

Nutrient Applicators Need Accurate Maps

By Nick Schneider, Winnebago County Agriculture Agent, March 2010

Applying nutrients in the form of manure can be a dirty, stressful, yet rewarding job. I say “dirty job” with caution because the Professional Nutrient Applicator Association of Wisconsin (PNAAW), aka custom manure haulers, works to help clients and the public understand that manure is not the four-letter word, rather they handle valuable nutrients. PNAAW member companies train their employees about safety, spill response, regulations, calibration, public relations, and understanding nutrient management plans. During training sessions this past winter, it became clear that the majority of applicators still are not receiving from their customers one of the most important tools for a successful application: accurate application maps.

Nutrient application maps are a piece of nutrient management plans that meet the NRCS 590 standard. Application maps with spreading rates are an important form of communication between the farmer, application company, and the driver. Depending on land features, an accurate map can be fairly simple or complicated. At the most basic level, the map should contain an outline of the field, acreage, identify field entrances, and contain the application rate. One applicator suggested writing the map key with acreage and application rate on the map where the field entrance can be found. However, this isn't enough to protect ground and surface water. Manure application setbacks also need to be identified. There are two general types of setbacks:

1. Prohibition setbacks are areas where manure is prohibited from any application. Examples of manure prohibition areas include within 50 feet of drinking water wells, grass waterways, non-harvested vegetative buffers, and over sinkholes or drain tile inlets.
2. Restriction setbacks are areas where manure applications are restricted by the time of year, method, or decreased rate of application. Examples of manure application restriction areas include within 1,000 feet of a pond or lake, 300 feet of a perennial stream or river, fields with slopes greater than 9%, highly permeable soils (sandy), places with less than 20 inches of topsoil to bedrock, soils with a seasonal water table within 12” of the soil surface, and within 1000 feet of municipal wells. Manure can be spread in fields with these features but restrictions give the applicator more guidance of when, where, and how.

Regions of the state with combinations of high slopes, surface water, karst soils, or numerous other features will have an application map that is too cluttered to clearly read. In these cases, applicators would like two separate maps, one with the field outline, rate and acreage, and a complementary map with the setbacks identified.

Application maps can be obtained from numerous sources. Many farm operators have a copy of their soil series maps. You can begin by identifying the fields and the setback features on photocopies of these maps. Most County Land Conservation offices can provide a more detailed map with soil, surface water, and slope features. An excellent option is the download 590 nutrient application restriction maps at: <http://mmas-mapping.soils.wisc.edu/>. It's important to remember these maps will lack local setbacks such as wells and drain tile inlets.

Nutrient applicators are trained on how to follow setbacks; however, without an accurate map, it is nearly impossible for the driver to correctly identify where all of the prohibitions and restrictions are on a farm. Please provide a copy of these maps to your nutrient applicator when they service your farm in 2010.

Image Caption: Nutrient application restriction maps, such as the one pictured, can be downloaded for free at: <http://mmas-mapping.soils.wisc.edu/>. Maps are available for all sections in Wisconsin with land mass.