

## Testimony on 2019 Senate Bill 718

Senator Robert Cowles

Senate Committee on Natural Resources and Energy – February 5, 2020

Thank you, Committee Members, for allowing me to testify on 2019 Senate Bill 718. This bill would create a much-needed Nitrate Optimization Pilot Program.

Wisconsin has shown a need to address the sources of nitrate pollution in our waters which is already a serious problem for many households and the scope of this issue continues to grow around the state. While water treatment or well replacement can be effective short-term fixes to provide clean drinking water, nitrate pollution remains one of the most pervasive contaminants of Wisconsin's groundwater, and the problem shows no signs of slowing.

Overtime, we've learned that an over-application of nitrates through the land-spreading of nitrogen-rich fertilizer, manure, and biosolids and liquids can impact groundwater, especially in areas with low soil depths, shallow aquifers, and porous and permeable bedrock. Unfortunately, these sensitive resource areas make up a large portion of our state's best agricultural land.

2019 Senate Bill 718 creates a revolutionary new pilot project to tackle the problem of nitrate contamination by working directly with some of the stewards who know our land and water best: Wisconsin's farmers. Under this program, the Department of Agriculture, Trade and Consumer Protection (DATCP) would award grants to farmers or producer-led watershed groups to implement a project for at least two-growing seasons with the ultimate goal to reduce nitrate contamination and improve water quality. Under this program, we're not just looking for tried and true methods that have shown to be somewhat effective; we're looking for new and innovative ways that can be more effective, don't harm yields, and work in the soil and bedrock types where our farmers are truly located.

The legislation provides \$1 million with individual grants not exceeding \$50,000 to assist with the implementation, practice, and research of the project. The farmer or group of farmers will also partner with DATCP and the UW-System, which is provided up to 20% of each grant to monitor and study the effectiveness of each project.

While the farmers and Wisconsin well owners will certainly be the main beneficiaries of this program, they're not the only ones. DATCP, who will collaborate with the College of Agriculture and Life Sciences (CALS) at the University of Wisconsin-Madison, the Center for Watershed Science and Education (CWSE) at the University of Wisconsin-Stevens Point, and UW-Extension to monitor these projects, will gain tremendously and can use this data to further study nitrogen loading

reduction methods and improve nutrient management planning. This information will lead to smarter technical assistance, agricultural planning, and regulatory implementation for decades to come.

Senate Bill 718 has also has a technical change incorporated by Senate Amendment 1 to clarify that the UW-System is eligible for up to 20% of the total grant award for their share in the process. Originally, nutrient management planning (NMP) was designed to promote the efficient use of fertilizer and improve yields. While crop yields around the state have improved through the years, adoption and adherence to NMPs have not necessarily kept pace. Estimates put the total cropland in Wisconsin complying with an NMP between 15%-37%. Senate Bill 718 would provide grant funding to unique projects around the state that reduce nitrogen loading or optimizes the use of nitrogen while also protecting water quality. In the process, we can create better NMPs and promote smarter compliance with those NMPs.

After the projects and research have concluded, DATCP will prepare and submit a report to the Legislature which provides recommendations on ways to cost-effectively implement their findings into Nutrient Management Plans (NMPs) and Wisconsin's cost-share system. In short, by passing the Nitrate Optimization Pilot Project, we have an opportunity to be on the cutting-edge of new ways to advance our state's water quality, maintain or increase crop yields, and promote smarter agricultural planning in a more efficient and optimized manner.



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# JOEL KITCHENS

STATE REPRESENTATIVE • 1<sup>ST</sup> ASSEMBLY DISTRICT

**Testimony for the Senate Committee on Natural Resources and Energy**  
**Senate Bill 718**  
**Wednesday, Feb. 5, 2020**

Thank you Chairman Cowles and committee members for holding a public hearing and giving me the opportunity to testify on Senate Bill 718.

This bipartisan bill, which came from the final recommendations of the Speaker's Task Force on Water Quality, creates a nitrogen optimization pilot program where the Department of Agriculture, Trade and Consumer Protection would award grants to farmers or producer-led watershed groups in targeted areas for implementing projects that reduce nitrogen loading.

Farmers are some of the most responsible stewards and conservationists of our land throughout Wisconsin, so it only makes sense to take advantage of their vast knowledge and get them further involved in lessening the amount of nitrates in our water.

It is critical that we protect our water from excessive nitrates because of the impacts to human health. For almost 75 years, physician and public health professionals have known that exposure to high levels of nitrates can lead to "blue baby syndrome," a condition where a baby's skin turns blue due to decreased hemoglobin in their blood.

Nitrate exposure during pregnancy can also result in increased cases of intrauterine growth retardation, cardiac defects, central nervous system defects, Sudden Infant Death Syndrome (SIDS) and miscarriage.

According to the U.S. Environmental Protection Agency, exposure to higher levels of nitrates also has been associated with increased incidence of cancer in adults, and possible increased cases of brain tumors, leukemia and nasopharyngeal (nose and throat) tumors in children.

Because of these health risks, we need to be able to get to the root of the problem to fix these issues, and I believe SB 718 is a significant step in the right direction.

Under the bill, DATCP would be required to work with the College of Agriculture and Life Sciences (CAL S) at the University of Wisconsin-Madison, the Center for Watershed Science and Education (CWSE) at the University of Wisconsin-Stevens Point and UW-Extension to monitor the implemented projects and use the data to further study nitrogen loading reduction methods and improve nutrient management planning.

One of the main issues we've been finding with nutrient management planning is they were originally designed to promote the efficient use of nutrients while, at the same time, minimizing

nutrient loss and maximizing profitability. Furthermore, these plans have also typically focused on phosphorous losses to surface water and have barely paid any attention to nitrogen losses to groundwater.

After the different agencies are able to conduct ample research on the pilot program, a report will be presented to the state Legislature that will provide recommendations on ways to improve nutrient management plans and the state's cost-share system. The report must also give an assessment of the cost-effectiveness of different nitrogen reduction methods and of the feasibility of a permanent nitrogen optimization grant program.

I formed a nitrate work group at the beginning of 2019 and we have spent the last year coming up with science-based solutions on how to address the high amount of nitrates in some of our state's water. I know many of the group's members are looking forward to lending their expertise in determining which areas of the state we should target for the pilot program and what practices we should use.

SB 718 would provide \$1 million in grant funding in fiscal year 2020-21 and the individual grants to farmers or producer-led watershed groups in targeted areas would not be able to exceed \$50,000.

Before being awarded a grant, all applicants would have to work with DATCP and CALS to determine which practices and approaches should be implemented to generate the most optimal results. No more than 20 percent of each individual grant could be used for research expenses.

I would like to thank you for taking the time to listen to my testimony and I hope you consider supporting SB 718. I would also like to thank my co-authors and the members of the water quality task force for all the hard work they put in to this bill. I would be happy to answer any questions if you have them.



State of Wisconsin  
Governor Tony Evers

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## Department of Agriculture, Trade and Consumer Protection

February 5, 2020

**Re: SB 718: creating a pilot grant program for farmers to reduce nitrate loading**

Chairman Cowles and members of the Senate Committee on Natural Resources and Energy. Thank you for the opportunity to provide information about SB 718 related to a pilot grant program for farmers to reduce nitrate loading. My name is Sara Walling, and I am the Administrator of the Division of Agricultural Resource Management at the Department of Agriculture, Trade and Consumer Protection. I will describe the work the department does with regards to nutrient management planning, and how SB 718 might impact those efforts.

**Background:**

DATCP and Department of Natural Resources (DNR) coordinate our efforts to improve agricultural water quality impacts through complementary programs – DNR sets the performance standards for water quality, while DATCP sets the technical standards. Another way to describe this is that DNR sets the regulatory goals for waterbodies, and regulates dischargers that have the potential to pollute. When it comes to agriculture, DATCP is charged with translating these goals into technical standards by determining the practices that best help farmers meet the regulatory standards set by DNR. The practices we include in DATCP's technical standards must be demonstrated that they can meet the regulatory goals, while also being achievable by our agricultural producers. Our departments' collaboration then support implementation of our performance and technical standards through the annual allocation plan to counties which provides grants to counties and farmers for projects that address, or prevent nonpoint source water pollution through conservation practice implementation, county land conservation staff, rural targeted runoff management grants, notice of discharge grants, and nutrient management tool development, planning and education.

**Comments on the bill:**

If enacted, this bill would require DATCP to administer a pilot grant program for farmers who voluntarily initiate a project that identifies and implements practices necessary to reduce nitrate loading on their farms. For example, grants could help farmers offset costs of using nitrogen inhibitors, planting cover crops, or utilizing other innovative nitrogen management tools. Grant monies could also be used to offset any short-term reductions in crop yield that may be triggered by implementing these BMPs or adjusting their crop rotations to ones that require less nitrogen inputs. This bill requires each participating farmer to work with CALS, Extension, or UW Stevens Point to conduct research on these pilot programs and assess the efficacy of best practices at reducing nitrate loading to groundwater.

When administering this new grant program, DATCP would collaborate with partners to identify and award funding to projects in different parts of the state that have different soil types, or geologic characteristics and make awards up to \$50,000 to farmer participants and also provide a portion of the funding to each collaborating university entity to conduct the associated research components of this program.

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In addition to supporting innovative and effective nitrate loading best management practice implementation, DATCP believes the projects and practices conducted through this grant program can provide the powerful scientific information to support the technical standards in any future amendments of ATCP 50, DATCP's soil and water conservation practice rule that may be required following DNR's development of nitrogen groundwater standards. This data will also help DATCP to identify and justify cost-shareable practices farmers can use to reduce nitrate loading to the waters of the state – some of which may be needed for farmers to comply with those future targeted performance standards developed by the DNR. The ability for DATCP to work closely with our partners and monitor the progress and outcomes of this program will be imperative for future, successful and effective nitrogen management practices and cost-share incentives to become a reality.

Throughout the Water Quality Task Force hearings, we heard several consistent messages about the important role that agriculture plays in the future of Wisconsin's water resources, and DATCP stands ready provide farmers with the resources they need to meet that challenge. We are evaluating our opportunities to grow our expertise in alternative farming practices, emerging technologies to promote yields from lower nutrient inputs, and innovative cropping systems. With current staffing levels, DATCP will be challenged to find the staffing resources to dedicate to ensuring the long-term success of this program, and provide the invaluable technical support and expertise to assist our farmers in implementing the practices identified by this effort. However, given the priority of this program to DATCP's goal of serving farmers while helping to meet water quality standards, we accept that this proposed grant program would support our goal in a number of ways. We do, however, look forward to talking to you more about our vision for further developing this expertise and expanding the technical resources we offer to our agricultural community.

Thank you for the opportunity to provide information on SB 718 as it is currently written. I would be happy to answer any questions committee members may have.



## **Senate Committee on Natural Resources and Energy**

*2019 Senate Bill 718*

*Creating a Nitrate Reduction Pilot Grant Program*

*February 5, 2020*

Chairman Cowles and members of the Senate Committee on Natural Resources and Energy. My name Carrie Laboski and I am a Professor in the Department of Soil Science which is part of the College of Agricultural and Life Sciences (CAL S) at University of Wisconsin-Madison. I am also the Director of the UW Nutrient and Pest Management Program, which is also housed in CAL S. My research and extension education program are related to nutrient management including nitrogen use efficiency from fertilizer and animal manure, evaluation of soil plant diagnostic tests, and development of tools to assist producers, ag professionals, and regulatory agencies in making decisions that help sustain economically and environmentally sound production of grain and forage crops in Wisconsin.

Thank you for the opportunity to provide written testimony for informational purposes today on Senate Bill 718 (SB 718), which creates a pilot grant program for farmers to reduce nitrate loading to groundwater.

I applaud the legislature's interest in working towards improving water quality in Wisconsin. I also appreciate all the work that every member of the Speaker's Task Force on Water Quality and all the interested stakeholder groups have done on these issues.

With that said, I do have some feedback that I feel obligated to share with you about the language of SB 718. First, there are four basic principles to sound nutrient management planning. These principles are referred to as the "4Rs" and include applying the "Right rate", at the "Right time", using the "Right source", and in the "Right place". The "4Rs" are inextricably linked. The bill, as currently written, focuses heavily on rate, but does not seem to take into account timing, source, and placement. It is important to evaluate and understand the crop production system as a whole in order to come to the most accurate conclusions that will hopefully improve water quality in the long-term.

Second, weather greatly influences nitrogen cycling in the soil as well as crop growth. A two-year time frame is likely too short to adequately evaluate the pilot program's impact on water quality. What if the two growing seasons included a drought year, like 2012, or an extremely wet and cool year, like 2019? A minimum of five years, and preferably ten years, will be needed to more adequately characterize these complex systems and develop/refine decision making tools for producers.

Third, the bill requires the University of Wisconsin-Madison and other "eligible university entities" to monitor grant projects on-site, use information gathered to research nitrate loading reduction methods, and make recommendations to producers on optimal nitrogen usage while improving water quality. This objective is a large undertaking that would not be able to be completed in a meaningful way on piecemeal funding from multiple projects totaling at most \$200,000. Dedicated, long-term research funding, in conjunction with on-farm participatory research, and demonstration of research proven practices are needed to begin to solve this wicked problem.

I have conducted on-farm research on nitrogen management practices for corn production for a number of years. I value this collaboration with producers, UW Nutrient and Pest Management Program outreach specialists, and county extension educators as it provides me with diverse perspectives and direction for my research program. I use data collected in these on-farm projects to update recommendations that I provide to producers.

I have found that producers are more willing to make changes to their crop production practices if they participate or see a neighbor's participation in on-farm research or demonstration of research-proven practices. To that end, with consideration for my previous feedback, I feel the overall concept of this bill is a step in the right direction for improving water quality, especially when coupled with robust research to better understand our agroecosystems.

I, again, appreciate the bill authors' work in recognizing the need to invest in long-term water quality improvement practices. Thank you for your time and for allowing me to testify on this important topic.



## **Statement of Support for SB 718 and SB 722**

**Phil O'Leary**

**Residence - Cottage Grove WI**

**Farm - Rock County**

I appreciate your work to address this very important challenge that farmers and rural residents face every day. I wish to speak in support of Senate Bills 718.

I own and operate our family farm that was established in 1925 and is located in Rock Township which is in Rock County. My prior career was at the UW and DNR. I have extensive experience working as an agricultural and environmental engineer.

My fertilizer practices are guided by and consistent with the UW soil testing recommendations. I support the Nitrate Pilot Program, Senate Bill 718 with the expectation that this will result in the development of better practices for nitrogen fertilizer use in corn production.

The farmers that I know are anxious to maximize their productivity while also protecting the environment and minimizing their costs.

I also want to note that I am in support of other proposed legislation that will increase land conservation department support and accelerate well testing and replacement.

The private drinking water wells in Rock Township have an average reported nitrate-N concentration that exceeds the drinking water standard of 10 mg/l.

I have been annually collecting well testing samples from my well and have been helping some of my relatives do the same. Fortunately my well does not exceed the nitrate standard but I am concerned about my neighbors.

I specifically support of SB 722. Expanded well testing would increase the protection of the health of our rural residents by providing them information about their well. The expanded testing and plus funding for the hydrogeologist will provide a better understanding of Wisconsin groundwater state-wide.

I complement everyone that contributed their knowledge here today. We as a state are very fortunate to have this level of expertise and commitment here in Wisconsin.