

DATE: March 10, 2004

TO: Municipal Permittees; Industrial land application permittees; Septage licensees; County Extension Agents; County Conservation Departments; NRCS; Certified Crop Advisors; Watershed Staff; DATCP Staff

FROM: Russ Rasmussen, Director
Bureau of Watershed Management

SUBJECT: Application of s. NR 151.07(2), to municipal biosolids, industrial wastewater & sludge, and septage

The Department promulgated performance standards in October 2002 under ch. NR 151, Wis. Adm. Code, designed to address nonpoint pollution from agricultural and non-agricultural sources. We have received questions about how these performance standards impact and interact with other Department land application regulations. Specifically, the Agency has received many questions from permittees on the performance standard for nutrient management on cropland contained in s. NR 151.07. This memo will delineate how to implement the exemption to the nutrient management performance standard as it relates to existing regulatory programs under chapters NR 113, 204, and 214.

The standard in s. NR 151.07 requires that crop producers and livestock producers apply nutrients in conformance with a nutrient management plan, and it includes general criteria or standards that apply to the development of a plan. There is an exemption in s. NR 151.07(2) which reads as follows: *"This performance standard does not apply to industrial waste and byproduct solids regulated under ch. NR 214, municipal sludge regulated under ch. NR 204, septage regulated under ch. NR 113 or manure directly deposited by pasturing or grazing animals on fields dedicated to pasturing or grazing."* It is also important to note that essentially identical exemption language exists in section ATCP 50.04(3)(g). It is not the intent of this memo to create additional regulatory authority as it relates to land applied materials under chs. NR 113, 204 or 214.

If material regulated under chs. NR 113, 204, or 214, Wis. Adm. Code, are applied to cropland, then the management practices, loading limitations and other restrictions specified in the associated code and/or the WPDES permit will apply to that application. For example, if septage, biosolids, or industrial waste are applied to a given site, they will be applied at a rate not to exceed the nitrogen needs of the crop to be grown (or for septage the hydraulic loading limit or whichever is less) as required under chs. NR 113, 204, or 214. All sources of nitrogen must be taken into account in setting application rates, including commercial fertilizer and manure. Phosphorus is not a directly limited or regulated nutrient in any of these regulations. However, in cases where these materials have been applied, the future use of manure or commercial fertilizers on a site may be restricted by the nutrient management requirements of NR 151.07. This guidance is provided to allow a consistent determination as to how the application of wastes (biosolids, sludge, septage) under these regulations, impact the application of other nutrients (e.g., commercial fertilizer or manure) applied in accordance with a nutrient management plan developed under NR 151.07.

Two scenarios are described below:

- If the materials regulated under chs. NR 113, 204, and 214 are the only nutrient sources that are applied to a given field, whether or not a nutrient management plan has been developed, then the land application of these materials is regulated solely under the provisions of chs. NR 113, 204 and 214.
- If the materials regulated under chs. NR 113, 204 and 214 are applied to a given field in combination with other nutrient sources such as manure or commercial fertilizer and a nutrient management plan is developed under s. NR 151.07, then the following conditions apply:
 - Additional phosphorus from the materials regulated under chs. NR 113, 204 and 214 is allowed, even if there are phosphorus limitations associated with the nutrient management plan, but additional phosphorus from manure and commercial fertilizers may be limited as specified in the nutrient management plan.
 - The materials regulated under chs. NR 113, 204, and 214 must be applied in accordance with the associated regulation including the requirement that the combination of nitrogen from all sources does not exceed the nitrogen needs of the crop.
 - Farmers should be notified that future application of manure and commercial fertilizer to these sites might be limited in order for them to maintain compliance with any phosphorus limitations in their nutrient management plan.

This memo and the exemption contained in ch. NR 151 recognize that restrictions for materials regulated under chs. NR 113, 204 and 214 are specified in their respective codes and the WPDES permit program or under a business license. Any changes to these requirements must be subject to proper opportunities for public review and comment via formal rulemaking procedures and not in a guidance document. However, given that consistency between codes is important, it is helpful to recognize the following:

- In all instances, under chs. NR 113, 204 and 214, waste is required to be applied such that nitrogen supplied shall not exceed the nitrogen need of the crop to be grown, taking all sources of nitrogen into account.
- Site restrictions must be met as specified in the applicable administrative code and/or in permits. As a whole, these requirements are as restrictive or more restrictive than NRCS 590 or any other standard. Some of the site restrictions include an essential prohibition of land application of municipal biosolids on frozen or snow covered ground, slope restrictions, setback from surface waters, depth to groundwater and bedrock, setback to community and private wells, setback to residences, businesses, schools, and recreation areas, maximum loading restrictions, etc. Efforts are ongoing to scientifically and accurately evaluate the restrictions of the various codes to determine actual water quality impact.
- Requirements for materials applied under chs. NR 113, 204 and 214 must be met and are not contingent on the availability of cost-sharing dollars. This is different than the requirements of chapter NR 151. Therefore, while material regulated under chs. NR 113, 204, and 214 are applied to approximately 80,000 acres per year or only 0.9% of available agricultural land in Wisconsin, by law, all materials applied on all of this acreage must meet the requirements of the respective code.

In addition, the department is following new research assessing the relative environmentally available phosphorus between biosolids, manure, and commercial fertilizer. Early indications show that the water extractable phosphorus in most biosolids is much less than that found in manure or commercial fertilizer. Further the iron, aluminum, and oxides that are commonly found in biosolids serve to form strong and long-lasting bonds with the phosphorus. To aid in this research and to gather more relevant information,

all municipal biosolids and industrial sludge producers are requested to begin testing for water extractable phosphorus (WEP) in addition to the total phosphorus testing already required in permits. The recommended test method as developed by researchers at Penn State University is attached.

I hope this memo has clarified your questions relating to nutrient management on cropland performance standards. If you have any further questions on this issue, please contact Greg Kester at 608-267-7611 or via email at Greg.Kester@dnr.state.wi.us. If you have any questions related to agricultural operations, please contact Tom Bauman at 608-266-9993 or via email at Thomas.Bauman@dnr.state.wi.us.