



What's **NEW** that affects **YOU** in the **Iowa 590** **Nutrient Management** **Conservation Practice Standard?**

What is the Nutrient Management Conservation Practice Standard?

The standard is a guiding document for USDA's Natural Resources Conservation Service (NRCS) to develop voluntary nutrient management plans. It applies to all lands where plant nutrients and soil amendments are applied.

The Nutrient Management (NM) Standard provides farmers guidance on managing the rate, source, placement, and timing of the application of plant nutrients and soil amendments.

Potential sources of nutrients, include, but are not limited to: commercial fertilizer, animal manure, legume credits, green manure, and crop rotations.

What is its Purpose?

- The purpose of the 590 NM Standard is to:
- ◇ budget nutrients for plant production;
 - ◇ utilize manure or organic byproducts as a plant nutrient source;
 - ◇ minimize ag nonpoint source pollution;
 - ◇ protect air quality by reducing nitrogen emissions;
 - ◇ and maintain or improve soil health.

Why did the NM Standard Change?

NRCS changes practice standards to stay current with new technologies and changing agricultural practices. Additionally, NRCS updated the 590 NM Standard to better align

with the nutrient management conservation planning process, more consistently use 4Rs language (the Right nutrient source applied at the Right rate in the Right place at the Right time), treat manure and commercial fertilizer management more similarly, and comply with the Plain Writing Act of 2010.

The National Laboratory for Agriculture and the Environment in Ames led a comprehensive review of nutrient management technologies with critical input from Iowa State University. NRCS sought and utilized input from the Iowa Department of Agriculture and Land Stewardship, Iowa Department of Natural Resources, agricultural organizations, environmental groups, private agronomists, and other stakeholders to complete this revision.

11 Significant Changes

Compared to the 2008 version, here are 11 significant changes to the 2013 version of Iowa's Nutrient Management Standard:

1. **Changes to "sensitive" areas.** Several changes were made to the nutrient application criteria to minimize the contamination risk near water quality "sensitive areas." Recognizing that water entering tile inlets often runs directly to a stream, they are now considered a water quality sensitive area. A 50-foot filter strip can be used in place of a 200-foot setback when surface applying nutrients near

Continued on back...



What's **NEW** in the Iowa 590 NM Standard?



11 Significant Changes Cont...

sensitive areas. As an interim mitigation practice near tile inlets, cover crops or a no-till cropping system may be used to mitigate runoff risk. The application criteria now apply to most nitrogen and phosphorus sources, not just manure.



A newly installed tile intake.

2. **New 50 Degrees or Below Provision.** Iowa farmers have always been encouraged to wait to apply fall anhydrous ammonia until soil temperatures reach 50 degrees, trending colder. Now other high ammonium sources, such as liquid swine manure and MAP/DAP, are included in this criteria for fall application.
3. **Rescue Nitrogen Application OK.** Untimely heavy spring rains caused farmers to lose large amounts of nitrogen the past several years. A new provision allows farmers a “Rescue Nitrogen Application” that permits an additional nitrogen application when weather causes a significant loss of N. The Standard specifies ways to formulate and evaluate management alternatives for rescue N applications.
4. **Additional Practices for Controlling and Trapping Nutrients.** To help trap nitrogen, conservation practices such as cover crops, filter strips, bioreactors, and nutrient treatment wetlands (CREP wetlands) were added to the practice list. To control and trap phosphorus, practices such as no-till, terraces and grassed waterways that control erosion and trap sediments are included.

Strategies to Trap Nitrogen	Strategies to Control & Trap Phosphorus
340 Cover Crops	329 No-till/Strip-till/Direct Seed
393 Filter Strip	345 Mulch-till
332 Contour Buffer Strips	330 Contour Farming
656 Constructed Wetland	340 Cover Crops
554 Drainage Water Management	393 Filter Strip
747 Denitrifying Bioreactor	391 Riparian Forest Buffer
739 Vegetated Subsurface Drain Outlet	412 Grassed Waterway
	638 Water & Sediment Control Basin
	600 Terrace

5. **Equipment Calibration.** Equipment used to apply fertilizer and manure must be calibrated to assure that what is planned to be applied is actually applied. This provision is included in the Operation and Maintenance section of the Standard.
6. **Yield Goal Now Realistic Yield Potential.** Any reference in the old standard to “Yield Goal” was changed to “Realistic Yield Potential” in the new standard. This change provides for simpler ways to estimate yield to determine

nutrient removal rates.

7. **Manure Testing Requirement.** A lab certified through the Minnesota Dept. of Agriculture Manure Testing Laboratory Certification Program (MTCP) will be used to complete manure tests. (www2.mda.state.mn.us/webapp/lis/manurelabs.jsp)
8. **Biosolids Included as Plant Nutrients.** Biosolids like sludge and food processing waste are now included as sources of plant nutrients, recognizing that they are also a valuable fertilizer source.
9. **Guidance for Adaptive Nutrient Management.** This provision encourages producers to conduct on-farm research to improve their nutrient management decisions.
10. **No longer requires sheet and rill erosion be controlled to Tolerable Soil Loss, or “T.”** When “T” is not met, then the Phosphorus Index will now be used and met. This impacts farmers with alternative cropping systems who must now use the P-Index to prevent phosphorus from leaving fields.
11. **Well Water Protection on Plan Map.** Specifies that fields within well source water protection areas are identified on a plan map.

Contact Information

The entire Iowa Nutrient Management Standard is available on the Iowa NRCS website at www.ia.nrcs.usda.gov. Click on the “Iowa Conservation Practice Standards” link under “Helpful Links” on the home page.

Iowa NRCS 590 Standard Contacts:

Eric Hurley, Nutrient Management Specialist
(eric.hurley@ia.usda.gov)
Phone: 515-284-4370

Marty Adkins, State Resource Conservationist
(martin.adkins@ia.usda.gov)
Phone: 515-284-4370



Annual ryegrass grows between harvested corn rows. Cover crops were added to the 2013 Iowa Nutrient Management Standard as a practice that can be used to trap nitrogen, and control and trap phosphorus.