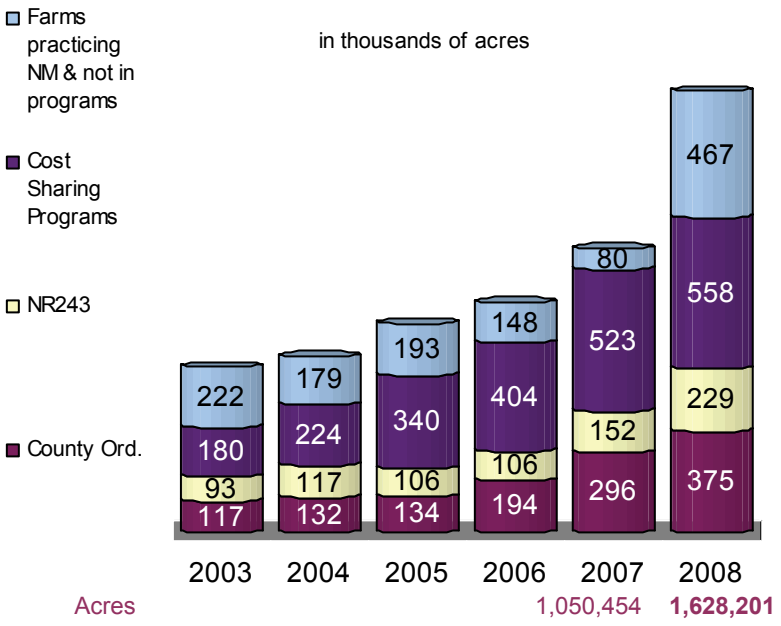
Wisconsin

NUTRIENT MANAGEMENT UPDATE

A Quality Assurance Team Review of 2008's Nutrient Management Plans

For the last 13 years, the Quality Assurance Team (QAT), comprised of agency and private nutrient management (NM) specialists, has conducted quality assurance reviews of NM plans. Each year the QAT reviews current plans written by NM planners that have not yet been reviewed. To date, 214 planners have had their plans reviewed for compliance with the NRCS 590 NM Standard with the goal of promoting stewardship of our soil and water resources. The results of the 2008 QAT review of 25 NM plans is sent to all qualified NM planners and those providing planning assistance to agricultural producers to help improve future NM planning.

2003-2008
Nutrient Management Plan Acres



What is a Nutrient Management Plan?

A nutrient management plan is an annually updated record that follows the USDA Natural Resources Conservation Service's 590 Nutrient Management Standard, 2005. A plan accounts for all N-P-K nutrients applied to each field over the crop rotation. Soils need to be tested by a DATCP certified laboratory every 4 years, with each field sampled approximately every 5 acres. A NM plan manages nutrient applications to *maximize* farm profitability while *minimizing* water degradation of both surface water and groundwater.

When is Nutrient Management Required?

All farms that mechanically apply nutrients must have a NM plan that accounts for all nutrients applied to each field. After Jan. 1, 2008, farms can be required to follow nutrient management plans. Some will be required without cost sharing if: 1. required by local manure storage or livestock siting ordinances; 2. participating in the Farmland Preservation Program; 3. regulated by a WPDES permit; 4. accepting cost share for manure storage; or 5. causing a discharge. Others not falling under these requirements can be compelled to follow a NM plan if 70% cost sharing, of $28/ac to cover 4 years, is offered.

WI Nutrient Management Codes

In 2002, DNR and DATCP promulgated regulations requiring all farms to have and implement a nutrient management plan. DNR's regulations, NR 151, require farmers to implement a number of water quality performance standards, including nutrient management.

In 2007, DATCP's regulations, ATCP 50, was amended to require following the 2005 NRCS 590 Nutrient Management Standard, which manages both N & P applications to reduce runoff. As of January 1, 2008, all farms can be required to implement nutrient management.

Liability Protection through NMPs: A Selling Point

ATCP 50 Wis. Admin. Code provides some liability protection for planners and farmers. If the NM plan is prepared or approved by a qualified planner, other than the farmer, and the farmer follows the properly written plan, the law presumes a farmer complies with the code requirements.

The 2008 Quality Assurance Team Members:

Randy Busch – Rock River Laboratory	Andrew Craig – WI DNR Madison	Laura Ward Good – UW Madison, Soil Science Department
Matt Luther – Rock River Laboratory	Fred Hegeman – WI DNR Madison	Joe Wolter – UW Madison, Soil Science Department
Roger Geisking – Premier Coop.	Chris Baxter – UW Platteville	Paul Kaarakka – UW Madison, Soil Science Department
Linda Miller – Premier Coop.	Jen Biscoe Smith – Larsen Coop.	Matt Ruark – UW Madison, Soil Science Department
Paul Kivlin– UW NPM	Judy Derricks – NRCS Madison	Kirk Langfoss – Marathon Co. Conservation Planning &. Zoning
Mike Harms – Frontier FS Darlington	Eric Galdi – Landmark Services Coop.	Ben Wojahn – Taylor County Land Conservation
Eric Tranel – Frontier FS Darlington	Sara Walling – DATCP Madison	Stephanie Schneider – DATCP Madison
Brad Schuett – Frontier FS	Sue Porter – DATCP Madison	

AGRICULTURAL PERFORMANCE STANDARDS

2008 NM Plan Review Compliance Summary

Our hope is that by reviewing planners and their plans, future plans will show improvement. The 590 standard requires planners to address the entire crop rotation for P applications and "T", tolerable soil loss. Not all planners are accustomed to this change. Snap Plus NM software is available free of charge from http://www.snapplus.net/ and it can help planners meet 590. Other tips to help planners meet 590 are listed below.

Soils

Soil Type: 44% of the NM plans used proper soil type. MEANING 56% OF THE PLANS DID NOT SELECT THE CORRECT SOIL FOR EVERY FIELD. The corner stone of any NM plan is picking the "dominant critical soil" for each field. Planners need to select the most erosive soil that covers 10% or more of the field.

Tip: *For example, if DuC2 covers more than 10% of the field, even though DuB is the soil type covering most of the field, you should select DuC2 to protect the steeper, more erodible soil.*

Soil Sampling: 60% of plans met the **5 ac/soil sample requirement**, a 14% decline from last year. ***Tip:*** *The Snap Plus* Soil Test Report *allows you to easily see if samples are taken at the correct sample size of 1 sample for every 5 acres. Each sample should be a composite of 10 cores. Some fields can have a larger sample size if fields have been tested in the last four years and are in the non-responsive range for P and K. DATCP certified laboratories provide UW soil test recommendations, proper soil analysis for WI NM plans, and electronic soil tests for import into Snap Plus.*

Manure Handling

Spreader Calibration: 36% of plans used calibrated manure applications to account for application speed and manure consistency. This needs to be mentioned in the plan. Contact your UWEX or conservation office for assistance with spreader calibration.

Manure Quantity: 68% of plans had consistent manure amounts for production, collection, and application. ***Tip:*** *Some plans did not account for manure deposited to pasture areas. Be sure to show where all manure is being applied in the NM plan.*

Phosphorus Management

68% of plans included P management for each year of the crop rotation, a 36% improvement from 2007. Wisconsin planners have come a long way in a single year. It is difficult to track extra P from previous applications without using some sort of computer program. Snap Plus keeps track of soil-banked P & K between soil tests on the *Cropping Screen* so farmers do not apply more than they need.

Tip: *PLANS NEED TO BE UPDATED! Show what really happened in the prior crop year and plan forward to ensure compliance. Keeping an application log makes it easy to update plans.*

Soil Erosion

72% of plans had every field meeting T, a 7% decline from 2007. If plans do not meet T (tolerable soil loss for the dominant critical map unit), then the NM plan is not compliant. Now with Snap Plus, farmers and planners are able to update crops and tillage and calculate soil loss over the crop rotation, making it an excellent tool for conservation planning. Updating the NM plans with the nutrient applications and crop management that really occurs, provides an easy way to reach and maintain compliance with the 590 NM standard.

Tip: *The plan's tillage should reflect the soil disturbance from all management. For example, if no-till is selected, but manure applications are incorporated, tillage should be changed to spring cultivation or strip till to reflect the soil disturbance from incorporating manure.*

88% of plans mentioned they protected areas of **concentrated flow** with perennial cover.

For more information about the content of this newsletter, please contact Sue Porter, Nutrient Management Specialist, DATCP at: sue.porter.wisconsin.gov, or (608) 224-4605.

FOR NUTRIENT MANAGEMENT

2008 NM Plan Review Compliance Summary

Spreading Restrictions

Non-Winter Restrictions: 80% of plans included spreading restrictions for **surface waters**.

Tip: *Be sure to tie the nutrient application restrictions on the maps to the plan. In Snap Plus, the plan needs to reflect real edge-of-field slope and distances to surface water while following 590 application restrictions.*

Winter Restrictions: 88% of plans properly applied nutrients according to the **winter spreading restrictions**, a 7% decline from last year. Winter spreading is restricted on fields with steep slopes and close to surface water. When fields are not in these areas, winter application rates are limited to reduce runoff.

Tip: *Tying the map restrictions to the plan applications is extremely important and should become easier as plan maps improve. Even if the farmer does not intend to winter apply, planners should still identify safe places to go with manure in the winter that will not exceed rate restrictions.*

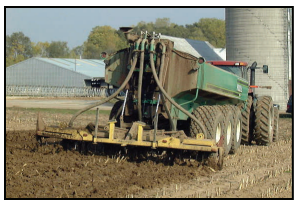
Wells

40% of the plans mention well restrictions, including neighbors, a 13% improvement from last year.

Nitrogen Applications

60% of plans had every field **meeting N recommendations**, a 14% decline from last year. A planner who wishes to justify higher applications must include credible information to show that the higher applications will not increase environmental damage. Or, include a soil or tissue test that reveals a nutrient deficiency. Remember that N applications are for a single year and cannot exceed UW recommendations (UWEX Pub. A2809). Snap Plus will flag excess applications by turning the application red in the cropping screen.

Tip*: A quick check to see if your fields are exceeding N recommendations can be done by printing the Field Data and 590 Assessment Plan Report. Fields with N applications in excess of UW recommendations for any year will show at the top of the report.*



72% of the plans correctly **identified N soil restrictions**, a 7% decline from last year. If these soils are present on the field, applications of N should be limited according to Criteria B of the 590 Standard. These criteria should be followed even if it is not the selected dominant critical soil type used for planning purposes.

590 Nutrient Application Restriction Maps Now Available Online

On-farm nutrient management begins with a good understanding of field-specific soils and their ability to accept nutrients and manure for optimal crop production while protecting water quality. Nutrient and Manure Application Restriction Maps show where, when, and how much manure can be applied according to 2005 Wisconsin NRCS 590 Nutrient Management Practice Standard. Providing easily accessible maps that depict areas best suited to receive nutrients will benefit both farmers and the environment.

These maps are available on-line and free of charge for use by planners, producers, and manure applicators. Please visit the website for more information and to download maps.

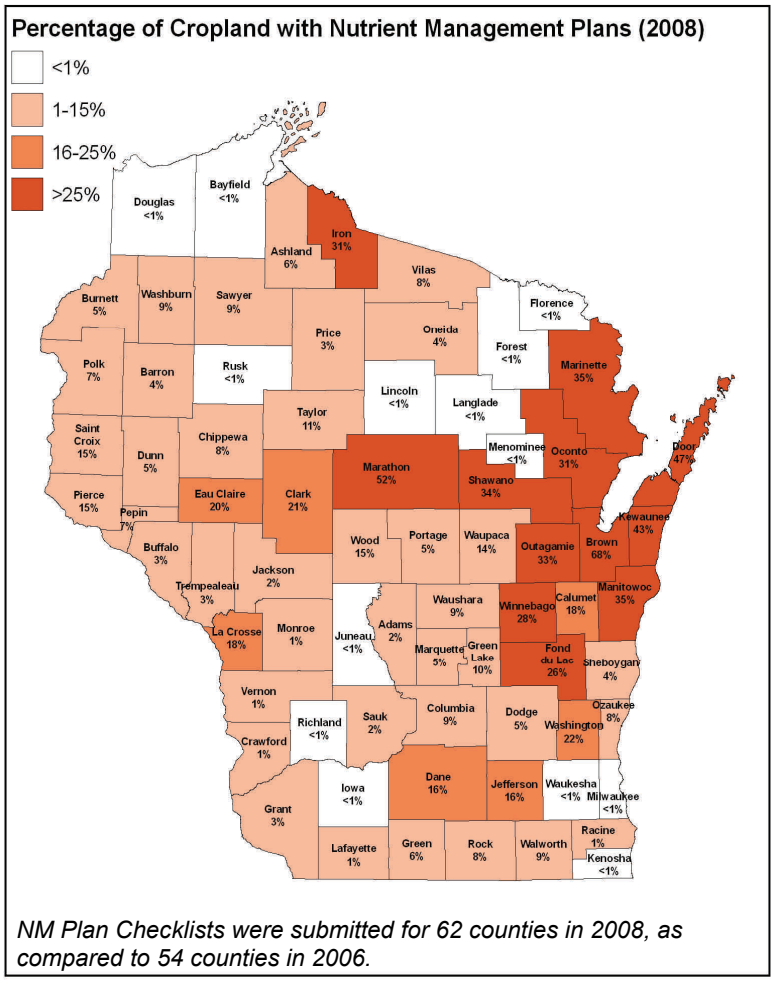
http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/manure-mngmt/index.jsp

The restriction maps available through this website are one section (one square mile) and contained in a GeoPDF® file format which allows user editing, drawing, querying, and printing options. Maps contain several layers that users can turn on/off including: NAIP 2005 ortho-photo; PLSS Section Boundary; Roads; 24K Hydrography, including Lakes/ponds, perennial streams, intermittent streams, Surface Water Quality Management Areas (SWQMAs) for those water features; soil survey mapping unit boundaries, including nitrogen restricted and slope restricted soil types.

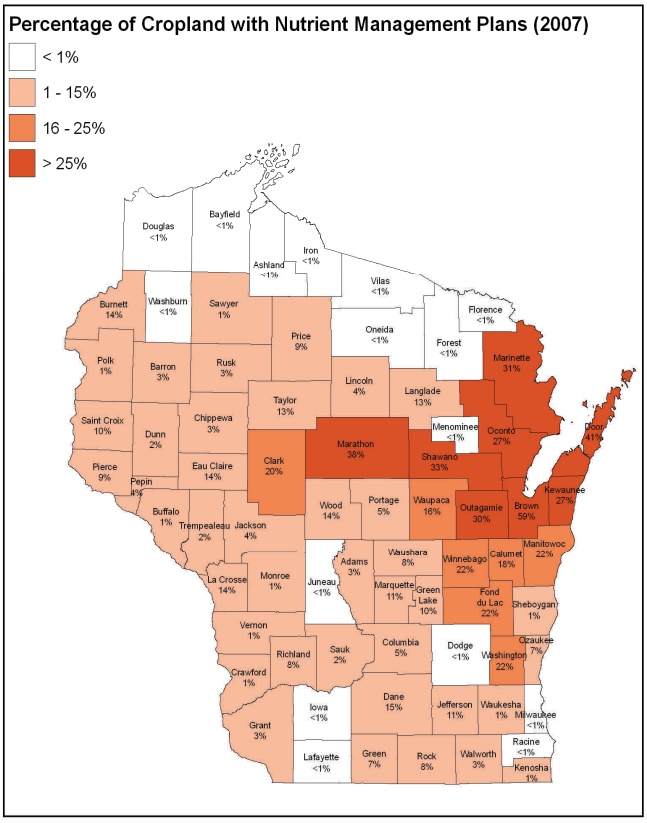
TRACKING NUTRIENT MANAGEMENT IN WI

The DATCP collects data on the extent of NM planning through bulk fertilizer suppliers and through the NM Plan Checklist form submitted by farmers, agronomists, and public agency staff. Suppliers of bulk fertilizer to Wisconsin farmers reported 3,489 plans covering 1,628,201 acres in 2008. This is 35% more acres than last year. In 2008, 615 NM planners (405 farmers and 210 agronomists) submitted Nutrient Management Plan Checklist forms. This is a remarkable 122 more farmer-written plans than last year, covering 24% more acres. Farmers hiring agronomists to develop plans also increased from last year. Agronomists submitted checklists for 2,322 plans (285 more than in 2007) covering 18% more acres than 2007.

Submitting your NM checklists to the local conservation office is an important way for WI to track its progress. All NM forms can be found at: http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/nutrient-mngmt/planning.jsp



NM Plan Checklists were submitted for 62 counties in 2008, as compared to 54 counties in 2006.



Marathon has reported 147,917 NM acres for the 2008 crop year, more acres than any other county. This is 39,000 acres more than 2007. Other counties that have made substantial increases are: Manitowoc with 23K more acres, Kewaunee 20K, Dodge 16K, Chippewa 15K, Brown 14K, Walworth 11K, and Columbia with 10K more acres reported than in 2007.

Wisconsin Qualified Planners

562 qualified planners available through the certifying organizations (1 and 2) listed below.

1. American Society of Agronomy *Certified Crop Advisors* and *Professional Agronomists* and Soil Science Society of America *Soil Scientists* see https://www.soils.org/certifications/;
2. National Association of Independent Crop Consultants *Certified Professional Crop Consultants* see the following website http://www.naicc.org/Directory/bystate.cfm?c=wi;
3. *Farmers developing their own NM plans* and submitting a NM Checklist form to DATCP. In 2008, 405 farmers prepared their own plans covering 102,628 acres. Another 2,322 farmers hired 210 agronomists to plan 1,126,629 acres.

DATCP Certified Soil Testing Labs

UW Soil & Plant Analysis Laboratory
Madison, WI
(608) 262-4364

UW Soil & Forage Lab
Marshfield, WI
(715) 387-2523

AgSource Cooperative Services
Bonduel, WI
(715) 758-2178

Rock River Laboratory
Watertown, WI
(920) 261-0446

Dairyland Laboratories
Arcadia, WI
(608) 323-2123

A & L Great Lakes Laboratories, Inc.
Fort Wayne, IN
(260) 483-4759

Mowers Soil Testing Plus, Inc.
Toulon, IL
(309) 286-2761