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# Kewaunee County

## LAND & WATER CONSERVATION DEPARTMENT

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March 17<sup>th</sup>, 2006

Senator Alan Lasee  
State Capitol - Room 220 South  
P.O. Box 7882  
Madison, WI 53707-7882

**SUBJECT: Winter/Early Spring Land Application of Manure**

Dear Senator Lasee:

The recent well contamination events in Brown County have once again resurrected the issues concerning winter/early spring applications of manure and its effects on our local groundwater resources. I'm sure you're well aware of the concerns of the citizens from the Town of Morrison as well as the local Brown County Land Conservation Department. However, as a County Conservationist, and constituent of yours, I'd like to provide you with a few of my thoughts and concerns as they apply to winter/early spring manure spreading and its effects on our local groundwater quality in Kewaunee County.

It's true that there is long list of potential groundwater contamination sources. Some of these sources include air pollution; fertilizer/manure storage; use and misuse of pesticides; landfills; ponds, lagoons and disposal of wastewater; private onsite wastewater treatment (septic) systems; spills and illegal dumping of commercial and industrial chemicals; leaking underground storage tanks; improperly abandoned wells and drainage wells; as well as natural sources of contamination. However, I believe that if we look at the prevailing land use pattern within Kewaunee County it becomes apparent that agriculture (dairy operations in particular) is the overwhelming land use. This being the case, I believe that it only makes sense to try to address the agricultural sources first off, and then work on any remaining sources. Of greatest concern is land application of manure during the winter/early spring time period on specific areas that have shallow depth to groundwater or fractured bedrock.

One thing that the overwhelming majority of your constituents have in common is that we purchase a lot of milk, meat and cheese. We also all consume drinking water. For the vast majority of citizens in Wisconsin, this means groundwater. We depend not only on a thriving agricultural economy, but we also require safe, clean groundwater. A thriving agricultural industry and clean, safe drinking water can co-exist together. We need key legislators to step up and provide thoughtful legislation; legislation that is truly focused on protecting Wisconsin's valuable groundwater resources in order to protect public health and welfare.

Locally, since 2004, the Kewaunee County Land & Water Conservation Department, along with a great amount of help from our local Groundwater Guardians Group, has been coordinating a countywide rural well testing program. We're scheduled to have our next round of testing the end of this month. The program's main focus is on educating local citizens about where their drinking water comes from and why it's important to protect their local groundwater sources. To date we've completed three rounds of testing. **Overall, 142 different wells have been tested through this program; 22% have been analyzed as "bacteria positive" and 11% have been analyzed as having nitrate levels above the 10 milligrams per liter human health standard.** Again, it's true that rural septic systems could be a minor source, however, with the overwhelming majority of our local rural land use being devoted to agriculture, I think it's reasonable to assume that land application of manure, specifically on soils having shallow depths to groundwater or fractured bedrock, plays the most significant role.

I ask that you please read over the following points and, if possible, support and champion them in your role as a state legislator.

- For the past two years our Department has provided section-level air photos to all operators of cropland with soil depths of less than 36 inches to fractured bedrock. The air photos depict the specific locations of these shallow soil areas. We ask the operators to voluntarily refrain from applying any manure in these areas during the months of December through March unless absolutely, positively necessary. The reasoning behind this time period is that even though most of our actual runoff events occur during the months of February and March, whatever has been applied to the land surface during December and January, and not adequately incorporated into the soil for crop uptake, is readily available for whatever runoff events occur in February and March. If manure must be applied on these areas we ask that the operator use extreme caution and apply the manure at a rate of one-half of the maximum allowed rate in their nutrient management plan (if they have one), and double any setback distances included in the plan. **Right now we're doing this on a voluntary basis in Kewaunee County, however, I believe that this should be legislated into a statewide required practice on these types of soil areas, as well as soils having depths to groundwater of less than 36 inches.**
- At the present time, USDA Natural Resources Conservation Service (NRCS) standard 590 (Nutrient Management) states that if "ponding" of manure occurs application must stop. The problem is that there is no actual definition of "ponding" found in the 590 standard. "Ponding" is not even defined in any of the nonpoint rules and regulations covering manure application. However, NR113.03(40), Wis. Adm. Code, defines the "ponding" of septage as "...the presence of free liquid over an area of 4 square feet or more, visible 2 hours after the application of the septage. An example of a 4 square foot area would be an area 4 feet by 1 foot." **A similar definition needs to be incorporated somewhere in the nonpoint rules relating to applied liquid manure. Actually, I think the above definition of "ponding" would do just fine if you could just have the word "septage" stricken, and the words "liquid manure" inserted.**
- At the present time, NRCS standard 590 (Nutrient Management) includes "fractured bedrock at the surface" in its definition of "direct conduits to groundwater". This certainly will help protect local groundwater, however, in the interest of truly protecting the public's health and welfare, the criteria of fractured bedrock deeper than just "at the surface" should be taken into account. The recent investigations completed down in Dodge County has provided some interesting results that would lead a reasonable person to assume that even 12 feet of soil may not be enough of a buffer between the surface and fractured bedrock, as far as manure applications and groundwater quality are concerned. **I think a prudent action to take would be taking fractured bedrock anywhere within at least 36 inches of the soil's surface into account.**
- Presently, there are 1,000-foot radius wellhead protection areas designated around municipal wells. **I believe that private citizens should have the option of officially designating similar private wellhead protection areas around their private rural wells.** For example, a private well owner could, through a county land conservation committee action, designate a 500-foot radius wellhead protection zone (specifically in soil areas having shallow depth to fractured bedrock or groundwater) around their well restricting the application of manure during the times of the year that are most vulnerable to causing groundwater pollution.
- **I think that a State Well Compensation Program providing 70% cost-sharing of installing a new private rural well if contaminated by bacteria/nitrates of agricultural origin is a great idea.** Of course, some kind of local on-site investigation and documentation would need to be completed certifying that the well owner's septic system or manure from the well owner's own animals was not a possible source of the contamination. **We also have to guard against just temporarily throwing cost-share dollars at the problem while ignoring the ongoing root causes of groundwater contamination.**

- **The state (i.e. legislators, DNR, DATCP, land conservation department staff) should begin a process of developing a model public health/land conservation ordinance that could be locally adopted and jointly administered through county Health Departments and Land Conservation Departments.** The model ordinance should address application of manure and fertilizer on shallow depth to bedrock or groundwater soil areas as well as soil areas with low or very low groundwater pollutant attenuation capacities during times of the year when groundwater contamination is most likely. Counties and Towns would then have the option to locally adopt this ordinance.
- Back in 2004 the Land & Water Conservation Department, local UW-Extension Ag Agent and County Emergency Management Office, jointly developed a local *Manure Spill Response Guide*. A copy of the guide booklet was provided to all of our local farmers countywide. **There should be a statewide commitment to developing these types of guides for distribution to all agricultural producers.**

I also want to voice my support for the recommendations found in the Final Report of the State's Manure Management Task Force (March 1, 2006), specifically;

1. Mandatory, locally tailored, winter manure spreading plans
2. Certification and licensing of custom manure haulers
3. Emergency manure spill response guides
4. Providing increased funding for statewide implementation of nutrient management plans
5. Web-based manure spreading weather/soil conditions advisory system

In summary, the recent well contamination events in Brown County have once again brought up the issues concerning winter/early spring applications of manure and its effects on our local groundwater resources. For areas in Kewaunee County this has been an ongoing concern for quite some time now. I hope that you'll support and champion any efforts to protect our vital local groundwater resources.

Thank you for taking the time to read through this letter. I'd be happy to discuss any of these ideas with you or answer any question you might have.

Sincerely,

Andy Wallander  
County Conservationist / Department Head

cc: office files  
Representative Garey Bies  
Kewaunee County Land & Water Conservation Committee  
Kewaunee County Board of Supervisors  
Kewaunee County Health Department