



Legislative Water Commission

Barb Huberty, Director

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April 26, 2016

Room 5, State Office Building

Meeting Minutes

Members Present

Senator Bev Scalze, Chair
Representative Paul Torkelson, Co-Chair
Representative David Bly
Senator Gary Dahms
Representative Peter Fischer
Representative Rod Hamilton
Representative Clark Johnson

Members Excused

Representative Matt Dean
Senator Carrie Ruud
Senator Roger Chamberlain
Senator Charles Wiger
Senator Matt Schmit

Minutes

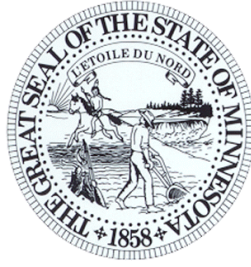
Sen Bev Scalze called the meeting to order at 5:06 pm on Tuesday, April 26, 2016 in Room 5 of the State Office Building.

1. DNR Assistant Commissioner Barb Naramore explained the proposed Pineland Sands Land and Water Study and its outgrowth from an earlier DNR order for the R.D. Offutt Company (RDO) to complete a Discretionary Environmental Assessment Worksheet (EAW), which was later vacated. She explained the timeline of actions related to the EAW and described the study area and the Phase 1 schedule, cost, and goals to characterize the area, establish baseline conditions, and develop sustainability thresholds. The potential scope of a Phase 2 study will address field scale analyses over a crop rotation cycle, at a yet to be determined cost, which is likely to be greater than the Phase 1 study. If the study is funded, next steps will include: establishment of a project advisory team, refinement of the scope, coordination with related efforts, and implementation. She acknowledged the concerns of the petitioner, including pesticide impacts, human health concerns and ecosystem functions.

Discussion: Ms Naramore did not have data at hand about the size and characteristics of the study area [note: that information was provided after the meeting and is posted on the web site]. She said that DNR has not done a similar study at this scale elsewhere in the state, other than generic environmental reviews which have parallels and differences. With the cooperation of other state agencies and project partners, DNR feels they have the needed expertise to complete the project. In response to a question about future applications for multiple small appropriation requests, she clarified that the EAWs are not triggered by smaller applications and the nature of the applications

guides their decision to require discretionary EAWs. These are case by case determinations, based on the site-specific considerations, not the number of permits requested. She will send the environmental review thresholds for irrigated acres and land use conversion [note: that information was provided after the meeting and is also posted on the web site]. The scale of the land use conversion and increase in irrigation led to their decision for the study, but she was not aware of any other land conversions at this scale in the last 2 decades. Ms Naramore clarified that the Memorandum of Understanding was completed when RDO has 5 pending applications; since then, 1 permit was issued and 2 applications were withdrawn, leaving 2 pending applications. Rep Johnson acknowledged that he owns land in this area and has been struck by the number of people who have deep concerns about water quality, especially nitrate; he feels citizens need to be involved and the role of the major producer needs to be defined. DNR was encouraged to continue communicating with the Legislature, particularly the LWC, on this issue. Rep Fischer asked what would happen if baseline or sustainability thresholds are exceeded. Ms Naramore said that they will use the results of the study when they review future permit applications, to determine whether existing permits need to be modified, and whether to refine recommended best management practices (BMPs).

2. Once a quorum was present, Representative Fischer moved approval of the minutes for the March 22, 2016 meeting. THE MOTION PREVAILED.
3. Director Huberty provided an overview of the packet contents, including overview maps along with handouts submitted by presenters and other organizations with projects or interests in the Pineland Sands Area. Members were reminded that there will not be a May meeting and to watch for a Doodle Poll for June meeting options.
4. Bruce Montgomery, Manager of the Fertilizer Non-Point Section in MDA's Pesticide & Fertilizer Management Division, explained the nitrogen dynamics when large tracts of forestland are converted to irrigated, agricultural production. He noted the importance of understanding that there is a first "flush" of nitrogen into the environment at the time of land use conversion, even without nitrogen inputs, due to the large mass of nitrogen and associated bacteria contained within the organic fraction of the plow layer. In an 11-year North Dakota study, they found that the flush lasted 2 years in the root zone and 5 years in the water table; with irrigation scheduling and nitrogen management BMPs in continuous corn, nitrogen levels were minimized to near the level of standards. He said it will be necessary for MN to be prepared to modify nitrogen recommendations for newly irrigated lands. Of the 300,000 acres that Potlach intends to liquidate in 10 years, only 60,000 acres have been sold and of that, only about 6,000 to 8,000 acres are suitable for ag irrigation. He then described the Byron Township study (on a 138 acre crop circle), which is similar to the approach envisioned in DNR's Phase 2 study at 3 additional sites that would compare the effect of various agronomic practices on water quality. RDO is the cooperating producer in this study and they are looking at spreading out the rotation of crops over a longer period to reduce nitrogen and pesticide inputs and reduce disease problems. RDO has been innovative over the last 20 years, particularly within source water protection areas, using techniques such as slow release nitrogen fertilizer and trying crop varieties that need less nitrogen. The new short season crops and cover crops that are being added into the rotation are expected to reduce N use by 60-70% and water use by 30-40%. Additionally, they are experimenting with cover crops that are natural soil fumigants in order to reduce or remove the use of Vapam. Mr Montgomery noted that only about 40,000 acres are dedicated to potato farming in MN and that nitrogen losses for Russet potatoes can't be reduced. He also reaffirmed that without any nitrogen inputs, there will still be a temporary increase of nitrogen in water at the time of conversion from native cover to crops and that it is possible to minimize nitrogen, but not eliminate it.



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5. Kim Kaiser, a hydrologist in the Fertilizer Management Unit of MDA's Pesticide & Fertilizer Management Division, described the regional Central Sands Private Well Network testing program, which found that (in 2011) 4% of the private wells in agricultural areas were above the health standard. From 2012-2015, MDA has continued to monitor a subset of those wells to assess long term trends and have found that the percent of wells exceeding the health standard remains between 3% & 4%. She also described the Township Testing Program that will analyze, over a multiyear period, the concentration of nitrates in up to 70,000 private wells that are located in row-crop intensive agricultural areas with vulnerable groundwater aquifers. When nitrates are detected, additional testing for pesticides is conducted. About 20% of the wells have been tested and 10% of the tested wells exceed the nitrate health standard. In Wadena County, on the edge of the Pineland Sands Aquifer area, over 13% of the tested wells exceeded the health standard. No pesticides were detected in the follow-up testing for List 1 pesticides. Designated townships in Hubbard and Becker County will be tested in 2016. MDA's Pesticide Monitoring Network, which evaluates shallow groundwater conditions at the edge of farm fields in vulnerable areas, was started in 1985. The state is divided into 10 pesticide monitoring regions and a list of 136 pesticide compounds is analyzed for each well. Pesticide findings were not discussed.

Discussion: List 1 contains 22 of the 136 parameters analyzed as part of the Pesticide Monitoring Network. It is abbreviated for two reasons: it is too costly to analyze the full list and the contracted lab's capacity was limited to the 22 compounds selected. Sampling technicians do look for obvious problems to assess the integrity of the wells. The MDA has made it convenient for people to participate.

6. Darren Newville, District Manager of the East Otter Tail and Wadena SWCDs, described the irrigation management and adaptive nitrogen management programs being implemented by the EOT SWCD in partnership with MDA. EOT SWCD has been working on irrigation scheduling for over 2 decades, but due to increasing concerns about elevated nitrate levels, more irrigation, susceptible soils/aquifers and the need for local wellhead protection, an irrigation forum was convened in 2011. They established 5 recommendations: restore the U of MN Ag Irrigation Extension Educator (done), increase education and outreach, develop new research and tools, improve weather and evapotranspiration data, and develop a voluntary certification program for irrigators. They have expanded irrigation scheduling to include five neighboring counties that are working together to deliver more education and outreach via regular workshops and one-on-one advice, facilitated by 2 irrigation technicians. (Benton, Becker and Dakota Counties are following in EOT's footsteps.) They have expanded their weather network geographically and have advance from an evapotranspiration hotline and radio broadcasts to a website that provides access to daily weather data. In combination with this, they are also addressing on-farm nitrogen management via on farm visits,

evaluation of aerial imagery, basal stalk testing, and annual meeting to promote producer interaction. Over the life of the program, 94% of participants have made nitrogen management changes, such as farmers: arriving when irrigation techs download weekly data so they can get results quickly and discuss them with the tech, changing from one-time spring application to 4-6 applications per season using fertigation (when the crop needs it), and sharing success stories (150#/acre reductions) with each other at the co-op. Farmers are concerned about the Nitrogen Fertilizer Management Plan, drinking water and profits; they want to be educated and enabled to protect the environment and remain profitable. Producer/SWCD trust and adequate funding are keys to success.

Discussion: Decreasing Nitrogen is not yet evident in source water; the preliminary Township Testing results for Ottertail County show that 7 of 32 wells have nitrates above the health standard.

7. Darren Newville also made a presentation explaining the buffer mapping and implementation programs and progress in both Otter Tail and Wadena Counties. DNR is dependent on the LGUs to review the preliminary buffer maps they are generating; for example DNR's Otter Tail map is ready but the Wadena map is not. Otter Tail had digital ditch data to share with DNR; Wadena County has not – they have not even identified who is responsible for ditch management within the County (GIS staff or planning staff). SWCDs and landowners are concerned about how the public review process will work and trespass issues, and they are unclear about the inclusion of public water wetlands. Mr Newville showed examples of the significant differences between DNR's maps and current aerial images, as well as the extent of Otter Tail County's water resources (1,049 lakes and 1,174 miles of streams and ditches). The Otter Tail County Board led the way to improve compliance with their Shoreland ordinance and started their Buffer Initiative in 2014, following the approach used by other counties that have achieved 100% compliance. They established a 9 year implementation plan (excluding ditches), but with accelerated implementation funding from BWSR to provide funding for additional techs, they shortened the timeframe to 5 years. This timeline doesn't match the buffer law timeline, but they are optimistic that they can meet it. They are documenting all notifications and transactions and are using a three step enforcement approach; having positive relationships will be a key to achieving compliance. Wadena County is significantly different; they have not identified who is responsible for the ditch program, they have only 12 lakes, they lack GIS expertise and data (they don't even have parcel data). Differences between counties include differing geographies, tax base and percent of taxing capacity, priorities, relationships between the SWCD and County boards, and philosophies (e.g., Otter Tail addresses ditches, Wadena takes a hands off approach). Even within Otter Tail County, the geographic differences create a buffer compliance difference, with the eastern half of the county having only 60 acres out of compliance and the western half having over 600 acres out of compliance.

Discussion: the complexities between SWCDs were revealed and the timelines to implement the buffer law will be more challenging for some.

Rep Fischer requested that meeting materials be posted earlier for members who wish to review it prior to the meeting. He'd be interested in coming back to other topics affecting the Pineland Sands area, such as hearing from RDO about their operations, learning about the Crow Wing River Watershed Restoration and Protection Strategies, getting more information from MDA on their pesticide monitoring program and other groups active in this area.

There being no other business, the meeting adjourned at 7:00 pm.