Proficiency Program are listed below:			
Midwest Laboratories Inc.	https://midwestlabs.com/	(402) 334-7770 contactus@midwestlabs.com	13611 B St. Omaha, NE 68144
A&L Great Lakes Laboratories, Inc.	https://algreatlakes.com/	(260) 483-4759 lab@algreatlakes.com	3505 Conestoga Dr. Fort Wayne, IN 46808
UW Soil & Forage Analysis Lab	https://uwlab.soils.wisc.edu/	(715) 387-2523 soil-lab@mailplus.wisc.edu	4702 University Avenue Madison, WI 53705
AgSource Cooperative Services	https://agsource.com/	(715) 758-2178 bonduel@agsource.com	106 North Cecil St. Bonduel, WI 54107
		(715) 687-9997 stratford@agsource.com	117609 Forward St. Stratford, WI 54484
Minnesota Valley Testing Laboratories, Inc. (MVTL)	http://mvtl.com/	(800) 782-3557 mnsoil@mvtl.com	1126 N Front St. New Ulm, MN 56073
Rock River Laboratory	https://rockriverlab.com/	(920) 261-0446 office@rockriverlab.com	710 Commerce Dr. Watertown, WI 53094

Soil tests are not required on pastures that do NOT receive mechanical applications of nutrients if either of the following applies:

- Pastures are stocked at an average stocking rate of one animal unit per acre of less at all times during the grazing season.
- Pastures are stocked at an average rate of MORE than one animal unit per acre during the grazing season, and a NMP is compliant while using an assumed soil test P level of 150ppm and OM content of 6%.

Landowner may be required to provide documentation to the county LCD that animal stocking rate and soil test values meet requirements in NMP.

Soil Testing Requirements

NMP SHALL COMPLY WITH NRCS CONSERVATION PRACTICE STANDARD 590 NUTRIENT MANAGEMENT (DECEMBER, 2015)

- Additionally, NMPs must comply with the Wisconsin Conservation Planning Technical Note WI-1 (February, 2016)
- Specific setbacks and guidelines come from the NRCS 590 standard.
  - We will explain those when we touch on the 590 standard.

NUTRIENT APPLICATIONS MUST NOT EXCEED THE RECOMMENDED AMOUNT FOUND IN UW A2809 (2012)

- UWEX A2809- Nutrient Application Guidelines for Field, Vegetable and Fruit Crops
  - Recommendations match recommendations found on soil test results from certified soil labs.
  - Recommendations are built into SnapPlus.
- Unless NM planner can show that one or more of the following circumstances justifies additional nutrient applications:
  - A soil or tissue test reveals a specific deficiency.
  - Excess nutrients are the results of an unforeseen change in the type of crop planted.
  - Excess nutrients are the result of manure applications made in the last year prior to the implementation of the NMP.
  - Other special agronomic conditions documented by the NM planner and must include credible information to show that the higher applications will not materially increase environmental damage.

DO NOT APPLY MORE NUTRIENTS THAN RECOMMENDED IN A2809 UNLESS THE NUTRIENT MANAGEMENT PLANNER CAN SHOW THAT ONE OR MORE OF THE FOLLOWING CIRCUMSTANCES JUSTIFIES THE RECOMMENDED APPLICATION:

1. A soil or tissue test reveals a specific nutrient deficiency. For supplemental in-season nitrogen applications, a nutrient management planner shall follow steps outlined in NRCS conservation practice standard 590 nutrient management (December 2015).

2. Excess nutrients are the result of an unforeseen change in the type of crop planted.

3. Excess nutrients are the result of manure applications made in the last year prior to the implementation of the nutrient management plan.

4. Other special agronomic conditions documented by the nutrient management planner. A nutrient management planner who wishes to justify higher applications shall include credible information to show that the higher applications will not materially increase environmental damage.

ANNUALLY REVIEW AND UPDATE PLANS

Landowner or NM planner shall annually review a NMP to determine whether the plan accurately reflects the planned cropping, tolerable soil loss, nutrient application rates, and application methods.

Plan shall be updated when necessary to reflect changes in planned activities.

Thank You!

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Nutrient Management Policy Specialist

cody.calkins@wisconsin.gov

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