

GROUNDWATER PROTECTION ORDINANCE SUBCOMMITTEE

Subcommittee of the Groundwater Citizens Advisory Committee

NOTICE OF MEETING

THURSDAY, AUGUST 3rd, 2017 AT 7:00 P.M.

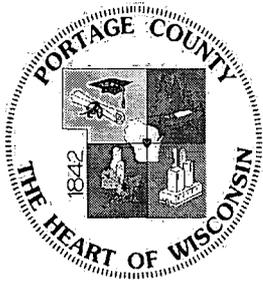
Conference Rooms 1 & 2, County Annex
1462 Strongs Avenue, Stevens Point, Wisconsin

AGENDA

1. Call to Order
2. Review/Approval of Minutes from May 30, 2017 and June 29, 2017
3. Discussion, observations, questions, and answers concerning packet materials:
 - White paper on Nutrient Management Planning Efforts in Portage County
 - Monitoring information
 - Regulations and other groundwater related municipal ordinance from throughout the state
4. Discussion on the merits of the proposed ordinance
5. Discussion and reflection on the value of deliberation about the ordinance to date
6. Discussion/Possible Action on the recommendation of specific concerns for consideration by GCAC or other entities
7. Discussion on the Expectations for the subcommittee and definitions of "success"
8. Presentation: Key features of community engaged governance; potential next steps
9. Discussion/Possible Action on Next Steps
 - Outline a collaborative approach to establish measureable and achievable goals, discover and explore effective solutions, and pursue a set of solutions to achieve results
10. Identify how GCAC may support proposed next steps
11. Discussion/Possible Action on outcome for the proposed ordinance
12. Adjournment

Notice: A quorum of the Portage County Board of Supervisors or any committee thereof may be present at this meeting.

Any person who has special needs, and plans on attending this meeting, should contact the Planning and Zoning Department as soon as possible to ensure that reasonable accommodations can be made.
Telephone 715-346-1334



PLANNING AND ZONING DEPARTMENT

1462 STRONGS AVENUE, STEVENS POINT, WI 54481 • PHONE: 715-346-1334 • FAX: 715-346-1677

To: Groundwater Protection Ordinance Subcommittee
From: Jen McNelly, Water Resource Specialist
Date: July 27, 2017
Re.: August 3, 2017 Subcommittee Meeting

The Groundwater Protection Ordinance Subcommittee will hold a meeting on Thursday, August 3, 2017 at 7 pm. in Conference Rooms 1 and 2 of the Portage County Annex Building.

At the last meeting Dr. Ray Reser and Pete Arntsen shared a presentation on the need and applicability of a public health and groundwater protection ordinance. There was a very nice discussion following the presentation that touched on a variety of topics including the need for an agronomist in Portage County, the role of nutrient management planning within the County, and the usefulness and cost associated with monitoring. At the end of the meeting, there was a request from the subcommittee members to bring back information on specific items including monitoring and ordinances from other municipalities from across the state.

As you will see on the agenda, the August 3rd meeting can be divided into two parts. The first part of the meeting will be a brief discussion about the requested topics. Included in the packet are additional pieces of information that may be beneficial to these discussions. Steve Bradley, Portage County Conservationist, has assembled a white paper on nutrient management planning efforts in Portage County from 1995 to 2015. This paper provides a summary of what was done, why it was done, and how those efforts are undertaken today. Steve will be present to answer any questions that subcommittee members may have regarding this topic. Steve has shared most of this information during previous meetings but this is simply a written summary of the information.

On the topic of monitoring I reached out to Kevin Masarik, Drinking Water Specialist at the UWSP Center for Watershed Science and Education to gather more information. Kevin has an extensive background in groundwater monitoring, especially in nitrate-nitrogen concentrations and is currently conducting research on this topic. Kevin is unfortunately not able to attend the August 3rd meeting due to prior obligations. I will be briefly sharing Kevin's point of view and concerns regarding establishing a county-wide monitoring at the meeting.

The third piece of information requested was a discussion on other groundwater related municipal ordinances from around the state of Wisconsin. I will be sharing these in a brief power point presentation. An ordinance is a set of strict rules for how to conduct an activity, so I have tried to go through each of the ordinances and pick out the rules or requirements that govern the specific activity they address. These highlights are included in the packet of information. The intent of this information was to provide an overview of how other municipalities from across the state are tackling groundwater related issues.

The second portion of the agenda will include a number of discussions that will be facilitated by Nathan Sandwick, UW-Extension Community Development Educator. As outlined in the original subcommittee charter, this subcommittee was intended as a limited-term special subcommittee that would report back to GCAC at the end of six months or in August. We have reached that timeline with this meeting and this seems like the time to assess where the Committee is at with the task that they were given. These discussions may include assessing the information that has been shared and the need to learn or discuss these issues further, assess the effectiveness of the discussions that have taken place and create a plan for next steps or how we will be moving forward with this issue.

Ideally, we would like to walk away from this meeting with an outline and recommendation for a collaborative approach to establish measureable and achievable goals, discover effective solutions, and select and pursue a set of solutions to achieve results as well as identifying how GCAC may support this approach.

We look forward to meeting with all of you at the meeting on the 3rd. If you are unable to attend please notify Amy Heins, Administrative Associate in the Planning and Zoning Office, as soon as you are able to. Her contact information is: 715-346-1334 or heinsa@co.portage.wi.us. If you have any other questions or concerns you can contact Jen McNelly at 715-346-1334 or mcnellyj@co.portage.wi.us.

GROUNDWATER PROTECTION ORDINANCE SUBCOMMITTEE
MAY 30, 2017

MEETING MINUTES

Roll Call

Members present: McFarlane, Jakubek, Mangin, E. Burns, Garth, and Droske.
Staff present: McNelly, Heins, Schuler, and Bradley, Planning & Zoning Department.

Others Present

Ray Reser, Anne Abbott, Gale Gordon, Pete Arntsen, Gary Garske – PCHHS, Jenny Larsen, Cecile Stelzer-Johnson, Jim McKnight, Susan Tupper, Bruce and Doreen Dimick, Ken Schroeder – UW Extension, Barb Gifford, Jim Gifford – Portage County District 14, Matt Jacowski – Portage County District 22, Vinnie Miresse – Portage County District 1, Bob Gifford – Portage County District 10, and Barry Jacowski – Portage County District 23.

1. CALL TO ORDER

The meeting was called to order at 7:02 p.m. by E. Burns.

*** McNelly informed the Subcommittee members and audience of the passing of member Christopher Cirno.

2. REVIEW/APPROVAL OF MINUTES FROM MARCH 30, 2017

McFarlane moved to approve the minutes as presented. Jakubek seconded the motion, which passed by voice vote, 5-0.

3. PRESENTATION AND DISCUSSION ON HOW NITROGEN ENTERS THE GROUNDWATER AND REGULATORY CHALLENGES

Bradley gave presentation; PowerPoint presentation on file.

Abbott asked the cost of runoff for a CAFO vs manure spreading. Bradley stated there are a variety of financial assistant programs available. The cost share rate through the DNR is \$150,000 which only covers 70% of the cost with the average cost to construct a structure to store manure for a year for a farm with 250 cows being \$300,000-\$400,000. Schuler asked what size facility that would be. Bradley replied 2-3 million gallons. B. Jacowski asked Bradley to explain the regulatory difference was between a CAFO and a smaller farm. Bradley stated anyone below CAFO size (700 dairy cows or 1,000 beef cows) is not required to have a manure storage structure, not restricted from hauling manure in the winter, and can apply for money through the DNR if they choose to build manure storage structure. McFarlane stated the DNR maximum is \$150,000 and only available to small farms; the federal grant maximum is \$100,000 and is available to small farms and CAFO's. McKnight asked the success rate for cost share applications. Bradley stated it varies from year to year and is based on the number of applications received. Reser asked on average, how many applications Bradley receives in a year. Bradley replied 3 in one year was the most we have received.

B. Dimick stated all these structures leak as they are made from concrete. Bradley replied there has been no evidence of leaking. Bob Gifford stated since manure structures are so expensive we should look into a concrete slab for the manure with a channel around it that would circulate the fluids with a pump; this would allow the UV rays from the sun to knock down some of the pathogens, and then compost the piles. Then by spreading enriched compost on the fields it would hold the nitrogen in a lot better. Miresse stated Wysocki was looking into something similar called an anaerobic digester. B. Dimick stated a lot of CAFO's prefer to handle manure in a liquid state since they clean up the barns by adding water to the manure/sand bed area which is why it goes into a lagoon. McKnight asked if there has been any water testing done prior to and after having manure structures/spreading. (Mangin arrived at 7:28 p.m.) Bradley stated Portage County has not done that as it is expensive. McNelly asked if water monitoring is a requirement for receiving a CAFO permit. Bradley stated it is. McNelly stated she knows the DNR can add extra conditions to the permit which is why Saratoga had so much information when they had a proposed CAFO. McKnight stated Saratoga had 7 or 8 test wells with many years of monitoring which is extremely valuable. B. Dimick stated it is available to the public, but sometimes you have to file a freedom of information request with the DNR, and also stated Saratoga has 10 monitoring wells which cost \$62,000. Abbott stated she had a discussion with farmers about installing monitoring wells on farms, and there was some interest, but it would take education.

Stelzer-Johnson asked if well water tests could be posted online and available to the public. McNelly stated we used to share that information, but cannot share that due to privacy issues as it was tied to the owners address;

data now goes by 1/4 1/4 section. McNelly stated only a lender can request certain tests prior to the purchase of a property. Reser asked if lenders drove the decision for labs not to release addresses. McNelly replied she is unsure, but stated statewide it is DNR's policy to not share that information as well.

Mangin asked if there are slow release forms of commercial nitrogen that are available and reasonable priced. Bradley replied yes, but the cost is not worth the yield response. B. Jacowski stated it had not been proved to be real effective and based on weather conditions. Schroeder stated you would need the right conditions to release at the right time; it is not the solution we had hoped it would be as of right now. McKnight stated data from the USDA shows commercial fertilizer going up and manure going down. E. Burns stated there are less farms, and less cows. Firkus stated the reason manure is not spread on more fields is because it cannot be spread on vegetable crops.

B. Jacowski asked Bradley to discuss irrigated manure. Bradley stated irrigated manure allows you to apply manure only when the crop needs it, and this would cause less leaching vs applying before the crops are planted and needs it.

McKnight stated he read that when cover crops are tilled in it can create nitrogen and one added 160lbs per acre of nitrogen, and asked if that is being done in Portage County. Bradley replied no, and in order to get that much nitrogen the crop would have to grow for at least a year, if not more. Schroeder stated farmers will grow alfalfa or clover for livestock feed, which is considered a green manure and is a slow release nitrogen, for 3 years before changing to corn. Stelzer-Johnson stated the green manure adds to the texture of the soil which is beneficial. B. Jacowski stated he purposefully seeds 10% grass to the alfalfa to absorb the nitrogen when it does die off as it can leach as it breaks down. Arntsen stated nitrogen organic matter decays more quickly than non-nitrogen organic matter. Jakubek stated she is currently surveying to find out how many use cover-crops as they want to look at the soils before and after and educate farmers even more with their findings. Schroeder stated there is a farmer group located near the Mill Creek watershed that is experimenting with cover crops. Schroeder stated on June 24th at 9 a.m. they are having a Spring/Summer Field Day at Eron's farm to discuss conservation efforts in the area which includes cover crops. There will also be a low disturbance manure injection demonstration; no-till builds the organic material in the soils by not disturbing it and airing it out. If we can maintain and build the organic matter in the soil through cover crops and no-till planting it will improve the ability to hold the nitrogen in the soils vs getting a big rain and it washing away. This is all part of the "best management" picture.

J. Gifford stated it seems to depend on the Nutrient Management Plan, and if we upped the regulations we could reduce nitrogen consumption. Bradley stated this is based on the amount of nitrogen sold and applied, not what is planned; some farmers have been applying less than what the Co-op says. Abbott asked how good the education is and if it was properly measured, and if we can up the taxes on fertilizer. Bradley replied only the State Legislature can adjust taxes. Miresse stated the Nutrient Management Plan is not working, it is for max profit and not necessarily soil specific. Bradley stated there are different recommended rates based on soil types. The University clearly states that "these recommendations are not for water quality protection." Gordon stated at one point the University stated it takes 1.2 units of nitrogen to produce a bushel of corn, and the recommendations today are only 1 unit.

Schuler stated there are a lot of great questions and some frustration, but asked the audience to let Bradley finish his slideshow.

E. Burns suggested having a work group vs a subcommittee. Bradley stated we received a grant from the DNR to fund a study that we will contract with UWSP to look at current water quality in the Tomorrow River watershed near best management practices, and it should show some improvement in water quality. Reser asked which County staff were unable to identify viable regulations. Bradley replied McNelly and himself. Reser stated farmer-led watershed groups have lead us to where we are today in the County and the State. Reser stated we need the ordinance to address these issues. The percentage of farmers in Portage County is 4%, and we all need to address it not the farmer-led watershed groups. Jakubek stated she is the leader of the farmer-led watershed group in eastern Portage County and part of Wisconsin Farmers Union; the reason it is called "farmer-led watershed" is because of DATCP grants. Jakubek stated they receive \$20,000 a year, but it has to be farmer led (5 farmers). We need to get farmers together, earn some trust, show off what everyone else is doing, put in test plots, teach them, and bring in the rest of the community. This ordinance has made them feel slightly attacked, and we need time to bring everyone together.

Schuler stated based on State and County regulations staff did not see a way we could unilaterally jump in and start regulating. Our main role in this has been education; information, education, and outreach will always be our first priority, and maybe it is time we address it. Schuler stated this is not a shut-down of the ordinance idea, but it is

us trying to explain our professional perspective. Any efforts made outside of the government organization to try and solve the problem is a very positive thing. Bradley stated there is something you can do if you are a frustrated rural residential homeowner, and that is to install a recirculating sand filter to minimize the nitrates coming from your own septic system. Audience member asked how much it costs. Bradley and Arntsen replied approximately \$5,000-6,000. M. Jacowski encouraged everyone to attend the Field Day at Eron's farm as it involves a variety of groups, not just farmers. McNelly stated Portage County recognizes we have an issue and it needs to be addressed, and this is a huge opportunity to create a strategy. McNelly stated we are missing some basic information; for example: how many farmers use "best management practices." If we can get this information we can assess where we are at, address these issues, and create strategies. This is a chance for us to come together and look at other options, including reaching out to the public with education and sharing what we are doing at the County level. Schuler stated one of the most important aspects of the Groundwater Management Plan is implementation, and a lot of this is in the plan which is why we need to get it passed.

Miresse stated when it comes to the farmer-led watershed group he believes everyone should be allowed a seat at the table as all voices deserve to be heard.

Mangin asked if all sources of nitrogen are considered when writing a Nutrient Management Plan. Bradley replied yes, by best management practice, and/or regulation if it is a CAFO; manure storage, or those that participate in farmland preservation. Droske asked what different economical farm practices are available since doing the same thing does not seem to be working. Bradley replied there are practices available, but they are not economically viable which means we would need to come up with some sort of incentive. Jakubek stated one goal of the farmer-led watershed group is to incentivize some of these things. McNelly stated Waupaca did an incentive program which bought farm land within their wellhead protection area to help reduce nitrates; this did work, but it is expensive. McFarlane stated (in reference to Waupaca) the crop agreements they had did not work with well 5, and it was actually a denuded cow lot nearby that's internally drained. McFarlane asked Bradley if there is anything similar in Portage County that could contribute to this issue like Waupaca had. Bradley replied some, but the ones he is aware of are high density feed lots where the animals compact the soil and prevent leaching; less concentrated animals may cause leaching. McFarlane suggested putting pressure on 590 Standard to make it more groundwater appropriate vs economically appropriate.

E. Burns stated what he is hearing is the Subcommittee will report back to GCAC that an ordinance is not what we need at this time, and we will look into alternative options using the Groundwater Management Plan. McFarlane stated there are some things in the ordinance that need to be stricken, and there are some good things that should be discussed. Miresse agreed, and stated the discussion is more important than the ordinance. Mangin and Droske agreed with McFarlane. McNelly asked if the finer points should be reviewed through the Subcommittee or GCAC. Mangin replied prefers discussing through the Subcommittee as they meet more often and can come to a resolution more quickly. B. Jacowski stated he does not want anyone to leave thinking this is the end as it is truly just the beginning, and suggested everyone contact their legislator.

Abbott stated this started in the Town of New Hope and felt it was much bigger, and that is why we brought it to the County; we are all concerned and can help. Arntsen stated no one wants an ordinance, but it is on our list since other things have not worked, and he encourages another meeting to discuss it further. McNelly clarified that there were good viable actions in the ordinance, but staff does not feel that a regulatory ordinance type setting is the correct option.

4. DISCUSSION OF ALTERNATIVE ACTIONS TO ORDINANCE

No formal discussion.

5. NEXT MEETING DATE

McNelly stated another meeting will be held to discuss each of the specific actions that were mentioned in the proposed ordinance, the intent behind them, how they would be implemented, and the potential impact on groundwater quality. McNelly stated the next meeting date is to be determined, but will take place in June, 2017.

6. ADJOURNMENT

McFarlane moved to adjourn the meeting; seconded by Jakubek. Meeting adjourned at 9:30 p.m.

Amy Heins, Recording Secretary

Ed Burns, Chair

Date

GROUNDWATER PROTECTION ORDINANCE SUBCOMMITTEE
JUNE 29, 2017

MEETING MINUTES

Roll Call

Members present: McFarlane, Jakubek, Mangin, E. Burns, Garth, and Droske.
Staff present: McNelly, Heins, Schuler, and Bradley, Planning & Zoning Department.

Others Present

Ray Reser, Anne Abbott, Gale Gordon, Pete Arntsen, Jenny Larsen, Cecile Stelzer-Johnson, Jim McKnight, Susan Tupper, Todd Kneffel, Diane Nelson, Jim Stokosa, Pat Martin, Patti Orthwein, Denise Brennecke, Pat Quigley, Nichole Besyk, Cory Rusch, John Eron, Nancy Turyk, Lynn Markham, Joseph Weisbrod, Helen Klimowicz, Pat Zellmer, Mark Klein, Ellen Davis, Ken Schroeder – UW Extension, Patty Dreier – Portage County Executive, Matt Jacowski – Portage County District 22, Vinnie Miresse – Portage County District 1, Bob Gifford – Portage County District 10, and Barry Jacowski – Portage County District 23, Gerry Zastrów – Portage County District 24, and Dale O'Brien – Portage County District 19.

1. CALL TO ORDER

The meeting was called to order at 7:02 p.m. by E. Burns.

2. PRESENTATION AND DISCUSSION ON THE PUBLIC HEALTH THREAT PRESENTED BY CONSUMING CONTAMINATED GROUNDWATER, THE CAUSES OF CONTAMINATED GROUNDWATER, METHODS TO MINIMIZE CONTAMINATION, AND WHY AN ORDINANCE CAN BE AN IMPORTANT TOOL IN THE SHED OF GROUNDWATER PROTECTION TECHNIQUES

Reser and Arntsen gave a presentation; handouts and PowerPoint presentation on file.

E. Burns stated when it comes to the nitrogen use chart for irrigated and non-irrigated crops it depends on the size of the plant and the timing. Reser stated timing is critical, and best management practices are important. E. Burns suggested we look into the existing County ordinances and update them versus creating a new one.

McFarlane referenced draft ordinance line 325, and stated at a County level we cannot exceed 590 Standards. Bradley replied correct, unless it is passed through each town by referendum. McFarlane stated we should look into heavily used denuded cow lots, which we are finding to be point sources. Those could be added and/or addressed by a grazing plan or language stating soils must be kept in some sort of permanent vegetation and managed better. We also need to define pasture better, and it should also include heavily used feed lots that are not totally contained. Reser stated this is why it is important to have a variety of experts; creates more discussion.

McNelly stated she reached out to Wisconsin's Legislative Reference Bureau regarding authority and their reply is as follows: *"These are complicated issues and so there is much we could discuss, but just briefly on the agricultural side local authority is limited but there are some options. Section 92.15 in the Statutes, livestock operations law authorizes local governments including counties to enact regulations that are consistent with State standards governing agricultural sources of nonpoint source pollution. Those standards are set forth in Chapters NR151 and ATCP 50 Wisconsin Administration Code, the address issues such as manure storage, wastewater processing, farm conservation practices, and nutrient management. That Statute generally prohibits local governments from imposing regulations on livestock operations that are more stringent than the State standards with certain exceptions. Specifically a local government may enact regulations of livestock operations that exceed State standards only if the local government demonstrates to the satisfaction of DATCP or the Department of Natural Resources that the regulations are necessary to achieve State water quality standards. Local governments may in some cases also be authorized to directly or indirectly regulate livestock agriculture under one or more other sources of law, for example: subject to certain requirements, counties, cities, villages, and towns are expressly authorized to enact ordinances regulating certain manure storage facilities. The Wisconsin State Statutes provide express authority for other times of local regulation that may impact agricultural operations such as the authority to establish highway weight limits and enact shore land and floodplain zoning ordinances. Such regulations would generally be authorized unless they are preempted by State or Federal law."* McNelly stated in some cases you can go stricter than State Statutes, but the DNR and/or DATCP have to review and approve them.

Arntsen stated an ordinance does not have to be stricter than State or Federal standards, but what it could do is give the County authority to uphold those standards. Jakubek stated Nutrient Management Plans are only required if someone takes any State or Federal funding. McFarlane stated if funding is offered and accepted by the farmer or

if funding is offered and denied by the farmer, they are still required to follow the Nutrient Management Plan. McFarlane stated Portage County needs a full time agronomist that is CCA certified to write plans, offer cost sharing, do follow-ups, and spot check as it has been very beneficial in Waupaca County. Jakubek asked what follow-up is done. McFarlane replied soil tests, site visits, etc.

B. Jacowski stated to start we have to make sure we are following ordinances that are already in place. Portage County has had a Wellhead Protection Ordinance as extra protection for certain areas, and it seems as though when a gas station is denied it is annexed to the City of Stevens Point and built anyways. B. Jacowski stated we definitely need to look at our ordinances and update them. Frost stated it seems as though we have an issue with enforcement and if we create a new ordinance there still will not be enough staff available to enforce. Arntsen stated we would need funding; we cannot just sit around and do nothing. Droske stated requiring the Nutrient Management Plans be adhered to is a good start, but currently it does not take impacts to groundwater into consideration. Arntsen replied the plan shows how much nutrients can be applied to maximize profits, but they do not have to apply that much. Arntsen stated we should reference best management practices in addition to the Nutrient Management Plan so farmers know when and how much nutrients should be applied based on their soil types. Johnson-Stelzer stated the enforcement of the Nutrient Management Plan is poor, and we should start with problem areas and call those individuals out.

E. Burns asked Reser his predictions on nitrate levels with all this rainfall. Reser stated you have to look at the groundwater flow, and stated all the rain has flushed a lot of nitrate out of some areas; readings change over time. E. Burns stated when we get done testing all the wells in Portage County, are they going to be at lower levels than they would have been 3 years ago before we received all this rain. Reser stated one test would not help as this is something you need to continue to do to establish a trend, but it is a good start. Frost stated transient non-community drinking wells get tested regularly; 11 showed a decrease and 22 showed an increase, and asked if we could tell a pattern from those such as if the decrease is in one specific area. McNelly stated that is something she can look into.

Gifford stated we need to look at environmental legal advisory groups that can help steer us through the process when local initiative is preempted by the State level. Stokosa asked how long ago did Kewaunee County get their regulations in place, and if they had any changes in their test results. McNelly replied 12/20/2016. Arntsen stated that is a great question, we do not know how long it will take to see changes as the groundwater flows faster in some places than others. Turyk stated on average, groundwater moves 1 foot per day. Bradley stated from 2011-2016 Kewaunee County had 80%+ of their crop land under Nutrient Management Plans. McKnight stated Nutrient Management Plans need to include groundwater practices; in 2015 the USDA stated corn only absorbs 35% of the nitrogen applied. The Town of Saratoga ordinance allows the County to put in monitoring wells to help identify spikes in nitrogen which would help locate the cause.

Nelson stated she is curious to know how many public water supplies exceeded nitrate level standards and were able to mitigate or tie into villages for treated water. The problem could be even worse than we think. Turyk stated the only wells that would be affected with rainfall are wells that are barely touching the top of the aquifer.

B. Jacowski stated everything circles back to the need of enforcing existing ordinances. Arntsen stated we need an ordinance that requires new farmers to follow certain practices. Reser stated the EPA states existing ordinances in Kewaunee County were insufficient at protecting groundwater, and he feel that is the same for Portage County.

Schuler asked Bradley if there is a regulation in place that sets limits or restricts limits of nitrogen used. Bradley replied yes, we have an Animal Manure Storage Ordinance and Nutrient Management Standards that states if you have a manure storage structure you have to have a 590 Nutrient Management Plan. Bradley stated in the 590 Nutrient Management Plan it states you cannot apply more nitrogen than what A2809 says which is the UW recommendation. There is no way to tell if someone is abiding by their Nutrient Management Plan which makes it hard to enforce unless we had a very large staff to go out and be with the farmer every time they apply. Schuler stated we cannot jump into a new ordinance without having discussions on what everyone can do/try voluntarily first. Weisbrod stated we need a level playing field for everyone that will be regulated, because if you are putting in extra work to improve and your neighbor is not, that is not fair and we will not get anywhere. In time, manure will go from a problem to a profit center based on research he has done on Scandinavia.

Jakubek asked what procedures the County has in place for someone with high nitrates. McNelly replied currently there are no procedures; we do offer resources and help, but it is up to the owner to follow through with it. Bradley stated if we are able to identify the source of the problem we can address it with the farmer and work on correcting the issue and possibly get them cost sharing to help. Most of the time we are unable to identify the source of high

nitrate. McNelly stated in some cases we can work with DATCP for extensive testing to identify the source. Turyk stated there are other models available such as New Mexico where some farms are required to have a few monitoring wells installed that would skim the top of aquifer, and are required to be tested so many times per year.

3. DISCUSSION OF SPECIFIC RECOMMENDATIONS AND ISSUES IDENTIFIED IN THE PROPOSED PUBLIC HEALTH AND GROUNDWATER PROTECTION ORDINANCE

No formal discussion.

4. DISCUSSION OF REGULATIONS AND OTHER GROUNDWATER RELATED COUNTY ORDINANCES FROM THROUGHOUT THE STATE

No formal discussion.

5. DISCUSSION/POSSIBLE ACTION ON POTENTIAL NEXT STEPS

McNelly asked what the Subcommittee would like to discuss next month. Members agreed they did not want to go line by line through the draft ordinance. E. Burns suggested looking at regulations and other groundwater related county ordinances from throughout the State, which we did not get to tonight. McNelly stated she will also look into the cost of an agronomist, cost to enforce the Nutrient Management Plan and existing ordinances, promotion of best management practices, current procedures/protocols to address these issues, and other alternative options such as monitoring wells.

6. NEXT MEETING DATE

McNelly stated the next meeting date is to be determined, but per the Subcommittee it will take place the first week of August, 2017.

7. ADJOURNMENT

Jakubek moved to adjourn the meeting; seconded by Droske. Meeting adjourned at 9:07 p.m.

Amy Heins, Recording Secretary

Ed Burns, Chair

Date

20 YEARS OF NUTRIENT MANAGEMENT PLANNING (NMP) 1995-2015

Portage County Land and Water Conservation

In 1995, Portage County Land and Water Conservation was one of the first counties in the Country to encourage farmers to develop NMPs, with an emphasis on dairy and livestock farms. The County began with a program within the Tomorrow/Waupaca Priority Watershed Project by providing 100% reimbursement to any interested farmer for all costs associated with soil sampling. In subsequent years, county staff met one-on-one with any farmer seeking assistance with the development or clarification of their NMP. Land and Water Conservation staff continue this service to the present day.

The goal is to provide education for farmers to write, understand, implement and evaluate their NMP. Some farmers are not interested in writing their Plan but request our assistance with interpreting one developed by a private agronomist. Because the USDA-NRCS 590 Standard for NMP includes nitrogen rates for maximized profitability recommended by the University of Wisconsin (UW), the County has developed a specialized educational approach. The focus is on the economics and dynamics of crop yield response curves for nitrogen applications in an effort to persuade farmers that applying less fertilizer than UW recommendations will result in relatively little reduction in profit due to savings on fertilizer purchases. The Portage Co. educational effort emphasizes the science of nitrate leaching to groundwater in an attempt to reinforce a farmers' land and water stewardship ethic by advocating lower nutrient applications that will translate to meaningful water quality improvements for their grandchildren.

NMP educational efforts were initially focused in the Tomorrow/Waupaca River watershed until November of 2006, which is when an agronomist was hired by the County to expand into other watersheds, with an emphasis in the Mill Creek watershed. The agronomist began as a part time position then became full time starting in the summer of 2008 through the summer of 2011, when DNR grant funding expired. During that time, approximately 170 farmers and farmland owners were contacted at least twice by mail, with follow up contacts by e-mail, telephone or in person to promote NMP and offer free NMP development assistance. Personalized letters were also sent to 90 Mill Creek landowners as part of an effort to target this region. Follow-ups were conducted by knocking on doors and phone calls in an attempt to recruit as many farmers in this watershed as possible. The agronomist offered to work with any farmer who wanted to learn how to develop and improve their NMP. Cost savings on fertilizer purchases and regulatory compliance were the main advantages promoted to farmers for why they should complete their NMP. Twenty-five farmers received individual nutrient management education and assistance in a quality one-on-one instruction to learn how to develop, understand and implement their plans. All of these farmers completed or substantially completed their own NMP's and are now able to develop their Plans that meet the 590 standard. Well over two dozen more farmers began working with the agronomist but did not continue to complete their Plans. They were shown the

components of a complete plan, were assisted in various aspects of the NMP process, such as soil testing, and often started planning using the SNAP-PLUS software. Most of the farmers in the project area chose not to work with the County agronomist. The most common stated reasons were that they were satisfied with the plans developed by their private agronomist and the nutrient rates recommended by the NMP are the same as what they are currently applying. The County agronomist also organized or took part in the following activities to meet farmers and get them engaged in the NMP process:

- Approximately 40 farmers and agriculturalists attended a multi-session nutrient management course and various small-group presentations on nutrient management together with the Mid-State Technical College (MSTC) and UWEX Agricultural Agent.
- Presentations on the use of SNAP-PLUS and nutrient management principles were given at two MSTC campuses together with their Agricultural Instructors; a total of 39 farmers in attendance.
- A two-session SNAP-PLUS workshop was organized together with DATCP staff for farmers in Portage County. Ten farmers inputted all their farm data and learned how to use all the functions of SNAP-PLUS, along with new township-level nutrient application restriction maps. They created and certified their NMP's for 2010. They also were updated on the latest regulatory requirements.
- The Agronomist also attended County Farm Bureau and Farmers Union meetings to meet farmers and explain the program; Assisted UW-Madison Soils professor and UWEX County Ag. Agent on a sweet corn nitrogen trials; Contacted 11 crop consultants working in Portage County to offer assistance and explore opportunities to work together.

In addition to one-on-one education, Portage County has hosted/promoted group NMP educational winter classes in 1995, 2000, 2001, 2003, 2006, 2010, 2012 and 2015 for any farmer seeking NMP assistance. Attendance was generally around 10 farmers, with half being new attendees and half returning for a "refresher". Not counting the three year effort of the County agronomist to partner with MSTC, other Land and Water Conservation staff have worked with their agricultural instructors by providing NMP assistance for multiple continuing education classes for several dozen Portage County farmers.

Over the last 20 years, 590 compliant NMP's were developed on 89 farms for 36,037 acres of cropland in the County. The farmers that engaged in the one-on-one assistance now have a better understanding of all the guidelines, resources and practices that are part of a NMP. Most importantly, because they now know how to develop their own plans and have a much better understanding of how their farming practices impact water quality, any water quality improvements should be self-sustaining without cost-sharing or regulatory oversight. Several dozen additional farmers who did not produce a completed plan received educational assistance on NMP basics and suggestions on management changes to reduce nitrate leaching. Some Portage County farmers have indicated to staff that they have no desire to develop a fully 590 compliant NMP but have reduced nutrient applications as a result of educational efforts.

With some Portage County farmers currently applying less nitrogen than the UW recommended rates contained in a 590 compliant NMP, the County needs to exercise

caution and recognize the potential of increased nitrate leaching when considering the promotion of NMP's. This problem was documented in research (Gensko 2012) that saw 50% of the participants increase nitrogen application rates following participation in WI NMP workshops. This somewhat explains the increase of 152,265 tons of nitrogen sold in WI from 2007-2016 when one would expect a reduction during this period as nutrient management acres went from one million to three million, as reported by DATCP. Because some Portage Co. farmers historically were applying less nutrients recommended in their newly developed 590-compliant NMP, the educational approach potentially averted similar increases of nitrogen applications in the County. Some farmers have expressed discontent with NMP's to County staff because of the "excessive" suggested rates. A couple of farmers were initially upset because they thought their "590 plan" written by a local coop required them to apply more nitrogen than they wanted until County staff explained they did not have to apply all the fertilizer recommended in the Plan. With the UW increasing their recommended rate of nitrogen applications on corn a few years ago, Portage County Land and Water Conservation staff plans to continue this specialized educational effort to discourage farmers who are thinking of increasing nitrogen rates because a newly developed 590 compliant NMP tells them to.

The WI DATCP tracks NMP development through bulk fertilizer suppliers and "Checklist" forms submitted by farmers, agronomists, and public agency staff. They provide an annual state-wide NMP update including a map of "Percent of County's Croplands with NMP". This map is very misleading because it doesn't capture NMP educational efforts, such as those promoted by Portage County, which do not result in completion of a "Checklist" submitted to DATCP. This clarifies why Portage County falsely appears to be lacking in NMP efforts. Because groundwater is more protected by an educational effort resulting in a farmer reducing nitrogen rates by 20 #/ac. without a 590 compliant NMP than by a farmer who completes a 590 compliant NMP without reducing nitrogen rates, Portage County has prioritized farmer education over collection and submission of DATCP "Checklists". The report and map are also deceptive if the reader doesn't recognize that only NMP development is specified, not NMP implementation or what actually takes place out on the land. When it comes to documenting nitrogen applications proposed in a NMP, it is nearly impossible to verify actual rates applied. To do so would require staff to verify legume credits along with every application of manure, biosolid and commercial nitrogen on every crop field. This lack of enforceability is another reason that NMP implementation must be encouraged through voluntary educational efforts. Reductions in nitrogen applications can occur with education as opposed to mandated NMP attempts that can't be proven and alienates farmers in the process, which diminishes any collaborative consideration they may have. Portage Co. Land and Water Conservation has a long history of cooperation by the agricultural community with a wide range of voluntary best management practice (BMP) implementation that a mandate of NMP development would jeopardize, making future water quality improvements very difficult to achieve. It would be a precarious risk to mandate NMP's when verification of implementation is futile and no documented reduction in nitrate leaching exists.

Local Groundwater Ordinances in Wisconsin

Moratoriums

Bayfield County: Moratorium on Livestock Facilities Licensing – A 12-month moratorium on the licensing of new livestock facilities that will have 1,000 or more animal units and on the licensing of facilities expanding to 1,000 animal units. Establishes a 9-person special study committee that reports its recommendations to the County Board. Adopted Feb. 2015.

Douglas County: Moratorium on Livestock Facilities Licensing - A 12-month moratorium on the licensing of new livestock facilities that will have 1,000 or more animal units and on the licensing of facilities expanding to 1,000 animal units. Establishes a special study committee that reports its recommendations to the County Board on issues that include baseline groundwater quality and quantity; the need to add more stringent standards in livestock facilities licensing; the need to consider zoning and other regulations including adoption of a manure storage ordinance and requirements related to a certificate of use for storage facilities operated with the county, implementation of state performance standards to address gaps in the livestock siting ordinance including standards related to processing wastewater, tillage setback, and phosphorus index, and adoption of zoning measures to create special zones for livestock operations over 1,000 animal units, and adoption of a livestock operations ordinance. Adopted September 2016

Iron County: Temporary Moratorium on Livestock Facilities Licensing - A 12-month moratorium on the licensing of new livestock facilities that will have 1,000 or more animal units and on the licensing of facilities expanding to 1,000 animal units while undergoing a revision and review of the Iron county Comprehensive Plan. Planning and Zoning Committee will conduct the review and shall report its recommendations on appropriate County-level regulatory approaches relative to the siting and/or operation of livestock facilities.

Town of York Green County: Moratorium on Livestock Facilities Licensing - A 12-month moratorium on the licensing of new livestock facilities that will have 750 or more animal units and on the licensing of facilities expanding to 750 animal units. Rural Land Conservation Committee will review, research, analyze, and synthesize scientific literature and research regarding the impacts of livestock facilities. Adopted April 2016

Town of Sylvester, Green County: Moratorium on Livestock Facilities – A 6 month moratorium on the licensing of livestock facilities of 500 animal units or greater, to allow the Town of Sylvester adequate time to study, review, consider and determine whether creation of a Livestock Facilities Licensing Ordinance with requirements that are more stringent than state standards and/or other ordinances relevant to livestock facilities are necessary to protect public health or safety in the Town of Sylvester in light of the unique environment and characteristics of the area and the concerns expressed by Town residents and property owners. Further, the imposition of a moratorium will allow the Town of Sylvester to determine whether it has adequate resources to enforce a Livestock Facilities Licensing Ordinance and/or other ordinances relevant to livestock facilities. Adopted September 2015

Manure Spreading, Pipelines, Storage and Transport

Town of Decatur: Manure Transport and Application Ordinance – Requirements in ordinance include no use of center pivot manure distribution systems; a time requirement for incorporation of wastewater from animal manure lagoons and animal manure in liquid form into the ground by disc or knifing within 24 hours; no hoses or pipes used or intended for the transport of animal manure or wastewater from manure lagoons shall be located on, over, under, across, or within a Town road or right of way; a permit is required for the temporary placement of hoses and pipes for transport of manure; a license is required for an underground pipeline for manure transport pipeline; special and/or seasonal weight limits may be placed on the transportation of animal manure on town roads.

Town of Sylvester: Center Pivot Irrigation Ordinance – use of center pivot manure distribution system is declared a public nuisance and are prohibited.

Town of Sylvester: Animal Waste Transport Ordinance – Purpose of the ordinance is to minimize the potential for manure spills and leakage from pipes or hoses. Requirements in the ordinance include: license required for temporary placement of surface hoses and pipes for the transport of animal manure, license required for underground pipeline used for manure transport, ability for County to remove hoses/pipes used for transport of manure.

Bayfield County: Animal Manure and Center Pivot Irrigation Ordinance – Spray irrigation systems for irrigating liquid manure and agricultural wastes through sprinkler systems, traveling guns, and center pivot irrigation systems are a detriment to the health, safety, and welfare of the public and are prohibited.

Bayfield County South Fish Creek Watershed: Manure Management and Storage Ordinance (Rejected by the DNR) – Requirements in the ordinance include: manure storage capacity requirements, windows for spreading of manure, operators may not increase soil test phosphorus levels over a 4-year crop rotation, the phosphorus index shall not be higher than 2 for any single cropping year in the rotation, and further limits on mechanical application of manure

Town of Saratoga, Wood County: Center Pivot Irrigation Ordinance – prohibition of center pivot manure distribution

Town of Saratoga, Wood County Manure Storage Ordinance – Regulates the location design, construction, installation, alteration, closure, and use of manure storage facilities; including steps to deal with malfunctioning, mismanaged, or idle waste storage facilities

Public Health and Groundwater Protection Ordinances

Town of Saratoga, Wood County: Livestock Operation Ordinance – Requirements in the ordinance include: manure applications must meet NRCS 590, NR 151 and/or NR 243, the Town may require a person engaged in the land application of manure to file a report with the Town if a groundwater contaminant exceeds a water quality preventative action limit, there is reasonable basis to conclude that manure application upgradient from the contamination had contributed to the contamination, and the concentration of the contaminant has increased more than 50% since the commencement of manure application or a groundwater contaminant exceeds a water quality enforcement standard and there is a reasonable basis to conclude that manure application upgradient from the contamination has contributed to the contamination. The submitted report must include if the person responsible for the manure application disputes that the application has caused or contributed to the contaminant levels and the factual basis for this position, all testing results and other information regarding the level of the contaminant on the property where the manure application occurs as well as any off-site, down-gradient areas, proposed steps to investigate the causes and extent of contamination, proposed steps to curtail the increase in the contaminant levels, and proposed steps to remediate the contamination. Lists additional steps the Town may take.

Kewaunee County: Public Health and Groundwater Protection Ordinance – The purpose of the ordinance is to protect public health by preventing the contamination of groundwater quality. Land Use and Management Restrictions include: a limitation on mechanically applying wastes to landscapes having less than 20 feet of soil to bedrock between January 1st and April 15th, no mechanical application of wastes on landscapes with less than 20 feet of soil to bedrock when soils is frozen, snow covered, or saturated, when snow is melting, when water is flowing off the land or when precipitation capable of producing runoff is forecast in the next 24 hours, wastes shall not be mechanically applied to direct conduits to groundwater or allowed to drain to direct conduits to groundwater, no temporary stockpiling of wastes on landscapes having less than 20 feet of soil to bedrock during January 1st through April 15th.

Bayfield County: Large-Scale Concentrated Animal Feeding Operations Ordinance – Requirements in the ordinance include: large scale feeding operations must have a permit to operate within the County, the Bayfield County Board of Supervisors shall decide whether to approve the permit with or without conditions to protect public health, safety, and general welfare, prevent pollution and the creation of private nuisances and public nuisances and preserve the quality of life, environment, and existing small-scale livestock and other agricultural operations of the County. Conditions may be related to operations characteristics, management of animal and other waste, population and depopulation of individual animal housing facilities, biosecurity and maintenance of animal health and welfare, transportation of animals, protection of private and public drinking and agricultural wells, air emissions and dust control, protection of private and public property rights, permit compliance, enforcement, and monitoring.

Town of Sylvester, Green County: Amended Ordinance for Licensing Livestock Facilities and Adopting Additional Standards (rejected by DATCP) – Requirements in the ordinance include: a license is required for all livestock facilities with more than 500 animal units, outlines set-backs, mandates a nutrient management plan, records of adequate land for waste spreading. Mapping and testing are required.

Brown County: Animal Waste Management Ordinance – Requirements in the ordinance include: regulating the location, construction, installation, alteration, design and use of animal waste storage facilities animal feedlots. Permit required for animal waste storage or feedlot, no application of animal waste between December 1st and March 31st without a permit, no unconfined manure pile without a permit, each permit requires a facility plan, requirements for animal waste storage facility abandonment, permits must require a winter spreading plan.

Door County: Agricultural Performance Standards and Animal Waste Storage Ordinance – Requirements in the ordinance include: all cropped lands, livestock operations, manure handling, storage, and applications, and applications of fertilizers or other nutrients, are subject to the agricultural performance standards and prohibitions. Lands must meet sheet, rill, and wind erosion standards. Manure storage facilities must meet standards outlined in the ordinance. Livestock producers in a water quality management area will have a clean water diversion. All crop and livestock producers shall comply with nutrient management plans. Tillage setback performance standard, phosphorus index standard.

Wellhead and Source Water Protection Ordinances

City of Bayfield, Bayfield County Wellhead Protection Ordinance - Consists of three overlay districts that limit land uses based on the distance to municipal wells to protect water quality. Also provides minimum separation distances that should be maintained within the district.

Chippewa County Groundwater Protection Overlay District – Institutes land use regulations and restrictions within a defined area which contributes water directly to a municipal water supply

Town of Menomonie, Dunn County Groundwater Recharge Protection Overlay Ordinance – Protects key groundwater recharge areas by imposing appropriate land use regulations in these areas.

Waushara County Groundwater Protection Overlay District - A wellhead protection overlay district in unincorporated portions of the County. Limits particular land uses to protect municipal drinking water supplies.