Attachment: Draft ACRE Plan Response to Comments

Source	Page, Chapter & Section	Comment	County Response
J. Clark and M. Hoffman, Met Council 8/31/22	General Comment	Thank you for providing the Met Council the opportunity. Neither of us have any specific comments or concerns. The plan is considered, has valuable and useful goals, and reasonable strategies for meeting those goals informed by residents and technical experts. We appreciate that the plan acknowledges and has strategies to build relationships with farmers, landowners, and rural communities. We too recognize the need to build trust within and help support these communities through our regional planning work and hope that the Council can learn and benefit from your efforts. We also want to recognize your identification of agency partnerships as a part of achieving the plan's outcomes. We look forward to supporting your efforts and collaborating as you proceed with plan implementation. As the 2050 regional development guide and regional policy plans are developed in the coming years, we hope that you will help them to align with local needs and Dakota County's plans and goals.	Thank you for your kind and supportive remarks! We look forward to continuing to work together toward our common goals.
S. Christopher, Board of Water and Soil Resources 9/1/22	General Comment	Thank you for the opportunity to comment on the Dakota County Draft Agricultural Chemical Reduction Effort (ACRE) Plan. I would like to acknowledge the hard work that the County has done. The ACRE Plan is well-informed through data and the strategies & outcomes for implementation are defined and include quantifiable measures which will assist the County in evaluating its effort and progress. The approach to addressing an issue that may impact many stakeholders of the County is forward-thinking and will be an example for other areas around our state and region.	Thank you!

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K. Cervantes, Conservation Minnesota 9/6/22	General Comment	We applaud Dakota County for attempting to further build on the MN Department of Agriculture's Groundwater Protection Rule (GPR) and implementation of the Nitrogen Fertilizer Management Plan (NFMP) to address the very serious issue of nonpoint pollution in agriculture and its impacts on water quality throughout the county. We especially support the plan's measurement of results-based contaminant reduction to protect the integrity of groundwater, and to consider private drinking water wells when measuring the plan's outcomes. Much of the success of the county's goals will depend on education and implementation, and we support the urgency of helping incentivize and provide assistance to farmers to reduce or eliminate the use of agricultural chemicals that ultimately contaminate the groundwater. Nitrogen-based fertilizers that are used to increase crop yields are important to farming operations but drinking water high in nitrates has been linked to different types of cancer, potentially fatal children's health issues, and elevated heart rates. Rather than continuing to invest money in denitrification systems to clean up water contamination, we support the county's effort to begin to eliminate the causes, such as over-application and nitrogen leaching into soil, which leads to these costly impacts on human health and groundwater. As water quality is an essential human right, Conservation Minnesota aims to ensure clean, safe drinking water in communities throughout the state of Minnesota. We support the ACRE plan as a solutions-based approach, especially creating models for cover and perennial crop adoption rate goals and the evaluation of agricultural practices. It will be vital to implement the "exploring ways" section of the plan and to secure funding to implement water quality practices on rented farmland and provide financial incentives to farmers for adopting healthy soil and groundwater practices. Conservation farming practices are proven to impact higher profits and we support the ultimate impact this new program will have on Minnesota's farm economy, water quality, and natural resources.	Thank you! Please let us know if there are ways that Conservation Minnesota would like to be more involved with this effort.

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C. Congdon, County Resident 7/20/22	General Comment	Good Morning, While I agree that the agricultural reduction of nitrates is important to help save wells and health, I would also urge the county to mandate similar or same requirements of homeowners who are dumping these same chemicals and types on their lawns and gardens multiple times per season. This is also washing into our lakes and groundwater, continuing to add to the issue. This is not a farmer's issue alone. Commercial residences (apartment, townhomes, etc) use sprays and chemicals. A large number of my neighbors use chemicals on their lawns and we live right next to a lake. I've even seen our county parks and rec areas with signs to warn people to stay off the grass until chemicals are dry. So, it would seem farmers are only a PART of the problem and should not be held accountable to limitations and new rules, without also having the rest of the community in the same boat. Thank you for your time.	Thank you for your interest in the Dakota County Agricultural Chemical Reduction Effort (ACRE) Plan. The ACRE Plan stems from the Dakota County 2020-2030 Groundwater Plan, which addresses a wide range of potential sources of groundwater contamination, including lawn and landscape maintenance chemicals. The ACRE Plan is specific to agricultural chemicals. The Groundwater Plan is available online. It was developed with input from interested residents and other stakeholders, the Dakota County Planning Commission, and a technical advisory group. The Groundwater Plan was approved by the Minnesota Board of Soil and Water Resources (BWSR) in December 2020 and was adopted by the Dakota County Board of Commissioners in January 2021.
S. Peterson, County Resident 7/23/22	General Comment	Dakota County looks like it wants to replicate what the Netherlands is doing--which is killing farming! Stop this "green" nonsense!	Your concern is noted. The strategies proposed in the ACRE Plan are all voluntary and provide farmers with flexibility in what practices to adopt to improve groundwater quality, technical assistance, and financial incentives.

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Various, Township Board Meetings	General Comment	Private wells with high nitrate in some cases may be a result of failing septic systems, especially in areas where there is a large cluster of septics.	Septic systems can be a source of elevated nitrate on a highly localized basis. However, septic systems are more often a health concern for infectious agents such as bacteria or viruses than as sources of nitrate contamination. For example, Inver Grove Heights is the community in the county that has the most households that use septic systems and private wells and it has very little row crop agriculture. Extensive testing of private wells there has found few wells with nitrate over the drinking water guideline. The county Groundwater Plan includes tactics for minimizing septic system impacts on groundwater quality. The County is responsible for directly regulating septic systems for the cities of Randolph and New Trier, Randolph and Waterford townships, and the shoreland/floodplain areas in unincorporated portions of the county, a total of approximately 980 households. Cities and townships regulate septic systems in most of the county; their ordinances are required to be consistent with the County's septic system ordinance (County Ordinance 113) and with State law. To address failing septic systems, the County administers a septic system low income grant program and a tax assessment program. In coming years, data collected from the county's new network of monitoring wells will help county staff to differentiate between elevated nitrate due to row-crop agriculture and that due to other sources. The monitoring wells are being located adjacent to cropland to evaluate the shallow groundwater that is being most impacted by cropping practices.
Various, Township Board Meetings	General Comment	What is Dakota County doing to address contaminants as a result of lawn fertilizer and landscape chemicals?	See answer to #4, above.

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M. Ryan/T. Thiel, VRWJPO 8/29/22	References P. 26, Chapter 1, Strategy 4, Financial Incentives	In general, there is a lack of information on how agricultural pesticides and chlorides will be reduced in the identified strategies. One can assume that activities that retire farmland/convert farmland to non-agricultural uses will reduce the use of these chemicals, but there are no other activities identified that reduce the use of or mitigate the impact of these chemicals.	Please note the Plan Purpose (page 1) and Chapter 2 (page 35) states the focus of ACRE is on reducing nitrate contamination in groundwater and addressing other agricultural contaminants where practical. Practices discussed under Strategy 4, Chapter 1 that reduce nitrate contamination will also reduce other agricultural contaminants such as pesticides and chloride. More explanation was added to page 1. Regarding chloride specifically, Tactic 3G calls for educating farmers about potassium fertilizer BMPs. At this time, farmers do not have a practical alternative source of potassium besides potassium chloride.
M. Ryan/T. Thiel, VRWJPO 8/29/22	P. 26, Chapter 1, Strategy 4, Financial Incentives	All the other quantitative measures listed have some means of quantification. This measure does not quantify anything and simply states it “will decrease.” Can you specify how this will be quantified? Will decrease based on the existing groundwater concentrations in wells? We suggest being more specific about how these contributions will decrease, how that decrease will be measured, and establish the baseline for which it will be measured against. In addition, will a selection of wells/groundwater data be used to analyze this measure due to the potential for road salt use to impact some agricultural areas near larger and/or paved roads?	Chloride levels will be evaluated in comparison to baseline. Clarification was added to Quantitative Measure 5. As of August 2022, County staff have limited baseline information about chloride levels in groundwater. In the next few years, the environmental well network and Community Focused Sampling program will provide a much more complete understanding of "where we're starting from." In the longer term, these two ongoing sources of information will show the seasonal and annual trends in chloride levels. For practical reasons, both the county and the Minnesota Department of Agriculture are installing their collaborative environmental well network in public rights-of-way, for the most part. As a result, the chloride levels in these wells may be higher than what would be found in shallow groundwater wells further away from roads, especially in the spring sampling event. Staff will keep this in mind when evaluating the chloride results and will be looking for relative decreases over time rather than hitting specific targets.

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M. Ryan/T. Thiel, VRWJPO 8/29/22	P. 12-13, Chapter 1, Section C, Strategy 1	Related to the comments later in this letter on pesticide reduction, there is not much in the way of sampling for pesticide breakdown products in the monitoring well network. While sampling drinking water sources gets at the high-risk locations for exposure, analyzing monitoring network samples from the shallow groundwater might indicate whether any pesticide application reduction efforts (or land conversion programs) are having an impact.	Amended Tactic 1G to include environmental well network. This is also addressed on p. 44, Chapter 3, Background Information: "Dakota County's extensive sampling for crop herbicides and herbicide breakdown products through its Ambient Study has documented the environmental fate of common herbicides in groundwater in the county over time, but is not necessarily geographically representative. In particular, the extent and concentrations of cyanazine breakdown products in private well water are not yet comprehensively understood. To date, cyanazine has been found above the drinking water guideline of 1 µg/L in 11 townships (Table 13). In late summer 2022, the MDA will be sampling private wells in Dakota County for the herbicides cyanazine, and atrazine, and related chemicals. When the results of the 2022 sampling are available, the information about cyanazine in private wells may be quite different from what is currently shown in Table 13 below. In addition, if feasible, the County's rotating private well sampling program will be expanded to include cyanazine breakdown products and other frequently detected pesticides and pesticide breakdown products, in accordance with the Groundwater Plan."
M. Ryan/T. Thiel, VRWJPO 8/29/22	P. 21, Chapter 1, Strategy 4, Financial Incentives	The summary indicates the County and SWCD will partner with state funding agencies and others to promote and fund BMPs and AMTs. BMPs and AMTs are terms used in MDA's Groundwater Protection Rule and are the means identified to comply with the Rule. The VRWJPO and other agencies often do not provide technical or financial assistance for practices meant to comply with or meet regulatory requirements. Funding for BMPs and AMTs may be in conflict with the policies of partner organizations and this strategy should be considered further given this potential conflict. It will be critical to identify when a practice is being implemented to meet minimum requirements of the Groundwater Protection Rule versus voluntary implementation.	The ACRE Plan itself comprises voluntary practices. Clarification was added to the ACRE Plan (page 21). However, to implement the Groundwater Protection Rule, the MDA is in the process of developing BMP requirements for the Hastings Drinking Water Supply Management Area (DWSMA) that will effectively be regulatory. (The Hastings DWSMA covers a large portion of the Vermillion River watershed but is only in the Vermillion River watershed.) BMPs proposed for nitrogen fertilizer usage per se (for example, using less fertilizer or splitting fertilizer applications during the growing season) would not depend on cost-share funding in any case. Nevertheless, Environmental Resources, SWCD, VRWJPO, and MDA staff should meet to clarify the

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			BMPs and AMTs that will be promulgated for the Hastings DWSMA and how financial incentives might be impacted.
M. Ryan/T. Thiel, VRWJPO 8/29/22	P. 26, Chapter 1, Strategy 4, Financial Incentives	It is unclear whether the "optional high priority tactic" of longer funding of initiatives will be made available to those who previously enrolled or even to those farmers who implemented cover crops on their own (without assistance) but may now be interested in cost-share programs (i.e., will people who have been doing the right thing be paid to keep doing the right thing). The table makes it seem as though the optional tactic would be for maintaining existing projects for additional time after having been provided assistance through the first three years.	Edited tactic and added clarification (see page 27). The intent of the tactic is to allow for a broad range of possibilities. Any future incentive programs would be dependent upon the identified need to increase BMP/AMT adoption rates, and County and/or SWCD Board approval. This may include incentives as extensive as providing payments to all farmers implementing cover crops, or only extending projects for additional time after having been provided assistance through the first three years in order to reduce risk of initial adoption.
M. Ryan/T. Thiel, VRWJPO 8/29/22	P. 6, Chapter 1, Section B, Goal	This goal text appears incomplete and we assume it needs something written after "unhealthy levels."	Corrected.
M. Ryan/T. Thiel, VRWJPO 8/29/22	P.8, Chapter 1, Section C, Introduction	in the second to last paragraph, it is noted that the County and SWCD are the same on the table and that the SWCD "was identified as a trusted resource to the agricultural community." It is recommended that this be changed to "is a trusted resource…" to get rid of confusion about the working relationship (and check for similar identity references elsewhere in the document).	Text edited.

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M. Ryan/T. Thiel, VRWJPO 8/29/22	P.11, Figure 4	Recommend changing one of the colors of the County or MDA wells on the map for those that are visually impaired (i.e. colorblindness).	Map updated.
Various	P. 22, Chapter 1, Strategy 4, Financial Incentives	Please clarify what is meant by "perennials."	Clarification has been added to the ACRE Plan (page 22). The term “perennials” refer to the following: • land enrolled in the Conservation Reserve Program or Conservation Reserve Enhancement Program; • prairie restorations; • grass hay, alfalfa, or pasture; • Kernza™ or other perennial crops; • other vegetation where the root structure is left in place all year round.
Various	P. 22, Chapter 1, Strategy 4, Financial Incentives	Please clarify what is meant by "cover crops."	Clarification has been added to the ACRE Plan (page 22). Cover crops are plants seeded into agricultural fields, either within or outside of the regular cash crop growing season. Cover crops are used to slow erosion, prevent nutrient losses, improve soil health, enhance water availability, smother weeds, help control pests and diseases, increase biodiversity, and bring other benefits to cropland (Sustainable Agriculture Research and Education). In regard to nitrate, cover crops can help retain nitrogen in fields, rather than allowing the nitrogen to be converted to nitrate and leach into the groundwater. The cover crop will use whatever nitrogen is still available from the fertilizer applied for the current growing season, plus the nitrogen that continues to mineralize via soil organic matter. That nitrogen will be protected from leaching and denitrification losses. Farmers have many choices among cover crops, depending on their priorities for the planting, the cash crop that preceded the cover crop, and the crop to be planted after the cover crop. The most common cover crops in Dakota County are Winter Cereal Rye, oats, or an oat and radish mix (Dakota SWCD staff). Dakota County SWCD staff or UMN

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			Extension Educators can assist farmers with selecting an appropriate cover crop for their farm.
L. Gunderson, MDA 9/9/2022	P. 4, Executive Summary	The ACRE Plan proposes four strategies including: 1) collect information for decision making; 2) communicate and educate; 3) provide technical assistance; and 4) provide financial incentives. In general MDA agrees with these overall concepts and supports working with the local agricultural community to address water quality concerns and help provide funding where needed to implement BMPs and other recommended practices. MDA considers these strategies to be extremely important when working with farmers to reduce nitrate in groundwater. They are key strategies in the MDA's Nitrogen Fertilizer Management Plan and Groundwater Protection Rule.	Thank you.
L. Gunderson, MDA 9/9/2022	P. 31, Potential Future Strategies.	MDA notes that there is limited discussion on how agricultural practices might be evaluated. The MDA supports University of Minnesota recommended BMPs and other practices which have sufficient documentation to be proven to be economically viable, implementable and can improve water quality. MDA suggests that the plan emphasize that recommended or required practices will be economically viable or subsidized so they are profitable, with adequate consideration of some of the practical challenges for their implementation such as adverse weather.	Text edited on p. 31, Potential Future Strategies: "Evidence is growing that farms that adopt practices to improve water quality (such as participating in the Minnesota Agricultural Water Quality Certification program) are more profitable than farms that do not (Minnesota State, 2022). That said, any requirements imposed by the county would respect that farming requires economic sustainability to support and maintain environmental sustainability."
L. Gunderson, MDA 9/9/2022	P. 29 (30), Chapter 1, Potential Future Strategies	Text on page 29 of the plan states that Dakota County may explore regulatory options "If, after five years (five complete growing seasons), groundwater nitrate conditions show a stable or upward trend (by township or city), County staff may recommend to the County Board ordinance amendments that require agricultural	As MDA indicates, more than 5 years of data may be needed to determine the normal range of variation, especially due to weather conditions. Text amended to "If, after at least five years (five complete growing seasons, or sufficient time to identify statistically significant trends, whichever is longer),

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		practices to reduce nitrate contamination." There is limited detail provided on how the water quality trends will be evaluated or if 5 years is an appropriate period of time to ensure that changes in nitrogen management at the land surface could improve water quality in the aquifer being monitored. Since private wells are included, it is unclear if the analysis might include wells which are constructed in different aquifers which may contain water which is potentially older than 5 years. There can be significant variability in water quality monitoring data from year to year especially when comparing wet years to dry years. The plan does not appear to consider that. In addition, it is unclear what the term "stable" means for the purposes of potential regulation. If stable means that there is not a significant downward trend in water quality, then it appears there could be a move towards regulation even if recommended practices are being implemented. These issues are complex but significant. MDA recommends that the plan consider these factors and that the plan should support and reward farmers who adopt recommended practices and not move to regulation unless other efforts are not successful.	groundwater nitrate conditions show a stable or upward trend (by township or city), County staff may recommend to the County Board ordinance amendments that require agricultural practices to reduce nitrate contamination. In this context, "stable" means that no statistically significant upward or downward change over time beyond the normal range of variation can be determined. Also, it should be understood that this refers to groundwater that is not improving toward the ACRE Plan's quantitative outcome measures (p. 7), not groundwater that already meets those criteria." The text indicates "... staff may recommend to the County Board ordinance amendments that require agriculture practices to reduce nitrate contamination." Text has been edited to reflect that the Plan does call for using both private and public drinking water and shallow groundwater monitoring well results. In addition, ACRE Tactic 1A calls for collecting and evaluating information on what agricultural practices are being implemented and maintained in the county. Staff will use the preponderance of the evidence before recommending any regulation. The ACRE Plan is designed to do as MDA recommends, to support and reward voluntary activities to improve groundwater quality and only adopt regulatory measures if groundwater fails to improve in a reasonable number of years.
L. Gunderson, MDA 9/9/2022	P. 33 (35) Chapter 2, Planning Process (Table 9)	Text on page 33 of the plan states that the outcome measures for the ACRE Plan are results-based since Dakota County is relying on contaminant reduction and the MDA's Groundwater Protection Rule is performance-based by evaluating BMP adoption. The Groundwater Protection Rule also includes results based elements by 1) moving a DWSMA from mitigation level 2 to a mitigation level 3 if the statistical analysis of the nitrate-nitrogen concentration is increasing for the public well or groundwater monitoring network; OR moving a mitigation level 2 DWSMA to mitigation level 1 if the statistical analysis of the nitrate-nitrogen concentration in the	MDA comment has been added to the text.

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		public well is not projected to exceed the health risk limit of 10 mg/L in ten years and the groundwater nitrate-nitrogen concentration has been below 8.0 mg/L for ten years. These two results based factors are evaluated separately from BMP adoption, although the two evaluations can occur in tandem.	
L. Gunderson, MDA 9/9/2022	P. 8, Chapter 1	Page 8 fifth paragraph – the last sentence includes an extra “a” and “rates” should be “rate”.	Text edited.
L. Gunderson, MDA 9/9/2022	P. 21	Page 21 under Summary – “alternate management tools” should be “alternative management tools”.	Text edited.