Izaak Walton League of America - Prairie Woods Chapter - Detroit Lakes, Mn (Willis Mattison)

Two files from the Prairie Woods Chapter of the Izaak Walton League of America containing our comments and attaching a report to Becker County on CAFOs have been uploaded at this site.

Prairie Woods Chapter

Dr. Bill Henke, President
962 South Shore Drive
Detroit Lakes, Minnesota 56501

May 7, 2026

Minnesota Pollution Control Agency
c/o Charles Peterson
520 Lafayette Road North
Saint Paul, MN 55155

Re: Izaak Walton League Comments on the West River Dairy Expansion Draft EAW

Dear Mr. Peterson,
Thank you and the Minnesota Pollution Control Agency staff for inviting comments on the draft West River Dairy Expansion Environmental Assessment Worksheet (EAW) and for holding a public meeting in Morris, Minnesota on April 28th.

Based on the history of past Riverview projects and confined animal feeding operations (CAFOs) in general, our review of the draft EAW for this exceedingly large expansion and the applicable criteria we have concluded that an environmental impact statement (EIS) is warranted. We find the draft EAW itself deficient in a lot of ways, but we do not call for its revision. Instead, the information we do find in the draft EAW is more than sufficient justification for moving forward into a full EIS.

Our comments in support of that conclusion are grouped according to the four specific criteria shown in Minnesota Rules 4410.1700, subpart 7. The MPCA, as the Responsible Governmental Unit (RGU) must consider these criteria when determining if a project has the potential for significant environmental effects and therefore warrants an Environmental Impact Statement (EIS):

1. Type, extent, and reversibility of environmental effects;
2. Cumulative potential effects;
3. Degree of mitigation by ongoing public regulatory authority, and;
4. Anticipation and control of effects from other studies.

Below is our summary outline with our comment topics listed as lettered subheadings under each of the four criteria. Following this summary is a more detailed discussion on each topic.

Comment Summary as Outline of Topics Covered

Criterion 1 - Type, extent, and reversibility of environmental effects -

A. EAW vastly under sizes the environmentally relevant area (ERA)
B. EAW fails to acknowledge that polluted groundwater may not be reversible
C. Effects on ground and surface water quantities and flows don't add up;
D. Potential ground water contamination by leachate from manure pits and basins is not quantified
E. Contamination by manure seepage to perimeter tile draining shallow groundwater from under manure pits delivered to storm water basin is unaccounted for
F. A report in EAW minimizes future low flow probability in Pomme de Terre River and is misleading and inconsistent with climate trends stated elsewhere
G. Crop land used for manure spreading may need containment to avoid runoff reaching surface waters
H. The EAW fails to identify potential increases in antibiotic resistance and/or the potential zoonotic infections effects of large CAFOs.

Criterion 2 - Cumulative potential effects

A. Deliberate under sizing the environmentally relevant area cannot be used to avoid impact overlap and claim impacts are not cumulative
B. EAW does not properly characterize past, present and future environmental conditions of the environmentally relevant area
C. EAW fails to account for impacts of feedlots in the impacted areas whether owned or operated by proposer or not.
D. EAW minimizes or ignores proposed project incremental contribution to cumulative potential effects
E. EAW describes purposeful avoidance of potential mitigation offered by "green infrastructure" as part of intentional project design
F. EAW fails to identify impaired waters as evidence of past and present projects

Criterion 3 - Degree of mitigation by ongoing public regulatory authority

A. The EPA has found MPCA's existing feedlot rules and permits to be inadequate
B. MPCA will not have strengthened feedlot rules in time to control this project
C. Local ordinances and county feedlot officers are ineffective
D. Federal Clean Water Act authority remains delegated to the state MPCA
E. MPCA may be in violation of MEPA which prohibits permitting polluting activity when less polluting alternatives exist
F. MPCA fails to extend its authority over pollution caused by manure delivered to other farmers and landowners

G. MPCA has failed to adopt nitrate standards for surface and groundwaters.

Criterion 4 - Anticipation and control of effects from other studies

A. No other EIS has been prepared on a feedlot of this size in the project area or similar setting
B. Compliance with TMDL goals for areas surface waters are not acknowledged
C. Other studies have found large feedlots degrade local economies and community health
D. Economic impacts are not included in EAWs but can be addressed in an EIS

Detailed Discussion of Each Topic

Criterion 1 - Type, extent, and reversibility of environmental effects – The RGU must examine the nature of the impacts, how widespread they are, and whether they can be undone.

A. EAW vastly under sizes the environmentally relevant area (ERA).
The EAW claims the area impacted by the project can be limited to the exact area of the feedlot site, the areas where manure will be spread and a one-mile radius around the off-site wells.

> *"The Environmentally Relevant Area (ERA) for the Project has been delineated to ensure that environmental effects from other projects do not overlap. The ERA is defined as the oversized Project Boundary, all identified manure application fields designated for the Project and Existing Facility, and a one-mile radius surrounding the off-site water-supply well (Attachment 20).*

This claim cannot be supported. Project impacted air, water and soils move freely across these property boundaries and are carried far beyond them, down rivers into aquifers that move and across neighboring properties and into other counties. Climate impacts are global in scale. Surface water impacts are regional and can exceed the bounds of the Pomme de Terre watershed into the Minnesota River. Therefore, the impacts of this exceeding large feedlot project on this larger more realistic and environmentally relevant scale are potentially significant and justify an EIS.

B. EAW fails to acknowledge that polluted groundwater may not be reversible
The potential for manure storage area leakage and field applied manure seepage below the crop root zone into groundwater is likely under the many thousands of acres proposed for this project. Despite the project's inclusion of extra thick clay liners under the manure storage pits, these liners can still be expected to leak up to 100 gallons per acre per day (one fifth of the allowable leakage rate). Manure application (along with commercial fertilizer) to farm fields has been shown to create the potential for seepage into groundwater even when applied at agronomic rates. Agronomic application rates are not designed to prevent excess nutrients or other farm chemicals from reaching groundwater, instead they are designed to maximize production with the least amount of application.

Once contaminated, groundwaters are extremely difficult if not impossible to clean. Drinking water sourced from groundwater may be treated to remove some contaminants but this is not a reversal of the original contamination.

C. Effects on ground and surface water quantities and flows don't add up

The expansion would use 287.5 million gallons per year, almost as much as the city of Morris, population 5,100. The project relies on two well water fields, one on site and one off site that are limited in available supply, either by impact on low river flows or excessive drawdown of aquifer levels. A back up storm and well water storage pond is planned to serve as a temporary water supply in when well extraction limits kick in. No calculations are supplied in the EAW to assure the backup will suffice during extended drought periods lasting several months if not years. An EIS will be required to estimate the probability and frequency at which the project operators may request emergency exemption from well pumping limits to keep their livestock alive. Depopulating such an enormous feedlot in a time of drought is impractical. Such an exemption places other well users and the river at risk for serious water shortages. This alone is a potential for significant impact warranting an EIS to evaluate available alternatives including the no-action alternative.

D. Potential ground water contamination by leachate from manure pits and basins is not quantified

At the public meeting in Morris on April 28th of this year, MPCA officials admitted that manure pit leakage, even at the reduced rates afforded by thicker clay liners, would likely reach groundwater. The MPCA dismissed these impacts as not being significant because "receptors" of this contamination (understood to be private or public wells) were far enough away. These estimates are subject to internal speculation and discussion with the project proposer but have not been made public. The basis for these estimates and the factors contributing to estimate uncertainties should be presented in an EIS and thus subjected to third party scrutiny.

E. Contamination by manure seepage to perimeter tile draining shallow groundwater from under manure pits delivered to storm water basin is unaccounted for

The draft EAW states:

> "To control potential seasonal subsurface saturation near the LMSAs, a drain-tile system will be installed around the perimeter of the LMSAs at an elevation below the LMSA liners. The clean seasonal subsurface water from the perimeter tile system will drain into a nearby stormwater basin, where it combines with Project stormwater.

MPCA acknowledges and allows (permits) manure storage ponds to leak and this leachate is most certain to find its way into the perimeter drain-tile system. The project should not be designed to dispose of manure contaminated seepage in this tile system in a stormwater system. The stormwater system is oversized but still can be predicted

to need discharge during wetter years. The EAW form fails to address the need for wastewater treatment in section 12.B.1. C as follows:

> "12.B.1.c. If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects."

The RGU's entry here is that this treatment requirement is "Not Applicable" which is interpreted to mean no wastewater discharge is planned. An EIS would need to resolve this contradiction/omission and either describe total containment of contaminated manure pit leachate which would seem impractical or the proposed treatment of this wastewater, possibly by land irrigation or other means.

F. <u>A report in EAW minimizes future low flow probability in Pomme de Terre River and is misleading and inconsistent with climate trends stated elsewhere</u>

> "Riverview LLP requested Moore Engineering Inc. (Moore) to evaluate discharge flows from Pomme de Terre River (River) in Appleton, MN. Moore assessed historic data from USGS Gage #05294000 to determine the percentage of time the flow in the River was less than three specified flow parameters. Historically, the trend of the Rivers minimum discharge has increased. This is most evident after 1991, as can be seen on Figure 1. Between 1931 and 1991, average minimum flow was approximately 8.5 cfs. After 1991, the average minimum flow increased to 50 cfs.

In the climate impacts section of the EAW, river flows are predicted to continue decreasing as average temperatures increase. These inconsistencies are confusing to the public and should be clarified in an EIS.

G. <u>Crop land used for manure spreading may need containment to avoid runoff reaching surface waters:</u>

The EAW states:

> "Increased precipitation may cause the loss of some acres of cropland due to saturation of low spots within fields or localized flooding after rain events. New drainage or water impoundment systems may need to be developed by landowners to handle increased volumes of stormwater in fields. If these structures are built on any of the manure application fields, they would take land out of crop production to convert to water management structures. With a contingency of over 3,000 additional manure application acres beyond what is needed each year, there is abundant operational flexibility if some portions of the fields are no longer available due to weather condition impacts.

This is a very important revelation that has potential for significant future effects that are a direct result of this project. If 3,000 acres of prospective manure application fields have known drainage issues that will not be identified and remedied until after some

future rain events this should be a red flag. Rainstorms that are increasing in frequency and severity due to climate change and cause localized flooding should not be relied upon as the trigger for corrective action. Surface or groundwater pollution is likely to have already happened. Simply eliminating these areas from future manure application after the drainage problem has been experienced will not prevent this pollution. Here, the EAW can serve its true function and trigger an EIS that can explore this issue more thoroughly and evaluate alternatives that would avoid predictable pollution.

H. The EAW fails to identify potential increases in antibiotic resistance and/or zoonotic infections effects of large CAFOs.

A report in 2020 by the Natural Resources Defense Council[1] (NRDC), reveals that US cattle producers use more than 40% of all medically important antibiotics—those that are also used in human medicine—sold for use in US livestock, and use them three to six times more intensively than many of their European counterparts.

NRDC says this overuse of antibiotics is a strategy used by the beef industry to offset heightened disease risks in feedlots, where cattle are routinely fed antibiotics to prevent disease whether or not they are ill, a practice that the World Health Organization discourages and that the European Union will no longer allow starting in 2022.
The reports also argues that there is little transparency or accountability in the beef industry regarding its use of medically important antibiotics, and little urgency to rectify the problem.

"Many infectious disease and antibiotic resistance experts believe such use is improper and helps contribute to reservoirs of drug-resistant bacteria on farms that can spread easily to humans through consumption of meat, exposure to soil or water contaminated with manure containing antibiotic-resistant pathogens or contact with animals. They also worry that it reduces the effectiveness of antibiotics that are needed to fight infections in people."

A 2023 report in the Journal of Dairy Science[2] states:

"Antibiotics are used in the dairy industry mainly to treat mastitis, respiratory illness, lameness, and enteric diseases (Andrews, 2000; Dodd and Booth, 2000; Alliance to Save Our Antibiotics, 2016). Some of the antibiotics used are particularly important in treating human infections; therefore, their continued use in dairy cattle is predicted to have dangerous implications for human and animal health (Alliance to Save Our Antibiotics, 2016). One of the main uses of antibiotics in dairy cattle is "dry cow" treatment, which involves a long-

[1] **Report slams beef industry for overuse of antibiotics -** *Chris Dall | News Reporter | CIDRAP News June 26, 2020* Antimicrobial Stewardship

[2] Factors influencing dairy farmers' antibiotic use: An application of the COM-B model - Journal of Dairy Science Volume 106, Issue 6, June 2023, Pages 4059-4071

*acting intramammary antibiotic infusion given to cows between lactation cycles, with the intention of treating existing infections and preventing new infections (Dodd and Booth, 2000). Blanket dry cow therapy (**BDCT**) involves the prophylactic antibiotic treatment of every cow at drying off to prevent infection; BDCT has historically has been used in mastitis control (Biggs, 2017). As this involves giving antibiotics to all cows, even those who are not infected at drying off, BDCT has been linked to the threat of AMR development (Brunton et al., 2012; Higham et al., 2018).*

With regard to zoonotic infection risks on large dairy farms, a 2017 article by Michigan State University[3] states that:

> *"People that work with dairy cattle can be at risk of becoming infected with a zoonotic disease. However, families of employees and people in close contact with dairy personnel can be at risk too. The compliance of preventive measures protects not only people in direct contact with animals, but also people in their homes. Prevention is especially important if there are children under 5 years old, elderly or people with weak immune systems in the families of the dairy personnel, since they can get sick more easily and could have more severe symptoms of the disease.*
>
> *Contracting a zoonotic disease not only has consequences on the health and wellbeing of the person affected, it also impacts the normal operation of a dairy farm. In times when the work force is very limited, producers cannot afford to have a valuable worker off the farm due to a preventable disease."*

Because these issues are highly complex, were not addressed at all in the EAW and because research has shown the overuse of antibiotics and failure to employ proper and consistent biological safeguards in feedlots can present significant threats to human health that may not be reversable, an EIS is warranted to fully inform the public and inform the permitting of an industrial scale livestock facilities like the one proposed.

Criterion 2 – Cumulative potential effects – The RGU must consider whether the project's impact is significant when added to other past, present, and reasonably foreseeable future projects, including those by other entities.

A. Deliberate under sizing the environmentally relevant area cannot be used to avoid impact overlap and then claim impacts are not cumulative

As was previously referenced above the EAW states:

> "The Environmentally Relevant Area (ERA) for the Project has been delineated to ensure that environmental effects from other projects do not overlap. The ERA is defined as the oversized Project Boundary, all identified manure application fields designated for the Project and Existing Facility, and a one-mile radius surrounding the off-site water-supply well (Attachment 20). **The**

[3] **Prevent Zoonotic Diseases on your Dairy Farm -** Paola Bacigalupo Sanguesa, Michigan State University Extension - November 29, 2017

established ERA for the Project avoids cumulative potential effects (CPE) as detailed in Item 21." (bold added for emphasis).

This is a conspicuous but unacceptable attempt to avoid having to disclose effects that are most certainly cumulative. The project is not proposed for a pristine, isolated island, it will be situated in an already degraded environment, part of which is caused by the existing feedlot that is being expanded. And degradation by the landscape having been converted to agriculture is evidence of past effects. If the air and water in the vicinity are not clean and the native ecosystems are not fully functioning, this project's impacts must be added to these "past and present" actions and then added to the impacts of reasonably foreseeable actions. The incremental degradation attributable to this project is certainly greater than most but it cannot escape its cumulative significance by simply declaring it does "overlap" with other "projects. These cumulative effects should be more honestly and accurately assessed by preparing an EIS.

B. EAW does not properly characterize past, present and future environmental conditions of the environmentally relevant area

The existing dairy and other farming operations are near the Pomme de Terre River, which flows into the Minnesota River. State testing has found E. coli in the Pomme de Terre watershed, as well as nutrients that can lead to algae blooms. Already, several sections of the river do not support aquatic life or human recreation. The river starts out clean but gets more and more polluted as it passes through farmland. TMDLs have been prepared to document the problems directly associated with animal agriculture in several streams and wetlands in the vicinity and the remedial measure needed to restore them to the fishable and swimmable condition required by law. A fair determination of the cumulative effects of this project requires the effects of all past, present and future projects be accurately characterized so this project's impacts can be added to them. An EIS is the appropriate tool for correcting this oversight in the EAW and informing the MPCA and the public as to whether a permit can be issued.

C. EAW fails to account for impacts of feedlots in the potentially affected areas whether owned or operated by proposer or not.

As stated in our comments above, Riverview owns and operates numerous other large feedlots, many of which in the same watershed as the proposed expansion. And other smaller feedlots not owned by Riverview are identified in maps included in the EAW. These feedlots are also in the same watershed and potentially are affecting the same wetlands, groundwater, habitat and air quality. Quantifying and accounting for the collective impacts of these existing livestock operations is usually beyond the scope and purpose a of an EAW. The EAW must identify and locate these feedlots but does not need to quantify their impacts. This is an appropriate function of an EIS.

D. EAW minimizes or ignores proposed project incremental contribution to cumulative potential effects

By declaring the environmentally affected area of the project so narrowly, as described above, the proposer attempts to side-step the need to acknowledge the incremental addition of the project to the effects of its own operations and those like it in the vicinity. This error should be corrected and the incremental impacts quantified in an EIS.

E. EAW describes purposeful avoidance of potential mitigation offered by "green infrastructure" as part of intentional project design

The EAW states:

> "The Project is not proposing to incorporate typical green infrastructure or planting trees at or around the Project site due to the negative effects they bring to the dairy cows. Common green infrastructure includes landscaping features such as trees, shrubs, and standing water that attract insects. In turn, this attracts birds and/or other animals. The United States Department of Agriculture (USDA) recommends incorporating enhanced biosecurity features into new dairy operations to avoid unwanted diseases. West River Dairy Expansion measures included designing the facility to minimize livestock exposure to birds and further prevent disease transmission, such as Highly Pathogenic Avian Influenza."

Landscaping with trees, shrubs, pollinator friendly plants near constructed ponds could provide aesthetic mitigation for the adverse effects of the enormous built infrastructure proposed in this project while providing a modicum of natural habitat for birds, insects and many other forms of important wildlife. As described above, this entire region has had its wildlife populations of all kinds, decimated by loss of these types of habitats. While this biosecurity practice may be recommended by the USDA, alternatives to these environmentally harmful biosecurity measures should be evaluated with an EIS.

F. EAW fails to identify impaired waters and loss of biodiversity as evidence of past and present projects

The writers of the EAW miss an opportunity to utilize comments from other agencies to document how past projects have degraded several aspects of the environment in the vicinity of this project.

The DNR letters and emails attached to the EAW identified several areas with high potential for restoration **very near the project** and recommended the project include plans to implement designs to prevent surface runoff or invasive species from damaging these areas:

> "The Minnesota Biological Survey (MBS) considered several areas very near the proposed project for Sites of Biodiversity Significance that did not meet the minimum biodiversity threshold for statewide significance. Despite being Below the statewide threshold, these areas may have conservation value at the local level as habitat for native plants and animals, corridors for animal movements, buffers surrounding higher quality natural areas, or as areas with high

potential for restoration of native habitat. **As such, indirect impacts from surface runoff or the spread of invasive species should be considered during project design and implementation**.

The project, as presently designed, does not specify any special designs or alternative measures intended to effectively avoid these impacts. This is an appropriate function of the EIS and underscores the need for that higher level of review that we support.

And the DNR identified several areas of high biological significance near the project largely due to bird populations, but mollusks and plant species were also mentioned:

> Ecologically Significant Areas • Three lakes near the proposed project area have been identified as Lakes of **High Biological Significance**. **These are Gorder Lake, Clear Lake, and an unnamed lake in T124N R43W Section 13**. Lakes of Biological Significance were ranked as Outstanding, High, or Moderate based on unique plant and animal presence. These lakes received their rank largely due to their bird populations.
>
> Elktoe (Alasmidonta marginata), a state-listed threatened mussel; Small white lady's-slipper (Cypripedium candidum) and prairie mimosa (Desmanthus illinoensis), both state-listed plant species of special concern
>
> • To benefit all of the above rare species and features, **we recommend that manure application rates and timing be carefully determined to ensure that nutrient input does not exceed the ability for crop nutrient uptake on the fields where it is applied.**
>
> The Environmental Assessment Worksheet should **address whether the proposed project has the potential to adversely affect the above rare features and, if so, it should identify specific measures that will be taken to avoid or minimize disturbance**. Sufficient information should be provided so the DNR can determine whether a takings permit will be needed for any of the above protected species."

Here the DNR recommends the EAW establish whether the proposed project has potential to affect these species but it does not. While buffers are shown around manure application fields near wetlands and water courses no analysis is provided to assure these buffers are sufficient to avoid or minimize the effects the DNR is concerned about. An EIS should be prepared to answer the question the DNR poses in order to inform the Department whether a takings permit will be needed. The EAW did not and likely could not provide this level of analysis.

The EAW reveals specific water body impairments near the project that included Lake Hattie had a nutrients TMDL plan approved in 2015 and the Pomme de Terre River identified turbidity (2002) and fecal coliform (1994) impairments. Muddy Creek has excessive E. Coli (2020) while Dry Wood Creek has listed impairments for dissolved oxygen (2012) benthic macroinvertebrates bioassessments (2012) Turbidity (2010) E. Coli (2010) with TMDL plans approved for all impairments in 2015.

The proposed project can be predicted to exacerbate these impairments given the EPA's finding that the state's feedlot rules are ineffective for protecting water quality (see item 3-A below). These impairments are, as evidenced by the TMDL plans prepared for

them, significant and in need of reduced loading primarily from improper handling of livestock wastes in their respective watersheds. An EIS is necessary to explore alternative methods for land application of livestock wastes from this facility as part of the remedial actions called for in the TMDLs.

Criterion 3 - Degree of mitigation by ongoing public regulatory authority - The RGU evaluates if existing, specific regulatory permits or processes can effectively mitigate the environmental impacts.

A. The EPA has found MPCA's existing feedlot rules and permits to be inadequate

The Minnesota Division of the Izaak Walton League of America on the advice of the Prairie Woods Chapter in Detroit Lakes joined with the MCEA, Trout Unlimited and the Minnesota Well Owners Organization (MnWOO) and others in signing a petition to the U.S. Environmental Protection Agency (EPA) that successfully convinced the EPA that the MPCA's current rules and permit requirements for feedlots were inadequate to protect water quality and the human environment as required by the Federal Clean Water Act. The EPA instructed the MPCA to revise or amend their rules and write more effective permits. While the MPCA is in the process of making these improvements, the proposed project is subject to the very same existing rules the EPA found inadequate.

The petition to EPA did focus on karst and sand plain regions of Southeaster and Central Minnesota but similar alluvial sands exist in the areas in and around Stevens County where manure application fields have been identified for this project.

While this fourth criterion is primarily intended to require identification of regulatory authority in place that could mitigate potential environmental impacts it can also function to identify shortcomings of existing regulations. That is precisely the situation we have here. There is no more compelling argument for ordering an EIS on this and any other large feedlot proposed in Minnesota than this finding by the highest environmental authority in the nation, the U.S. Environmental Protection Agency.

B. MPCA will not have strengthened feedlot rules in time to control this project

As stated in item 3-A above, the MPCA's rules and permit requirements for feedlots are in the process of being improved to satisfy the EPA and the public that they will adequately protect water quality. However, those improvements have not yet been made. Yet the MPCA has proceeded to draft an EAW and a prospective permit for this project under these decidedly inadequate rules.

In a footnote to a table showing depths to groundwater under the projects manure application fields the EAW states:

> **The Proposer has agreements with landowners for manure application covering over 16,500 acres. Depth to groundwater will vary throughout these acres.* ***There are no rules prohibiting***

manure application onto high water table soils. *The Proposer uses and exceeds BMPs for manure application and follows all state rules and local ordinances. (bolding added for emphasis)*

This declaration (in bold) by the project proposer demonstrates how feedlot operators can take advantage of the agency's overly lax feedlot rules to apply manure where shallow water tables are vulnerable.

The MPCA's moving this project forward to this point may be required by laws intended to streamline the permitting process. But by ordering an EIS on this and any other feedlot seeking a permit in the interim, the MPCA has the choice of forestalling inadequately designed feedlots from being constructed and operated until more adequate rules are in place. While not the intended purpose of the document, an EIS can serve as an effective guide in crafting rules and permit conditions that meet the EPA's requirements and fulfil the goals of the Clean Water Act.
This in effect, would declare a moratorium on large feedlot permits until such time as the rules are deemed adequate to protect the state's water quality.

We request the MPCA respond to this proposition by exploring their own and possibly the Environmental Quality Board's statutes and rules to assure the Agency has the authority and willingness to temporarily hold permits in abeyance for this purpose.

C. Local ordinances and county feedlot officers are ineffective

Here again, we apply this criterion to demonstrate the lack of regulatory authority at the local county or township level to mitigate identified environmental effects not otherwise addressed by state or federal rules. The Izaak Walton League's experience in Becker County and other rural counties has demonstrated local governments reluctance to effectively control water pollution from feedlots through local land use ordinances. In fact, these counties defer to the MPCA on these matters insisting that they control land use conflicts through ordinances, but they do not and will not control water pollution from these activities.

D. Federal Clean Water Act authority remains delegated to the state MPCA

While the EPA did find the MPCA feedlot rules inadequate the federal agency has not revoked the state's authority to continue issuing permits under the existing rules while the state's feedlot rules are undergoing amendments. Thus, citizens cannot depend on the federal government to prevent feedlot pollution.

E. MPCA may be in violation of MEPA which prohibits permitting polluting activity when less polluting alternatives exist

Minnesota Statutes 116D.04 (the Minnesota Environmental Policy Act or MEPA) in Subdivision 6 – Prohibitions states:

"No state action significantly affecting the quality of the environment shall be allowed, nor shall any permit for natural resources management and development be granted, where such action or permit has caused or is likely to cause pollution, impairment, or destruction of the air, water, land or other

natural resources located within the state, so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction. Economic considerations alone shall not justify such conduct."

Given that the EPA has officially notified the MPCA, the petitioners and the public (including Riverview Farms that the agency's feedlot rules are inadequate to protect water quality it is likely that if the agency does proceed to issue a permit for the project it will, in this federal agency's opinion, cause the pollution, impairment or destruction expressly prohibited by this section of MEPA when and if the project is constructed and operated as planned.

We agree with the EPA and also believe that this project will cause or is likely to cause pollution, impairment, or destruction of the air, water, land or other natural resources located within the state and that feasible and prudent alternatives to the issuance of this permitting action by the state exist including the no action (no permit) alternative. And, as MEPA states; any economic hardship such permit denial may inflict on permit applicants shall not be used to justify issuance of a permit for this or other similar projects.

Should the MPCA choose to issue this, or other large animal feedlot permits before it has properly amended its feedlot rules, we assert that such state agency action would be in violation of this prohibition section of MEPA.

In its response to these comments, we request the MPCA address this assertion and explain to us and the public why they should be considered in violation of MEPA in this situation.

F. <u>MPCA fails to extend its authority over pollution caused by manure delivered to other farmers and landowners</u>

MPCA feedlot permit writers and enforcement staff admit they have not attempted to extend permit conditions for land application of manure to secondary users. This means these secondary users have been knowingly allowed complete immune from compliance with the permittees manure management plan. This is an obvious failing of the MPCA's current feedlot rules and permits or the agency's enforcement policy.

The MPCA should not issue feedlot permits or approve manure management plans that allow this loophole that has significant potential for adverse effects on water quality. An EIS may be useful for exploring the jurisdictional options and authority the MPCA has or may need to close this loophole.

G. <u>MPCA has failed to adopt nitrate standards for surface and groundwaters.</u>

The Minnesota legislature granted the MPCA the authority and resources to develop nitrate standards to protect aquatic life uses for the state's surface waters and regulate

non-fertilizer sources of nitrates (primarily manure) from large feedlots decades ago but the agency has not completed the necessary rulemaking to implement this authority.

An EIS for this project that calculates nitrate loading to area surface waters (and groundwater) from the project may help underscore the urgency for the agency and the Minnesota Department of Agriculture to complete the rulemaking in effective way to control manure borne nitrates from polluting both surface and groundwaters.

Criterion 4 - Anticipation and control of effects from other studies - The RGU considers if the effects can already be managed through other available environmental studies or previous EISs conducted for the project or area

A. No other EIS has been prepared on a feedlot of this size in the project area or similar setting

This is an important fact and should be considered support for preparing an EIS for this project. The food industry in general has avoided formal environmental scrutiny by local, state or federal governments. Scientific studies of this industry's impacts are widely available in literature, and the impacts are myriad and widespread. We believe the MPCA is capable of a thorough literature search for these studies to corroborate this assertion. But, to assist the agency we've attached a report prepared by the Prairie Woods Chapter of the Izaak Walton League of America for Becker County's planned update of its comprehensive land use plan as it was dealing with a proposed CAFO in 2024. The report cites a number of environmental impacts identified by scientific studies.

The MPCA would be well justified in selecting this, the largest ever proposed CAFO in the state for the very first EIS.

B. Compliance with TMDL goals for areas surface waters are not acknowledged

C. Other studies have found large feedlots degrade local economies and community health

The following is taken from the abstract of Kelley J. Donham, et al article entitled: "*Community Health and Socioeconomic Issues Surrounding Concentrated Animal Feeding Operations"* [4].

A consensus of the Workgroup on Community and Socioeconomic Issues was that improving and sustaining healthy rural communities depends on integrating socioeconomic development and environmental protection. In workshop sessions the following recommendations were developed:

"Workshop Recommendations

[4] Environmental Health Perspectives • VOLUME 115 | NUMBER 2 | February 2007

Priority research needs.
Community health studies. *Although sufficient research supports actions to protect rural residents from the negative impacts of CAFOs on community health, additional research could be conducted to further delineate mechanisms of effects and impacts on susceptible subgroups. These areas include psychophysiologic impacts of malodor; impacts of malodor on mental health and quality of life; and respiratory impacts of bioaerosol mixtures, especially among asthmatics, children, and the elderly. Wider and more effective application of community-based participatory research will be important to advance research in these areas.*

Sustainability of livestock production.
Federal funding for agricultural research should be reoriented to promote innovation in sustainable livestock production.

Translation of science to policy.
Requirements for issuing permits for CAFOs should include increased protections for health and the environment including the following:

• CAFOs should be sited and issued permits on the basis of total animal density allowed in a given watershed as determined by the carrying capacity.

• Environmental impact statements should be mandated for all new CAFOs. These should include environmental health, social justice, and socioeconomic issues.

• Decisions to issue permits for CAFOs should be considered in public meeting and decided at the local level.

• CAFOs should be regulated using standards applied to general industry based on the level of emissions and type of waste handling.

• Permits for manure storage basins should require bonding for performance and remediation.

• The current state of knowledge of community impacts of CAFOs warrants support for the American Public Health Association recommendation for a moratorium on all new CAFO construction."

D. Economic impacts are not included in EAWs but can be addressed in an EIS

Dr. John Ikerd, who holds a PhD in Agricultural Economics, now retired from University of Missouri-Columbia, in a Freshwater Futures May 15, 2024, webinar presentation entitled "Economic Fallacies of CAFOs", presented the following conclusions from multiple studies:

- 2008 Review: Reams of research dating to the 1940's show local economies

suffer economically and socially from industrial agriculture;

- 2001 Study: Many CAFO counties are forced to raise taxes to offset increased
  costs of repairs to rural roads and bridges;

- 2008 Study: Lower income, greater income inequality, more poverty, less active
  "Main Street", fewer stores, and less retail trade in CAFO counties;

- 2015 Study: Property values up to 7 miles from CAFO lowered by 3.1% to 26%;
  properties next to CAFOs down 88%;

- 2022 Study: Personal incomes dropped 8% from 1982 to 2017 in Iowa counties
  with most CAFOs. Other rural counties rose 41%.

Dr. Ikerd, in his own paper entitled: Economic Realities of CAFOs[5] draws the same conclusions and more. He includes an extensive list of reference publications that support his findings. Below are some excerpts from that paper on rural community impacts:

> *"Defenders claim that regardless of the need for CAFOs to meet the needs of consumers, CAFOs are necessary for the economic survival of many farming communities. They point specifically to community economic benefits from local investments in CAFOs, local sales of animals and animal products, and local employment in CAFOs and related local industries. However, decades of socioeconomic research and actual experience in CAFO communities reveal something very different. Whatever CAFOs contribute to local tax bases is more than offset by increased costs of maintaining rural roads and bridges that were not built to accommodate the heavy truck traffic associated with CAFOs. Also, local CAFOs operators typically source construction materials and labor from outside their local communities. Feeder animals, feed, and other supplies are shipped in from elsewhere. Even animal health care is typically provided by corporate veterinarians. Few of the economic benefits from CAFOs remain in local communities.*
>
> *The most frequent claim for community benefits is probably that CAFOs will increase local employment, which is sorely needed in many farming communities. However, the economic reality is that CAFOs employ far fewer people per dollar invested or unit of production than do the independent family farms they inevitably displace. The first research I personally did on this subject was an evaluation of CAFOs as a rural*

[5] "Economic Reality of CAFOs and Rural Communities" - Dr. John Ikerd - University of Missouri - Prepared in May 2020 for discussion at screenings of the CAFO documentary film, Right to Harm, and other uses.

economic development strategy. I evaluated the employment implications of PSF's planned operation in north Missouri. My conclusion was that if PSF came into Missouri, their CAFOs would displace up to three independent Missouri hog farmers for every job they created.[26] CAFOs came to Missouri, and Missouri lost more than 90% of its independent hog producers. I doubt that the number of workers employed in CAFOs in Missouri exceeds more than one-third of the independent hog farmers they displaced. In the case of CAFOs, once livestock and poultry production became specialized, previously diversified family farms became specialized producers of either livestock or crops.

Livestock and poultry were major sources of farm income that had made many diversified family farms economically viable. So, farmers who specialized in grain production were forced to farm more acres of land than before to maintain adequate family incomes. Larger crop and livestock operations meant fewer economic opportunities for farmers. With the industrialization of agriculture, the percentage of the U.S. labor force employed in agriculture dropped from 4.4% in 1970 to less than 1.5% in recent years. Even in the communities where they locate, CAFOs do not actually create jobs. They simply relocate and concentrate fewer lower-paying jobs in CAFO communities than had previously existed on family farms elsewhere.

In addition, this loss of farm families cannot be offset by people moving into rural communities from elsewhere. No one really wants to move to a CAFO community. A 2015 study reviewed thousands of assessed property values for residences located up to 7 miles distant from CAFOs. The review concluded: "Overall, the new studies confirm the [negative] valuation impacts reported in earlier studies, as they range from 3.1% to 26% losses depending on multiple factors, and that properties immediately abutting an AO [CAFO] can be diminished as much as 88%."

It takes people, not just production, to support rural communities. It takes people not only to buy farm supplies and equipment but also to shop on Main Street for cars, clothes, shoes, and haircuts. It takes people to send their kids to local schools, to attend local churches, and to serve on volunteer fire departments and local town councils. When independent family farmers are displaced by CAFOs, it's not just a matter of losing employment; it's a matter of losing the essence of what it takes to be a viable rural community."

After detailing our specific comments on the EAW above, it is important that we make some broader statements here about the deficiencies of Minnesota's environmental review process itself. The worksheets used to make preliminary determination on the potential significance of a project's environmental effects have evolved to be so focused on categorical details as to miss the big picture. The public who reads these lengthy EAWs gets lost in minute details and is never informed of the devastating, incrementally small but cumulatively significant destructions of nature that humans have committed.

The ecological setting for this massive, multifaceted food (milk) industry enterprise is one that has, over many decades, been incrementally degraded to such an impoverished level that the beneficial functions (services) original ecosystems once provided have been all but obliterated. These are the very services nature delivers for free that are essential for all life forms including humans. Pure clear air, clean and plentiful water, fish and wildlife once abounded here. Remnants of the tall grass prairie and wetland complex ecosystems that existed prior to its near total conversion to agriculture (dotted by small human communities) remain only in small insignificant patches here and there. This EAW hints at what the area used to be and in subtle ways justifies the projects contribution to the ecological destruction by explaining that the land is now only used for agriculture and therefore there is little measurable impact on the parts which remain in their "natural" state. That is to say that if natural attributes of our property have already been destroyed, our project's further contribution to that destruction can only be described as minimal or insignificant. Our proposed use is consistent with current land use. We find phrases like this used frequently in this and many other EAWs.

If the setting, the natural backdrop of this project was to be fairly described, it would have to disclose the plummeting populations of insects, birds, fish, reptiles, amphibians, fish and macroinvertebrates. It would have to describe soils that are no longer thriving ecosystems teeming with microscopic life forms important to healthy crops or native prairie. This is known science but this and other EAWs avoid mention of it. Thus, the public largely remains unaware of the apocalyptic declines and a projects likely role in continued declines. Only when a species for which we have some measure of its population trend (which is few) reaches a near extinction level to we call attention to in in EAWs and that is because it is required by law. There is no requirement to acknowledge mass declines on most all other wildlife and plant populations that are rapidly nearing extinction.

It was astonishing but revealing that the project proposer (who we all understand is allowed to draft the EAW) claims that natural vegetation (trees and shrubs) that might provide habitat for birds on or around the area used for confinement buildings would have to be removed in order to prevent the potential for viral infections transmitted by some birds to reach their livestock. When mere vestiges of nature are pronounced a threat to a human enterprise and sanctioned in a government document such an EAW, there is something seriously wrong with the process. It no longer serves the serves the spirit or intent of Minnesota's Environmental Policy Act that authorizes the document.

This is a substantive comment on all EAWs in general, but also on this one in particular. So, we request that the MPCA respond to it in its record of decision.

The scope and scale of the project under review is not fairly represented in the EAW. Riverview Dairy is a very large food industry spread widely across the landscape in Minnesota and other states. The huge dairy operation is but a fraction of the entire corporate food enterprise that, when viewed as a whole, has tremendous potential and

real impact. But current rules allow for segmenting incremental steps, whether large or small, into smaller parts.

We realize this may be allowed by current rules but nevertheless, nature responds (the environment is affected) according to natural rather than human law.

Karen Tolkkinen, a newspaper reporter put the subject project in its proper perspective, one not really allowed by environmental review because, as the EAW states below, the specific project is not presented as a phase or "stage" of any past, existing or future project, it's an expansion. And the proposer's existing facilities have already passed environmental muster so its impacts can no longer be counted.

The EAW states:

> "There are no past stages for the Project. The Existing Facility was permitted in August 2003 after undergoing environmental review and receiving a negative declaration on the need for an Environmental Impact Statement (EIS)."

In nature, serial impacts from a series of similar projects (especially large ones) in the same area add up. This by scientific definition is a "cumulative impact". But this is not definition allowed by Minnesota's environmental rules.

> "There are no planned future stages of the Project beyond what is described in this worksheet."

This statement above is also in the EAW and, for the moment it may be true. But do the public and the MPCA really believe that River View Dairy will not continue to expand and add more feedlots and even milk processing factories? EAWs are not allowed to speculate beyond what is not already in formal planning stages.

We refer to a more realistic assessment of the scope and scale of the no-less-than **fourteen** gigantic subcomponents of the larger project by the same owner. In Tolkkinen's recent Minnesota Star Tribune article she writes, *"the proposed expansion is the latest in a series of large dairies appearing in western Minnesota over the past two decades. Riverview's 13 dairy farms are located in Chippewa, Grant, Kandiyohi, Norman, Stevens, Swift, Traverse and Wilkin counties. A 14th in Traverse County, has been approved for 8,571 cows but not yet built."*

The article goes on to say: "*The Existing Facility in Stevens County was permitted in August 2003 after undergoing environmental review (EAW) and receiving a negative declaration on the need for an Environmental Impact Statement (EIS). The Existing Facility operates under the NPDES General Feedlot Permit and has undergone the addition of an anaerobic digester (2008), dry manure solids storage (2010), and liquid manure storage (2014). Additionally, the Existing Facility has increased its animal unit capacity three times (2008, 2011, and 2018)."*

Our state government's tolerance (it is not the MPCA alone) for siloing a segment of what is obviously a much larger industrial enterprise, that shelters it from closer

environmental scrutiny is a miscarriage of authority and a slow-moving environmental tragedy that is obvious to any student of the science.

It was one of the Izaak Walton League's early members, Aldo Leopold who aptly said:

> *"One of the penalties of an ecological education is that one lives alone in a world of wounds. Much of the damage inflicted on land is quite invisible to laymen. An ecologist must either harden his shell and make believe that the consequences of science are none of his business, or he must be the doctor who sees the marks of death in a community that believes itself well and does not want to be told otherwise."*

It is eminently and very possibly existentially regrettable that even our state agencies who accept and even produce flawed environmental assessments "do not want to be told otherwise".

These comments were prepared by Willis Mattison, professional ecologist, retired MPCA Regional Director now volunteering for the Izaak Walton League of America – Prairie Woods Chapter as chief science advisor. These comments are offered on behalf of the Prairie Woods Chapter with permission.

This concludes with our comments.

[9] Economic Reali es of CAFOs- Dr. John Ikerd, May, 2020

Addressing AFOs and CAFOs in Becker County's Comprehensive Land Use Plan and Zoning Ordinances

A Report to the Becker County Board, Zoning Administrator, the County Planning Commission the Comprehensive Planning Consultants and the Public

from

The Izaak Walton League of America's Prairie Woods Chapter

May 22, 2024

Comprehensive Land Use Planning

Most land use decisions are inherently local. In Minnesota local governments create their own "comprehensive plan" for growth and development. The plan establishes the way development occurs in that area. The primary purposes of the plan and the ordinances that implement it is to "promote and protect the health, safety and general welfare" of the public, to "preserve and enhance the quality of surface waters" and to "provide for the wise use of water and related land resources of the County"[1]

Decisions about local planning and zoning, local utilities and other infrastructure are all made pursuant to that plan. State law requires certain minimum elements in the plans but leaves it to localities to develop and implement them through ordinances. The plan is supposed to be reviewed, updated and approved every 10 years.

The Becker County Public Engagement Survey used to gauge citizen priorities for the current land use planning effort found that 70% of Becker County citizens thought more should be done to protect the water quality of lakes and streams. When the nearly 500 respondents were asked to note their top priorities in terms of issues facing the county 83% considered housing one of the three highest concerns. Further over 70% consider Jobs and economic development a key priority and slightly more than 50% see the environment as an issue to be prioritized.

A county's land-use decisions about the livestock and poultry operations (Animal Feeding Operations, AFOs and Confined Animal Feeding Operations, CAFOs) can

[1] Quotes from statement of purpose section 101 in Becker County Zoning Ordinance

have significant effects on the county's water quality, natural resources and human health, and economy, but impacts vary widely depending on sizes and locations of the operations. The impact of a single livestock or poultry project may seem small, but when we look at the bigger picture, the challenges to the environment and human health from both the small and industrial scale agriculture projects added together can be dramatic.

The livestock industry has experienced increasingly adverse conditions attributable to over-crowding; too many large facilities in close proximity increasing animal disease risks, depletion of available clean water supplies, saturation of available crop lands with manure and growing community animosity stemming from nuisance odor, traffic and insect (fly) populations.

Because industrial scale livestock agriculture is a recent arrival in Becker County the current comprehensive plan update is particularly well timed to perform its purpose of protecting the county's water quality, natural resources and human health as well as its economy.

The information provided here will serve to inform the County Board, the Planning Commission, the Zoning staff and the public that allowing industrial scale animal feeding operations to get established and to expand in Becker County will present a very high risk to the public health and welfare of its current and future residents, is highly likely to degrade the value of the county's natural resources and is a threat to the vitality of the County's rural economy.

Filling the AFO/CAFO Information Gap

Conventional wisdom expressed in recent deliberations about these divisions of government responsibility for livestock facilities led Becker County officials to wrongly defer to state and federal laws, permits and standards to protect surface and ground water as well as look after the general welfare and economic well-being of the county's citizens. And county zoning staff and planning commission members neither had the assignment nor the time or resources to fully research the laws or the literature

on large confined feeding operations. Zoning staff stated that no one had alerted them to issues relating to these operations and invited the public's assist in gathering more information.

The Izaak Walton League's Prairie Woods Chapter located in Detroit Lakes, the Becker County seat has offered to help fill these information gaps and provides the following documentation, resources and references.

CAFOs Are Migrating North Into the Lakes Region– Why?

New industrial scale feeding operations have been migrating north from Iowa and southern Minnesota in northwestern Minnesota in order to reduce disease risks and have access to ample clean water.

> *"The number of large concentrated animal feeding operations, or large CAFOs, in Iowa increased nearly fivefold in the past two decades, a new study from Environmental Working Group reveals, with almost all of the growth from big hog-feeding operations.*
>
> *EWG found that in 1990, Iowa had 789 large CAFOs – those housing 1,000 or more animal units – swelling to 3,963 in 2019. The findings are supported by the federal Census of Agriculture, which reported that Iowa, the top hog-producing state, housed more than 22.7 million hogs in 2017, an increase of 8.5 million since 1992.*
>
> *Swine and other livestock raised in Iowa's large CAFOs now produce 68 billion pounds of manure a year – conservatively, 68 times the total amount of fecal waste produced each year by the state's 3.15 million residents.*
>
> *Large hog CAFOs house a minimum of 2,500 pigs each, and the largest hog CAFO in Iowa houses 24,000 animals. In total, more than 60 percent of the animal waste produced by the largest CAFOs in Iowa comes from hogs. The*

mountains of animal waste produced by these facilities pose a serious and growing threat to human health, the environment and water resources in the state.

EWG used satellite and aerial imagery to pinpoint where and when the new large CAFOs appeared in Iowa. The interactive map (found at the link in footnote 2) below shows their locations, the type of facility, the animals housed there and the growth in facilities over the past two decades.[2]

Industry Claims That They Handle Manure Responsibly Don't Hold Up

Industrial farming representatives often claim farmers don't contribute to water nitrate or phosphorus pollution by over-apply fertilizers or manure because these materials cost too much, and it would be wasteful. However, Jeff Mitchell, Laboratory Supervisor for the Des Moines Iowa Water Works has found ever increasing concentrations of nitrates in the Des Moines and Racoon Rivers, primary sources of the city's drinking water over the past 50 years. In an August 2023 webinar entitled "*Nitrate in Drinking Water – Public and Private*" for the Izaak Walton League, Michell presented nitrate concentration trends for the Raccoon River from 1972-2023 shown in the graph below. By multiplying river concentrations by river flow volumes Michell calculated the total amount of nitrogen flowing past the city in 2018 (if applied as anhydrous ammonia would have cost $10 million and could have fertilized 400,000 acres, over 20% of the watershed. Since 1974, he calculated that 1.8 **Billion** pounds of nitrogen had flowed past the city in the river. Using similar calculations Mitchell demonstrated that in 2015, 116,000,000 pounds of nitrogen was lost to the river at a cost of $35,000,000, and as fertilizer it would have treated 800,000 acres (40% of the watershed).[3]

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[2] EWG Study and Mapping Show Large CAFOs in Iowa Up Fivefold Since 1990 – See interactive map at: https://www.ewg.org/interactive-maps/2020-iowa-cafos/

[3] Jeff Mitchell – 2023 Izaak Walton League Clean Water Webinar Series *"Nitrate in Drinking Water: Public and Private"* at: https://www.youtube.com/watch?v=OpSnuGti2k0

These data clearly show that farmers do over-apply both commercial and manure fertilizers at a great economic loss to the farmers themselves and at great expense to municipal water suppliers such as Des Moines to remove that fertilizer again. Nitrate removal has cost the city over $317,000 in 2016 and over $750,000 in 2015.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Number of Days in Operation	76	28	177	65	24	3	9	-	-	20
Number of Vessels Operated	313	96	726	265	72	9	58	-	-	70
Marginal Cost Per Vessel	$1,015	$1,015	$1,038	$1,159	$1,045	$1,090	$1,199	$1,199	$1,199	$1,199
Marginal Cost to Operate Facility	$317,695	$97,440	$753,588	$307,135	$75,240	$9,810	$69,542	$0	$0	$83,930

Public water supplies must meet drinking water standards, are tested often and as shown above, treatment can be effective when nitrate contamination is found, but it is very expensive. On the other hand, private well owners in rural areas lack testing, no standards are enforced and well-owners are “on their own” when contamination comes from their neighbor’s activities.

All Manure Pits and Lagoons Leak

In Wisconsin and other states including Minnesota, manure pits and lagoons are designed to limit leakage to less that 500 gallons/acre/day. This means that a three-acre lagoon is allowed to leak 1,500 gallons per day and could total over one half million gallons per year into the groundwater below. This has cause major problems for rural well owners.

A USDA study in Wisconsin examined this problem and found that not only nitrates were reaching private drinking water wells but that fecal coliform bacteria from the manure pits were traveling over three miles from the source.[4]

> *Borchardt's study found that the No. 1 risk factor for contamination was the proximity of a well to a manure storage pit. Borchardt said the closest well in the study was 150 feet from a manure pit, but even wells three miles away still have some risk of being contaminated with coliform.*
>
> *Borchardt called coliform an "indicator bacteria" for the presence of other bacteria and pathogens.*
>
> *According to state regulations, manure lagoons are allowed to leak 500 gallons per acre, per day. Borchardt said contamination of nearby wells may be due to leakage from the lagoon, as well as the tendency of farmers to spread liquid manure close to the location of their pits.*
>
> *According to a spreadsheet of permitted manure storage pits in Kewaunee County from 2017, some of the largest pits for which dimensions were listed span more than 4 acres. Borchardt said there are around 270 manure pits in the county.*
>
> *"(The findings give) policy makers and other stakeholders interested in working on solutions the information they need to think about solutions, instead of just saying 'Hey, your wells are contaminated,' " Borchardt said.*

The Minnesota Pollution Control Agency's construction standards for manure pits and lagoons are "theoretical" rather than practical. This means that if construction standards are followed the pits "should not leak more than allowed but need not demonstrate that they are indeed not leaking. Pits and lagoons are allowed to leak slightly less than 500 gal/acre/day leakage but is generally understood to be 500 non-the-less.

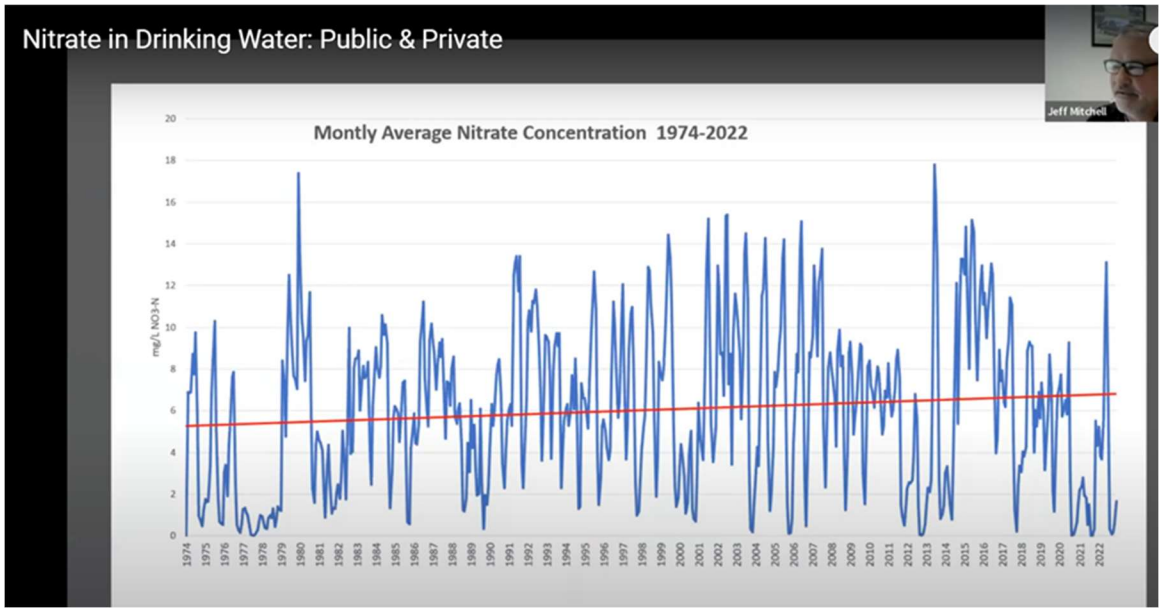
> "Minn. R 7020 requires that non-concrete liners for LMSAs be designed to achieve a theoretical seepage rate of no more than 1/56 of an inch per day. The required seepage standard is routinely considered to be approximately 500 gal/acre/day; however, this is slightly more than the actual 485 gal/acre/day allowed by the rule. Long-term protective

[4] **New research indicates tainted Kewaunee County wells tied to manure pits –** March 4, 2019 – Green Bay Press Gazette at: https://www.greenbaypressgazette.com/story/news/investigations/2019/03/04/tainted-kewaunee-county-drinking-water-wells-tied-manure-pits/3054018002/

and maintenance measures are required to meet this limit throughout the life of the structure."[5]

This maximum leak-rate standard applies to manure storage facilities no matter what kind of liner is provided including concrete, clay, Geotech (bentonite) or petroleum (plastic) liners.

It is important to note that while the MPCA rule requires this leak rate be maintained throughout the life of the pit or lagoon there are no requirements for demonstration that the structures are not leaking more than this rate at the time of construction or with aging over time.



As part of the same Izaak Walton League webinar Jesse Campbell, Private Well Coordinator for the Midwest Assistance Program, shared information the Iowa Environmental Council had gathered about the presence of nitrate in groundwater and the challenges faced by private well users in avoiding nitrate contamination. In a 2019 Water and Land News report Campbell revealed that "more than 6,600 private wells (12% of those tested) had nitrate averages at or above the EPA's legal limit (10 ppm) for drinking water systems and more that 12,330 wells (22%) had nitrate levels at or

[5] **Liquid Manure Storage Areas MPCA guidelines for design, construction, and operation of all types of liquid manure storage areas** – p 30 of 60, found at: https://www.pca.state.mn.us/sites/default/files/wq-f8-04.pdf

above 5 ppm. Natural background nitrate levels in Iowa ground water are generally less than 1 ppm.

Becker County, like most other rural counties, does not have private well protection strategies in policy or ordinances other than well setbacks from on-site sewer systems. And private well owners seldom, if ever have their wells tested to see if drinking water standards are being met. If a neighbor's CAFO should contaminate a private well, the well-owner has little recourse and will only have the choices of continuing to drink the contaminated water, purchase bottled water or drill a deeper well.

Economic Impact of CAFOs on Rural Communities

Dr. John Ikerd[6], who holds a PhD in Agricultural Economics, now retired from University of Missouri-Columbia, in a Freshwater Futures May 15, 2024 webinar presentation entitled *"Economic Fallacies of CAFOs*[7]*,* presented the following conclusions from multiple studies[8]:

- 2008 Review: Reams of research dating to the 1940's shows local economies suffer economically and socially from industrial agriculture;
- 2001 Study: Many CAFO counties are forced to raise taxes to offset increased costs of repairs to rural roads and bridges;
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[6] Dr. John Ikerd - University of Missouri-Columbia, in a Freshwater Futures May 15, 2024 webinar presentation entitled *"Economic Fallacies of CAFOs*

[7] **Freshwater Futures' Great Lakes HABs & CAFO Manure Conference Series** May 9, 2023. YouTube Recordings from the Conference can be found at: https://www.youtube.com/playlist?list=PL_JsLZuTdlRu96Q1tarJmgjsWOHEdoIYv

[8] Studies referenced by Dr. Ikerd are attached to the cover email transmitting this report to Becker County Planning Consultants, to the County Board and to the Zoning Administrator.

- 2022 Study: Personal incomes dropped 8% from 1982 to 2017 in Iowa counties with most CAFOs. Other rural counties rose 41%.

Dr. Ikerd, in his paper entitled: *Economic Realities of CAFOs* draws the same conclusions and more. He includes an extensive list of reference publications that support his findings.[9] Below are some excerpts from that paper on rural community impacts:

> *"Economic Reality of CAFOs and Rural Communities.*
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> *"Defenders claim that regardless of the need for CAFOs to meet the needs of consumers, CAFOs are necessary for the economic survival of many farming communities. They point specifically to community economic benefits from local investments in CAFOs, local sales of animals and animal products, and local employment in CAFOs and related local industries. However, decades of socioeconomic research and actual experience in CAFO communities reveal something very different. Whatever CAFOs contribute to local tax bases is more than offset by increased costs of maintaining rural roads and bridges that were not built to accommodate the heavy truck traffic associated with CAFOs. Also, local CAFOs operators typically source construction materials and labor from outside their local communities. Feeder animals, feed, and other supplies are shipped in from elsewhere. Even animal health care is typically provided by corporate veterinarians. Few of the economic benefits from CAFOs remain in local communities.*
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> *The most frequent claim for community benefits is probably that CAFOs will increase local employment, which is sorely needed in many farming communities. However, the economic reality is that CAFOs employ far fewer people per dollar invested or unit of production than do the independent family farms they inevitably displace. The first research I personally did on this subject was an evaluation of CAFOs as a rural economic development strategy. I evaluated the employment implications of PSF's planned operation in north Missouri. My conclusion was that if PSF came into Missouri,*

[9] *Economic Realities of CAFOs- Dr. John Ikerd, May, 2020 at:* https://ikerdj.mufaculty.umsystem.edu/presentation-papers/factory-farms-cafos/economic-realities-of-cafos

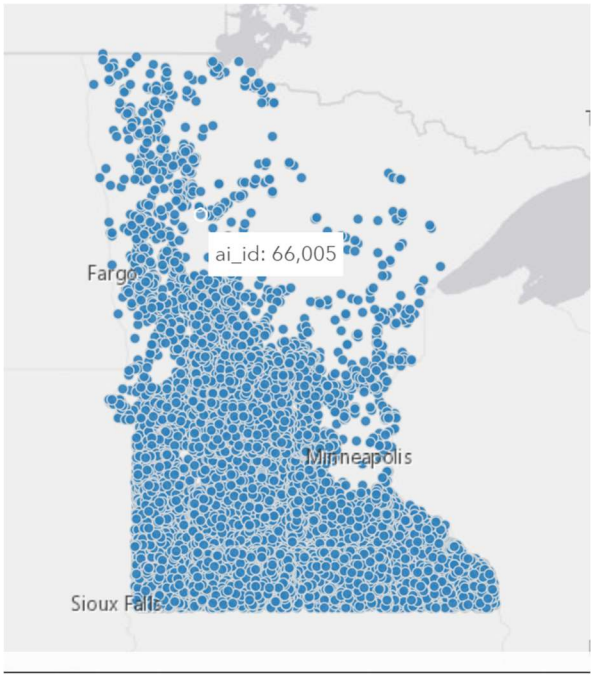
their CAFOs would displace up to three independent Missouri hog farmers for every job they created.[26] CAFOs came to Missouri, and Missouri lost more than 90% of its independent hog producers. I doubt that the number of workers employed in CAFOs in Missouri exceeds more than one-third of the independent hog farmers they displaced.

In the case of CAFOs, once livestock and poultry production became specialized, previously diversified family farms became specialized producers of either livestock or crops. Livestock and poultry were major sources of farm income that had made many diversified family farms economically viable. So, farmers who specialized in grain production were forced to farm more acres of land than before to maintain adequate family incomes. Larger crop and livestock operations meant fewer economic opportunities for farmers. With the industrialization of agriculture, the percentage of the U.S. labor force employed in agriculture dropped from 4.4% in 1970[27] to less than 1.5% in recent years.[28] Even in the communities where they locate, CAFOs do not actually create jobs. They simply relocate and concentrate fewer lower-paying jobs in CAFO communities than had previously existed on family farms elsewhere.

In addition, this loss of farm families cannot be offset by people moving into rural communities from elsewhere. No one really wants to move to a CAFO community. A 2015 study reviewed thousands of assessed property values for residences located up to 7 miles distant from CAFOs. The review concluded: "Overall, the new studies confirm the [negative] valuation impacts reported in earlier studies, as they range from 3.1% to 26% losses depending on multiple factors, and that properties immediately abutting an AO [CAFO] can be diminished as much as 88%."[29] It takes people, not just production, to support rural communities. It takes people not only to buy farm supplies and equipment but also to shop on Main Street for cars, clothes, shoes, and haircuts. It takes people to send their kids to local schools, to attend local churches, and to serve on volunteer fire departments and local town councils. When independent family farmers are displaced by CAFOs, it's not just a matter of losing employment; it's a matter of losing the essence of what it takes to be a viable rural community."[10]

10

The map below suggests the northerly progression of large feeding operations (CAFOs) into Minnesota stretching to the far northwestern corner of the state. [11]



These realities highlight the importance of using local land use plans and ordinances for proper siting, inspection and monitoring of large livestock facilities where the public can have greater confidence that pollutants are not and will not enter surface or groundwaters without detection. Becker County has set an important protective precedent by requiring water sampling for large feedlots needing conditional use permits. But the water sampling regime lacks sufficient sophistication to assure the monitoring would accomplish the intended purpose.

Industrialized Food System Engenders CAFOs.

Over the last 250 years, almost every sector of the American economy has become dominated by a handful of corporations. The forces that drove that trend have also come together to transform the most important sector of the American economy: the

[11] Source: MPCA on-line, data may not be current: https://hub.arcgis.com/datasets/mpca::feedlots-2/explore?layer=3&location=45.932764%2C-92.791165%2C6.00

food system. The way in which the United States produces and distributes is food has a profound effect on worker rights, animal welfare, air quality, water quality, the landscape, rural communities, public health, international trade, and the global climate. Livestock and poultry DNA are now owned, manipulated and sold to American farmers by a handful of corporations. Four companies control 66 percent of the hog genetics; three companies control 95 percent of the broiler chicken genetics; two companies control 99 percent of turkey genetics.[12]

Iowa Select Farms employes more than 7,400 people, including contractors, and brings about five million pigs to market annually. Since Iowa Select was founded in 1992, the states pig population has increased more than 50 percent while the number of hog farms has declined by over 80%. Pigs now outnumber human residents by a ratio of more than seven to one, and they produce a volume of manure equivalent to the waste of nearly eighty-four million people, more than the populations of California, Texas and Illinois combined.[13] One expert estimated that each confinement facility produces "the same amount of waste as a city of 90,000 to 150,000 people," spread over 640 acres with no sewage system.[14]

State and federal laws do regulate some environmental impacts of livestock operations but other than prohibiting siting in flood plains and wetlands, these regulations do not control the location of this particular agricultural land use. Recent findings by a federal agency show that Minnesota's regulations are inadequate to protect surface and groundwaters from nitrate pollution (more details on these findings are found later in this document). Therefore, without local government playing its role for proper siting of livestock facilities the government's protective network is not only incomplete but has been shown to be ineffective. This means that local governments must exercise their authority and responsibility for deciding if and where large

[12] From forward by Eric Schlosser in **Barons – Money, Power, and the Corruption of America's Food Industry –** by Austin Frederick-Island Press 2024

[13] CNBC Interview with Warren Buffet, Feb 27, 2017 quoted in "BARONS" by Fredrick – See footnote #1 above

[14] Natalie Gagliordi, "Walmart CEO outlines Omnichanel Retail Strategy to Stakeholder Associates", SDNET, June 5, 2015 as cited in BARONS by Fredrick – See footnote #1 above.

livestock facilities are located in their county in order close this loophole in the state and federal regulatory scheme.

Under the Federal Clean Water Act, direct discharge of manure to surface waters from livestock holding pits and lagoons is prohibited for large Confined Animal Feeding Operations (CAFOs are over 1000 animal units). However, the controls on land spreading of manure from both the larger CAFOs or smaller AFOs (animal feeding operations under 1000 animal units) for disposal or fertilizer use are strictly voluntary. Manure management plans, whether for CAFOs or AFOs, generally adopt what is known as best management practices (BMPs) for manure spreading based on so-called agronomic rates of application. Such agronomic rates are designed to maximize efficiency of manure application while allowing maximum application for crop production purposes alone and have no scientific basis for surface or groundwater protection. These BMPs have been demonstrated to be ineffective, not only in Minnesota but in a number of states and watersheds around the country.

Once surface and groundwaters are degraded by concentrated livestock feeding operations or other sources little can be done to reverse these impacts. Given the county's location in the heart of the lake country's tourism region, degraded surface water quality has potential significant economic consequences. Therefore, Becker County officials can benefit greatly from the experience in other states and regions by taking a "no-regrets" planning approach.

The League has researched several other states and another region of Minnesota to gather the experience of others with industrial scale agriculture beginning with Chesapeake Bay in Massachusetts.

Chesapeake Bay-

Over forty years ago, bay watchers and state officials noticed significant water quality and aquatic life deterioration. In 2004 studies investigating severely degraded water in the bay revealed the primary causes were increased nitrogen and phosphorus from intensifying livestock agriculture.

"The Chesapeake Bay is choking on nutrient pollution from a myriad of sources – from urban runoff, industry, automobiles, and human sewage, but the largest source is agriculture and, increasingly, from the manure produced by livestock, which now outnumber the watershed's human population by 11 to 1. Most of that manure is spread on the surface of nearby cropland, and studies show that within two years as much as half of its nutrient pollution washes out of the soil and into rivers and streams or seeps into groundwater. Both of these pathways lead to pollution in local waterways and, ultimately, in the Bay.

"Of the nitrogen and phosphorus that reach the Bay, agriculture is the largest source and animal manure is the largest agricultural component. Chemical fertilizers and airborne pollutants such as ammonia gas—a common manure by-product – make up the rest of the agricultural sources. This makes animal manure not only the largest source of nitrogen and phosphorus deposited on the land, but also the second largest source that reaches the Bay, behind sewage, which is deposited directly into the water. Animal manure is a major source of the Bay's pollution and must be addressed swiftly and comprehensively.[15]"

After 40 years of intensive, watershed wide efforts to restore water quality after severe degradation by non-point pollution Chesapeake Bay maybe only holding its own because crop and farm animal sources of nutrients have proven difficult to cure:

"Controlling agricultural runoff, the largest source of nutrients, has turned out to be more complex. Significant regionwide reductions have proven difficult. Data suggest, though, that efforts over the last 15 years have held the line, despite increases in crop production and growing numbers of chickens and other farm animals."

Now, as the Bay Program celebrates its 40th anniversary, its partners are contemplating what comes after 2025, the deadline for meeting most of the 31 outcomes set in its 2014 agreement. Of those, 15 are on track, 10 are off-

[15] **Manure's Impact on Rivers, Streams and the Chesapeake Bay- Keeping Manure Out of the Water, A Report by the Chesapeake Bay Foundation** July 28, 2004 at: https://www.cbf.org/document-library/cbf-reports/0723manurereport_noembargo_7567.pdf

course and the status of four others is unclear. Nutrient goals will be missed by a large margin."[16]

Maumee River in Ohio and Western Lake Erie in Michigan

Lake Erie water quality improved greatly in the 1980s-90s when point sources of nutrient pollution were remedied by the Clean Water Act but recent expansion of intensive crop and animal agriculture (factory farms) have reversed these gains and frequent toxic algae blooms have once-again become the norm.

> *"The Maumee River, overloaded with fertilizer and manure, is the single largest source of the phosphorus that triggers blooms of toxic algae in Lake Erie. Over half of the manure in the Maumee River watershed comes from an exploding number of unregulated factory farms, a new EWG and Environmental Law & Policy Center investigation reveals.*
>
> *Outbreaks of toxic algae, fueled by pollution from manure and fertilizer from farm fields, are increasing in frequency and severity across the U.S. In 2014, a toxic bloom in Lake Erie imperiled the drinking water of 500,000 residents in Toledo, Ohio. The Lake Erie outbreak, now an annual event, is getting much worse.*[17]

Tim Boring, a sixth-generation farmer and Director of Michigan's Department of Agriculture and Rural Development has bad news about Michigan's efforts to curb the farm pollution that fuels Lake Erie's toxic green algae. He finds that farm programs designed to protect water quality aren't working and that "factory-sized megafarms" are detrimental to the traditional farm economy.[18]

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[16] **After 40 years, Chesapeake Bay Program Yields Mixed Results** – Bay Journal at: https://www.bayjournal.com/news/pollution/after-40-years-chesapeake-bay-program-yields-mixed-results/article_4af88180-92b0-11ee-9d06-ab0f3bb0d72f.html

[17] **Explosion of Unregulated Factory Farms in Maumee Watershed Fuels Lake Erie's Toxic Blooms** at:

https://www.ewg.org/interactive-maps/2019_maumee/

[18] Michigan farm czar: Our fight against Lake Erie pollution isn't working: https://www.bridgemi.com/michigan-environment-watch/michigan-farm-czar-our-fight-against-lake-erie-pollution-isnt-working

Lake Erie's phosphorus pollution problems have grown worse amid decades of consolidation in farm country. Diverse family farms have been steadily gobbled up by massive operations that primarily grow either cattle feed such as corn, or cows — and not on the same piece of land. The corn grown on one megafarm is shipped to a separate factory-sized livestock operation, which produces huge amounts of manure yet lacks the cropland on which cow poop becomes a valuable fertilizer.

The corn farm, in contrast, has plenty of acreage but no cows to fertilize it. So the farmer resorts to chemical fertilizers.

"It's not the problem that we have too much manure, it's that we have manure in all the wrong places," Boring said. Boring sees the state playing a bigger role in protecting small farms, which tend to grow more diverse crops while also raising livestock, and helping them succeed without expanding their acreage.

In doing so, he said, Michigan can bolster rural communities that rely on farming and food processing jobs.

Freshwater Futures based in Petroskey Michigan recently hosted a day-long conference on CAFO manure impacts on surface and groundwater and especially their contributions to harmful algae blooms (HABs) on Western Lake Erie. The conference was recorded and featured technical experts in all fields of concern, an attorney and a local politician. The whole recording of individual speakers and their Power Point slides can be accessed at the links below:

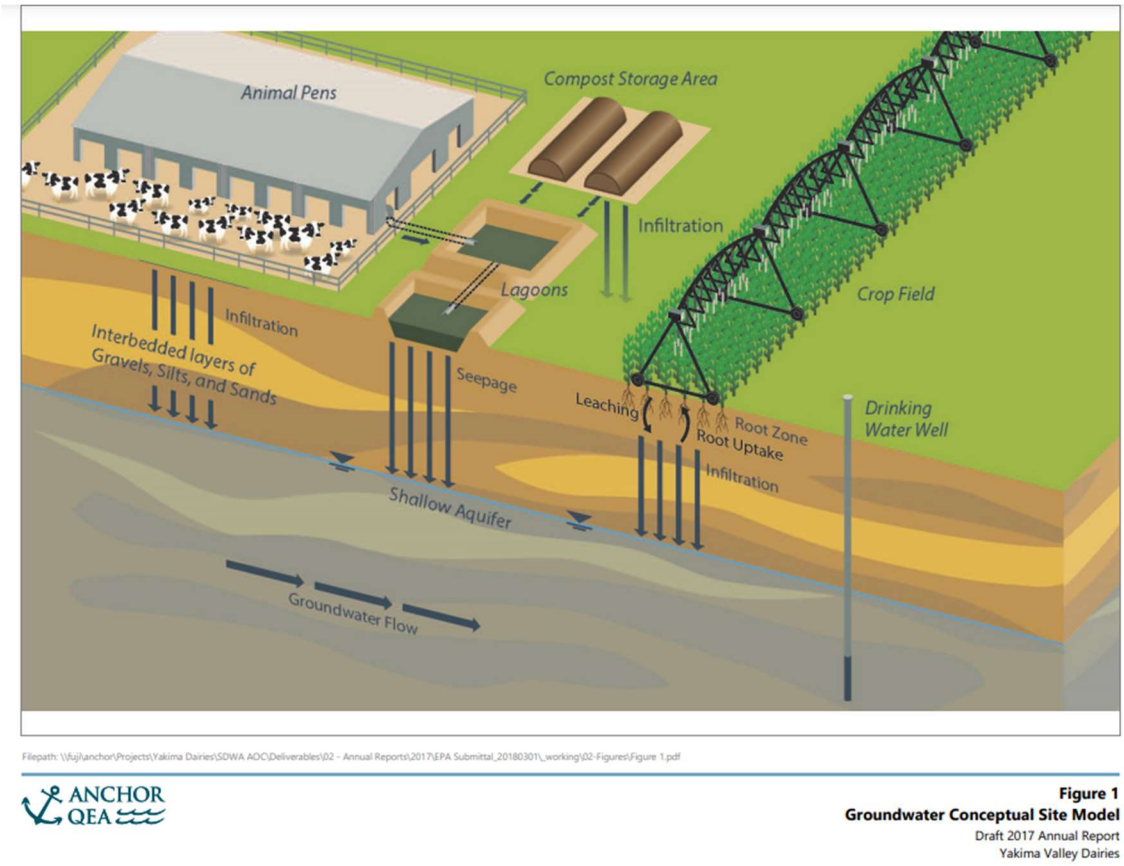
Great Lakes HABs & CAFO Manure Conference Series.[19]

- Great Lakes HABs & CAFO Manure Conference Recording
- Speaker Presentations - Power Point Slides

For additional questions and concerns on the conference or speakers please contact Sandy Bihn (sandylakeerie@aol.com) or Alexis Smith (alexis@freshwaterfuture.org) Jill M. Ryan, Executive Director, Freshwater Futures.

[19] This webinar, while useful to disclose the wide variety of environment, human health and economic problems with CAFOs may not be suitable for comp plan content. It may be better suited for a series of public education events for the Becker County Board, Planning Commission members and the public. Citizens, once well informed on CAFOs by these means can build fact-based support for the County's leaders taking appropriate actions.

The conference presenters used the graphic below to illustrate pathways for manure nutrients to reach groundwater. With permission, this graphic could be included in the pertinent section of Becker County's Comprehensive Plan.



EPA Intervenes to Protect Southeast Minnesota's Ground and Surface Water – Orders Permit and Guideline Improvements

In April, 2023, citizens petitioned the U.S. Environmental Protection Agency, saying nitrate in the groundwater in southeast Minnesota's karst region — largely from fertilizer and manure applied to crop land — poses an imminent danger to human health. They asked the Federal Environmental Protection Agency (EPA) to use its emergency authority under the Safe Drinking Water Act to intervene. [20]

[20] EPA says 'further actions' needed to protect human health from nitrate in southeast Minnesota Kirsti Marohn - November 8, 2023 at: https://www.mprnews.org/story/2023/11/08/epa-says-further-actions-needed-to-protect-human-health-from-nitrate-in-southeast-minn

In response to the citizen's petition, in August 2023 letter to four Minnesota State agencies the EPA stated that the MPCA's permit and manure management requirements for CAFOs were inadequate and needed to be "more protective" of sensitive groundwater resources. The federal agency says state agencies need to take additional steps to protect drinking water in southeast Minnesota from nitrate contamination.

> *"While this letter is largely focused on addressing immediate health concerns regarding nitrate contamination in drinking water in the Karst Region, Minnesota must also develop and implement a long-term solution to achieve reductions in nitrate concentrations in drinking water supplies. Developing a complete understanding of potential sources of nitrate contamination is an important immediate step for the state. A risk analysis of current and future nitrate contamination of the impacted groundwater will be critical for determining long-term solutions, and such analysis should incorporate the latest science and technologies. Minnesota has tools to effect reductions in nitrate concentrations through the National Pollutant Discharge Elimination System (NPDES) and State Disposal System permit programs, including development and implementation of more protective NPDES/SDS CAFO permits. In addition, Minnesota should consider adopting monitoring requirements in NPDES/SDS permits related to (1) subsurface discharges from manure, litter, and process wastewater storage, as well as (2) discharges from land application, similar to those proposed by EPA as modifications to* **the EPA-issued CAFO general permit for Idaho: https://www.epa.gov/npdes-***permits/npdes-general-permitconcentrated-animal-feeding-operations-cafos-idaho. We also encourage Minnesota to consider modifications to the state's Technical Standards for Nutrient Management with regard to land application of manure, litter or process wastewater, and any Minnesota guidelines for land application of commercial fertilizer, specific to Karst areas.*[21]

A similar petition to EPA has recently been filed by citizen groups in the Northeast corner of Iowa where identical topography and groundwater sensitivity exist. Private wells and public

[21] US Environmental Protection Agency August 2023 Letter to Minnesota Agencies found at: https://www.epa.gov/system/files/documents/2023-11/ao-rmod-reponse-letter_20230510-508.pdf

water treatments systems in this and other parts of Iowa as described above, have experienced rapidly increasing nitrate concentrations in both ground and surface waters.

> ***"The state's failure to regulate industrial agriculture pollution has steadily eroded Iowans' right to clean drinking water. For decades, Northeast Iowa residents have been exposed to dangerous levels of nitrate contaminated water. As the state reckons with high cancer levels and ongoing pollution regulation rollbacks, federal action is needed to safeguard the right to clean water. EPA must exercise emergency authority to hold polluters accountable and deliver safe drinking water in Iowa."***[22]

With this information and the additional reference material below, Becker County can learn from other's experience and hopefully take effective planning and zoning actions to avoid the predictable outcome of welcoming industrial agriculture into the county without the necessary safeguards and monitoring in place.

Becker County's sensitive surface and groundwater regions include its eastern Becker County sand plain areas with its high value trout streams, its highly developed central lakes area and its western agricultural areas served by extensive patterned drain tile and drainage ditch systems. Having sufficient, pre- and post-CAFO project construction ground and surface water monitoring in place can be a useful tool for holding industrial agriculture accountable for its operations and providing the assurances Becker County citizens need to keep from reliving the regretful experience of others.

These realities highlight the importance of using local land use plans and ordinances for proper siting, inspection and monitoring of large livestock facilities where the public can have greater confidence that pollutants are not and will not enter surface or groundwaters.

Importance of Water Sampling and Monitoring

[22] https://www.foodandwaterwatch.org/2024/04/16/iowa-environmental-groups-petition-epa-for-emergency-action-on-iowa-drinking-water/

The feedlot industry persistently claims that manure management plans limited to "agronomic rates" of application are sufficient to protect surface and groundwaters. One of the best strategies to test the performance of such plans is to actually monitor the water. New Mexico began requiring performance monitoring for large confined dairy operations as early and the 1990's. During the first six years of monitoring significant increases in ammonia and nitrates were found in groundwater.

> "*Feedlot milk production has increased dramatically in New Mexico in the past decade, along with the potential for groundwater contamination from animal wastes. State statutes require animal feedlots to maintain groundwater-monitoring wells and report water quality analyses quarterly to the New Mexico Water Quality Control Commission. This preliminary study analyzed six years of groundwater quality data from seven dairy feedlots and found elevated levels of nitrate, ammonia, chloride, total Kjeldahl nitrogen, and total dissolved solids. Samples were obtained from groundwater-monitoring wells located around dairy wastewater lagoons that were lined with clay, concrete, or synthetic membranes. Mean nitrate concentrations were significantly higher in groundwater samples taken in the vicinity of lagoons with clay liners. Lagoons with synthetic liners produced the lowest mean groundwater concentrations of ammonia and nitrate. Mean concentrations for all contaminants tended to increase as the size of dairy herds increased. Nitrate was the only groundwater contaminant measured that showed a consistently increasing trend from 1992 to 1997.*
>
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produced the lowest mean groundwater concentrations of ammonia and nitrate. Mean concentrations for all contaminants tended to increase as the size of dairy herds increased. Nitrate was the only groundwater contaminant measured that showed a consistently increasing trend from 1992 to 1997. [23]

In 2015, the state adopted the Dairy Rule, which requires dairies to monitor groundwater impacts and to line waste lagoons. The rule came following a 2009 study by NMED's Groundwater Protection Division that found 60 percent of the state's dairies were polluting groundwater. [24]

The Public Engagement Survey used to gauge citizen priorities for the current land use planning effort found that 70% of Becker County citizens thought more should be done to protect the water quality of lakes and streams.

Becker County has already set an important protective precedent by requiring water sampling for large feedlots needing conditional use permits. But the water sampling regime lacks sufficient sophistication to assure the monitoring would accomplish the intended purpose.

The comprehensive plan could present guidelines or suggest qualified consultants for designing appropriate ground or surface water monitoring regimes to clearly gauge the effectiveness of manure lagoons or pits and manure management plans to protect waters of the county.

Ordinary Small Farmers Can Get Financially Trapped and Even Puntished by the Industry

Conventional scale (small) farmers are not at fault or in any way to be blamed for being attracted to the offers from the industry representatives. With persistently narrow profit margins it makes

[23] **Dairy Feedlot Contributions to Groundwater Contamination - A Preliminary Study in New Mexico** – Sept, 1999. At: https://go.gale.com/ps/i.do?id=GALE%7CA55884900&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=00220892&p=HRCA&sw=w&userGroupName=anon%7Ee4bab884&aty=open-web-entry

[24] **New report looks at dairy operations in NM** -March 29, 2022 https://nmpoliticalreport.com/news/new-report-looks-at-dairy-operations-in-nm/

a lot of sense to scale up and grow overall profits even though margins remain slim. But once "in the contract system" farmers all too often discover they are on a financial treadmill that is extremely difficult to escape. Some who try unsuccessfully to escape have suffered retribution from the industry. Some farmers who once were "contract farmers" are speaking out to alert others of the risks and their efforts to transition back out. Modern Farmer's on-line ezine published one farmer's story.

> *When Paula and Dale Boles took over Dale's father's farmland in North Carolina, they thought that poultry farming would be a good way to work the land until they were ready to pass it on to their children. They obtained a contract with Case Farms, eventually switching over to Tyson, and built two poultry barns to company specifications, going $300,000 in debt to do so. It seemed like a good situation, though—as long as they could make their annual mortgage payment of $40,000, they'd be able to pay it off within 10 years.*
>
> *But soon, other expenses started getting tacked on. Tyson required a new computer system to control the temperature in the barns. This was another $70,000. Their propane bill averaged around $25,000 per year. Not making the updates wasn't really an option—no matter how much time and money you invested to be a farmer for the company, they could cut your contract at any time.*
>
> *And the income wasn't quite what they expected. Companies like Tyson pay their farmers in what's called a tournament system. There's a base pay, but whoever raises the best flock and has the best "feed conversion"—the biggest birds for the least feed— makes the most money, and payment decreases the further you go down the ladder. This essentially pits all the regional farmers against each other.*
>
> *"While contract farming, or "factory farming," has been exposed in the media for being exploitative of animals, the farmers who sign contracts with companies like Tyson, Perdue or other big players in animal agriculture also find themselves backed into a financial corner. But, over the last several years, there has been a wave of efforts to find ways to support farmers transitioning out of factory farming.*
>
> *"The way that the current structure of factory farming is designed is that the steps that carry with it the most risk and the most debt and the most liability are transitioned to the farmers," he says. "And so what you have is you have farmers building these extremely expensive facilities at the very specific direction [and] design of the company that they're working for. But they don't own the animals.*[25]

[25]**They Once Worked in Factory Farming. Not Anymore.** Modern Farmer, May 07, 2024 at: https://modernfarmer.com/2024/05/they-once-worked-in-factory-farming-not-anymore/

Antibiotic Resistence Linked to Feedlots

Becker County may not have the authority to address or curb the contribution of large animal feeding operations to antibiotic resistance but the Comprehensive Plan could provide or suggest tools to educate the public about the problem. This in turn could influence policy-makers at the appropriate level of authority to take remedial steps.

> *A **report** in 2020 by the Natural Resources Defense Council (NRDC), reveals that US cattle producers use more than 40% of all medically important antibiotics—those that are also used in human medicine—sold for use in US livestock, and use them three to six times more intensively than many of their European counterparts.*
>
> *NRDC says this overuse of antibiotics is a strategy used by the beef industry to offset heightened disease risks in feedlots, where cattle are routinely fed antibiotics to prevent disease whether or not they are ill, a practice that the World Health Organization discourages and that the European Union will no longer allow starting in 2022.*
>
> *The reports also argues that there is little transparency or accountability in the beef industry regarding its use of medically important antibiotics, and little urgency to rectify the problem.*
>
> *"Many infectious disease and antibiotic resistance experts believe such use is improper and helps contribute to reservoirs of drug-resistant bacteria on farms that can spread easily to humans through consumption of meat, exposure to soil or water contaminated with manure containing antibiotic-resistant pathogens, or contact with animals. They also worry that it reduces the effectiveness of antibiotics that are needed to fight infections in people."*[26]

The Izaak Walton League's Prairie Woods Chapter members have also compiled other authoritative reference materials including video interviews with groundwater experts, lawyers,

[26] https://www.cidrap.umn.edu/antimicrobial-stewardship/report-slams-beef-industry-overuse-antibiotics

and citizens from Minnesota and neighboring states that provide testimonials on their knowledge and experience with AFOs and CAFOs. Some of the content includes discussion of local economic impacts and local units of government adopting plans and ordinances to address industrial scale feedlots. Interactive MPCA maps of feedlot locations in Minnesota are also provided.

Other Confined Animal Feedlot Operation Resources and Video Links

Izaak Walton League Chapter Produced Videos with CAFO experts and Citizen Testimonials at:
https://drive.google.com/file/d/17fEX-Wfztuq39zN4T4uXgnFkLOzasGNf/view

Freshwater Futures' Webinar - Great Lakes HABs & CAFO Manure Conference Series | May 2, 2024 Freshwater Future
https://www.youtube.com/playlist?list=PL_JsLZuTdlRu96Q1tarJmgjsWOHEdoIYv

Explosion of CAFOs in Iowa and its Impact on Water Quality and Public health at:
https://roadactivist.org/wp-content/uploads/2018/01/Explosion-of-CAFOs-in-Iowa-and-Its-Impact-on-Water-Quality-and-Public-Health.pdf

Economic Realities of CAFOs – Dr. John Ikerd - University of Missouri-Columbia at:
https://ikerdj.mufaculty.umsystem.edu/presentation-papers/factory-farms-cafos/economic-realities-of-cafos

Antibiotic Use in Animal Medicine and Antibiotic Resistance.
https://www.cidrap.umn.edu/antimicrobial-stewardship/study-predicts-global-increase-antimicrobial-use-food-producing-animals
https://www.cidrap.umn.edu/antimicrobial-stewardship/report-slams-beef-industry-overuse-antibiotics