

NUTRIENT MANAGEMENT FOR PERENNIAL FRUIT CROP PRODUCTION

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Hopefully before the end of 2006, the Wisconsin Department of Agriculture, Trade and Consumer Protection's (DATCP) Board will approve a rule related to nutrient management on farms. Current rules are mostly based on nitrogen and can be inconsistently implemented from county to county. This rule would incorporate the September 2005 Natural Resources Conservation Service's 590 nutrient management standard based on nitrogen and phosphorus. DATCP adopted the current rules in 2002 as part of a redesign of state nonpoint pollution abatement programs mandated by the Legislature. DATCP proposes to incorporate the updated federal standard in state nutrient management rules to help prevent manure and phosphorus runoff and improve water quality. This will also to help ensure that manure is applied in a cost-effective and environmentally sound manner. It will also reduce fish kill and well contamination risks. Adopting this rule amendment will fulfill DATCP's nonpoint-rules commitment to keep Wisconsin rules consistent with federal standards.

Cost sharing

Updating ATCP 50 Wis. Admin. Code will allow state cost sharing to be provided to county land conservation departments, and then to farmers, for implementing the September 2005, 590 nutrient management standard. Under this existing DATCP rule, all farmers who apply manure or commercial fertilizer to cropland (not just livestock operators) must implement a nutrient management plan. This requirement took effect on January 1, 2005 in certain watersheds, and will take effect on January 1, 2008 elsewhere. However, state law makes enforcement contingent on cost sharing for farms not regulated by other means. Enforcement is therefore limited by the availability of cost-share funds and state and local authorities. Farms that must comply regardless of cost-sharing include those holding a pollution discharge elimination system permits from the Department of Natural Resources, farms that claim farmland preservation tax credits, and farms that are required by local ordinances to have permits for manure storage facilities or livestock facility expansions. Current DATCP cost-share funding levels make it possible to target about 20,000 acres per year starting in late 2006 (less than 1% of Wisconsin's crop acreage). These cost-share funds will be mainly targeted where runoff has caused fish kills or well contamination or at priority farms noted in the county's *Land and Water Resource Management Plan*.

Counties have *Land and Water Resource Management Plan* to promote compliance with farm conservation requirements (see s. ATCP 50.12). Counties will seek voluntary compliance and will offer information, cost-sharing and technical assistance to help landowners comply. As a last resort, a county may seek enforcement action against a landowner that refuses to implement required conservation practices. A county may not seek enforcement action until it complies with applicable cost-sharing requirements under s.

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ATCP 50.08. A county may pursue any of the following enforcement options, as appropriate:

- The county may suspend a violator's eligibility for farmland preservation tax credits (see s. ATCP 50.16(6)).
- DNR may issue a notice of discharge, requiring a violator to obtain a pollution discharge permit from DNR (see ch. NR 243).
- The department of justice or a district attorney may file a civil forfeiture action against the violator (see s. 281.98, Stats. that authorizes penalties not less than \$10 nor more than \$5,000 for each violation).
- The county, town, city, or village may take action to enforce its own ordinance, if any.
- County compliance procedures should be consistent with ss. ATCP 50 and ss. NR 151.09 and 151.095. A county should spell out compliance procedures in its land and water resource management plan, as provided in s. ATCP 50.12(2). The DATCP and DNR will work with counties to develop suggested guidelines for county compliance programs.

Nutrient management planning requirements

A nutrient management plan must be prepared or approved by a qualified nutrient management planner. A farmer may prepare his or her own plan if the farmer has completed a DATCP-approved training course within the preceding 4 years, or can prepare a plan that complies with the 590 standard. A nutrient management plan must comply with the NRCS 590 nutrient management standard. A nutrient management plan must identify the lands on which the operator will apply nutrients. The plan must also include the source, rate, timing, and method of application for all major nutrients (N, P, and K).

Changes to 590 - DATCP and NRCS held joint public hearings on the NRCS nutrient management standard that is incorporated in this rule. Some of the changes to the standard are:

- Nutrient applications prior to establishment of perennial fruit crops are determined by soil tests recommendations from UW Publication A-2809 "Soil Test Recommendations for Field, Vegetable and Fruit Crops". A soil test laboratory, certified by DATCP, must conduct the soil tests. Established perennial fruit crops should base nutrient recommendations on plant tissue analysis results and perennial fruit crop publications referenced in the 590 standard. These references are:
 - Cranberry Tissue Testing for Producing Beds in North America (1995) Davenport et al., Oregon State Univ. Ext. Serv. Pub. CM8610.
 - Mineral Nutrition for Fruit Crops, Roper, Univ. of Wisconsin Dept. of Horticulture Pub.
 - Nitrogen for Bearing Cranberries in North America (2000) Davenport et al., Oregon State Univ. Ext. Pub.
 - Phosphorus for Bearing Cranberries in North America (2004) Roper et al., Univ. of Wisconsin Ext. Pub.
 - University of Wisconsin Soil and Forage Analysis Lab Sampling for plant analysis: <http://uwlab.dyndns.org/marshfield/> (Click on Lab procedures and then plant analysis).

- If applying manure or other organic byproducts anytime during the crop rotation, then the standard allows P assessments using the PI or soil test P levels to determine P application rates over a maximum 8-year crop rotation. The Wisconsin P Index is a tool to rank fields on their potential to deliver phosphorus to surface water bodies. The PI is available on the web from <http://www.snapplus.net> as part of the SNAP-Plus software. Perennial fruit crops are not currently part of this software.
- The conservation plan must address cropping practices that control sheet and rill erosion to tolerable levels (T) and provides treatment of ephemeral soil erosion. Sheet and rill soil erosion calculations shall be based on current NRCS erosion prediction technology. Contact your local conservation department for assistance in developing a current conservation plan.
- Prohibits winter applications of N and P commercial fertilizer except on grass pastures and on winter grains where not prohibited.

References

USDA Natural Resources Conservation Service. 2005. Nutrient Management Code 590 Conservation Practice Standard, NRCS, WI September 2005.

WI Department of Agriculture, Trade and Consumer Protection. ATCP 50 Wis. Admin. Code 2002 and Proposed Final Draft ATCP 50 Wis. Admin. Code, October 24, 2005.