

Table 1: Name, where you live, connection to issue, and value that motivates you to be here tonight.

Public and stakeholder outreach, engagement, and participation	Frustration and exasperation with a sense of not being taken seriously by state agencies.
	Values citizen engagement.
	Concerned that citizen input not being considered seriously, but feels it's still important to show up and voice concerns.
	Values citizen involvement in environmental processes (Silica Sand Rule Advisory Panel member).
	Representative of Cattlemen's association: came out to understand process.
	Value public participation and belief in public engagement in decision making.
	Fillmore county Planning commissioner – and farmer. Noted that the County Board, Planning Commission and other area stakeholders did not get invited to this meeting. He heard about it second hand and did not appreciate that.
	Throughout the study there needs to be an awareness that everyone needs to earn a living and we all need food as we work to clean up pollution.
Collaboration	Local and state collaboration.
	Can't achieve success addressing the issue one field at a time, needs to have holistic approach.
Action and Solutions	State agencies are not doing enough to use current data to identify solutions.
	Attending meeting because of concern that MN environmental review process is not enough to protect environment (just a check-the-boxes exercise).
	Concerned about the lack of action to fix the problems.
	Pork producer from Northfield area: Concerned about whether GEIS is the right process for the problem at hand; how long will it take? Favors implementation over ongoing study.
	Feels like same conversation has been happening for decades with no real action being taken.
	GEIS is an opportunity to bring stake holders on to the same page, identify issues, and identify actions to take.
	Need to recognize the increase of Nitrate contamination in GW and SW and what can be done about it.
Trust	Goodhue County small farmer – wants a process that makes sure everyone's voice is heard. Very skeptical that will happen.
	DNR has been best to work with, no trust with MPCA or Department of Commerce. Do not want Department of Commerce in charge of GEIS.
Data and information needs	Goodhue County Commissioner and farmer. Main concern is that we thoroughly review existing data before duplicating effort.
Regulation	Fillmore county farmer whose main concern is how much additional regulation is this going to cause. This could make or break livestock in the area.

Water quality and environmental protection	Value environmental protection and soil health.
	Value the condition of the overall environment and impacts to human health.
	Concern that our current environmental regulatory system doesn't do enough to adequately protect the environment.
	Concern that current practices lead to (and are accepting of) pollution and are harming health and the potential of future generations.
	Former MPCA citizen board member who values sustainable land use practices and water quality impacts.
	Organic farmer from Kenyon, MN. Values clean water. Well has arsenic contamination.
	Values water quality.
	Concerned over trends in pollution/contamination.
	Values healthy land and water.
	75 year resident of Wabasha County: well owner, concerned about his drinking water and is aware that he relies on groundwater for that, welfare of future generations.
	Person from Wabasha works for the private sector for 32 years - nitrate is not a new issue. His family drinks water from well. Concerned about nitrate and other things. Can't regulate everything. Need to identify solutions available and concerned about other things coming.
	Twin Cities area trout fisherman: concerned that groundwater is drinking water for many people in SE Minnesota; contamination levels getting worse; wants to better understand land uses and practices and understand impacts; make full accounting of nitrate sources.
	Value water resources.
	Worried about the water supplies.
	Concerned about groundwater contamination from agricultural practices and industrial use. Values watershed health (all aspects), water quality.
	From a 5th generation family in MN. 1st generation not in farming. Member of Trout Unlimited. Concerned about water quality.
	Member of Trout Unlimited – Stream Restoration Chair. Has relatives that farm, he lives in Rochester. Concerned about water quality.
Computer programmer. Entrepreneur – interested in developing a program for environmental monitoring. Concern about nitrate levels in water. Concerned about Pepin siltation.	
Private Forester, former mayor of Lake City. Family in area since 1850s. Water Quality concern - -ethical issue – all people should have clean water.	
Works for Culligan Water. Values good, clean water.	

	Grew up in Rochester. Fished in clear waters in youth – wants to make sure those resources continue into the future. Clean water for future generations. Process should engage people & produce collaborative solutions.
	Retired U of M Fisheries Professor that lives in Chatfield. Concerned about drinking water quality and also hypoxia.
	Person from Winona, MN - concerned about groundwater and surface water. Tired of seeing assets like water exploited. Need GEIS to connect people and to understand.
	Wabasha Co – SWCD, water planner, water quality.
	Red Wing water utility director. Main concern is about water quality coming in to plant and about disposing of sludge and bio-solids.
	An environmental advocate who sees little or no movement in the clean water issues. The Citizens Advisory Board was disbanded.
	An avid fly fisherman for whom clean water is important. Was living in Ohio when the Cuyahoga River started on fire. Afraid our future could see more water pollution than Ohio.
	Member of Trout Unlimited for 30 years. Restores streams and works, therefore, with farmers to do so. Everyone invited to be part of this GEIS is important.
	Main concern is habitats for pollinators (bees) and Lake Pepin is silting in.
	Concern for drinking water, 29% of wells high nitrogen.
	Has seen changes in water quality.
	Value: leaving the area the same or better for the next generation; Children and Grandchildren enjoy same environment or better environment.
	Executive Director of the Cannon River Water Partnership who also operates a small flower farm in Dakota County.
	A member of the Land Stewardship Project who does not like the MPCA’s stance on environmental review.
	A citizen that lives in the karst region and has a private well. In addition, this person is employed at the Department of Natural Resources as a scientist and studies the Mississippi River.
	Concerned about water-quality issues and the environment, especially in this sensitive karst setting. Also very concerned about groundwater quality, especially for her grandchildren and future generations.
Agricultural practices	Concern that the agricultural business does not share their same land stewardship values.
	Dairy farmer in Preston, MN. Values clean water and orderly feedlot regulatory process.
	Values family history and farmer autonomy to make decisions for their farms.
	Grew up on a dairy farm and is a self-identified conservationist.

<p>Crop and livestock farmer in Preston, MN. Values clean water. Property borders Forestville State Park. Works with MPCA and MDA (3 years of nitrogen rate plots) on projects. Conservation minded, very concerned with government, skeptical about more regulation.</p>
<p>Crop farmer, Goodhue SWCD board supervisor. Worked with MDA on conducting nitrogen rate studies on his farm. Trying cover crops. Participated in MDA township testing program. Never saw results from well testing.</p>
<p>Crop farmer. Sits on the SE MN Irrigators Association Technical Advisory Committee in Dakota County. Frustrated because we never know the age of nitrate in groundwater – legacy issue. Today’s farmers are doing more conservation practices and using technology to manage loss.</p>
<p>Farmer from Rice County: Came to learn about the unfamiliar process; wonders if it is the right process. Current water quality data represent data practices from many years ago; expressed concern about water resources.</p>
<p>Citizen from Winona: Wants to move forward to more effective nutrient management BMPs.</p>
<p>Values farm and soil health.</p>
<p>Interested in the ethics of stewardship/regenerative resources.</p>
<p>Has economic concerns—impacts of nitrates in water and impacts to small and midsize farms.</p>
<p>Concerned about “cave mucking”, odor, karst, and ability of big agriculture with deep pockets to influence outcome.</p>
<p>Small farmer, professional and private interest. As a farmer we have fixed gullies and seen farming community go in wrong directions by planting corn and bean which require more fertilizer and pesticides.</p>
<p>Owns a small organic farm in Wabasha county. Has seen prairie expansion go to livestock farms. Has concern with corporate farming operations. One near my home has 260 million gallon liquid manure storage on a bluff. I have been told that these farms are allowed as much as 5000 gallons of liquid manure lost from their storage tanks. Where does this go? Has to affect our Ground water supplies. MPCA has rules form 2002 that they use, need new rules.</p>
<p>Big farms/businesses involved in farms. Scary, they have more resources.</p>
<p>Someone who works for Land Stewardship Project- wants to see sustainable ag working with tourism area to help protect rural communities and farms.</p>
<p>Farmer from Welch. Wants to see all farms succeed.</p>
<p>Wabasha Co – organic farmer, grass-fed cows; values public health, food & environment.</p>
<p>Goodhue Co – farmer, hog confinement barn; balance industrial ag & environmental protection.</p>
<p>A farmer milking 2000 cows on 4000 acres of corn and alfalfa, and a member of MN Corn Growers Association. Water sources and quality is of vital importance to her farm. Does bumper strips and extensive cover crops; is happy with the U of M research on these crops.</p>

	As a dairy farmer for 40 years milking about 130 cows – had to quit because of lack of labor supply. Has done cover crops for six years and is happy with the soil condition results. Water quality is low in his county. Needs people to work together to find solutions.
	Interested in changing and improving farming practices.
	Sustainability in Agriculture large vs. small farms and the need to include all types of farms on the landscape.
	Blend farming with realistic expectations: Don't expect farmers to change overnight, realistic alternative crops or farming practices that could be implemented but would need to generate income.
	Add restrictions to BMPs, provide more information and ways to improve.
	A farmer in Winona County who is concerned about a factory farm in Lewiston.
	County extension offices have pushed farmers in the wrong direction of using too much fertilizer and manure to produce their crops. This person also was concerned that there are no regulations and soil testing is not used to determine how much should be applied.
	Concerned about erosion relating to corn / bean rotations.
	Concerns over soil erosion.
Public health	Concerned our current environmental regulatory system doesn't do enough to adequately protect public health.
	Values human health.
	Dakota Co – water quality work; public safety/health/drinking water and insure ag remains strong – find right balance.
	Main concern is public health.
Other	Does not want to prevent people from making money, but wants all residents to understand the risks and how those risks are assumed.
	Works for MN State Colleges, including Red Wing. Here for the students- wants to find out how the can GEIS inform students.
	From Lino Lakes – small business vendor: there are possible new methods to remove pollutants.
	Here to learn.

Table 2: What opportunities do you see in doing a GEIS? For example, what information would you like to see be included in the GEIS and how would you use that information?

Public and stakeholder outreach, engagement, and participation	Want to see better communication and collaboration between state agencies along with more communication with the public about this type of work. GEIS could provide this.
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	Information presented in GEIS should not be too technical. Lay persons should be able to understand GEIS information and potential solutions offered up.
	Opportunity to communicate the problem in a compelling way: We already have extensive technical data but most of it is written by technical experts. We need to aggregate the technical data, rather than publish more and more data. We need to be able to communicate the current state in a way that makes the problem come alive for people, written in simple, non-technical language.
	Use opportunity to provide education.
	GEIS is an opportunity to provide education.
	GEIS could be a good communication tool.
	Opportunity for learning, information gathering and dissemination.
	Need to provide information in a way the lay reader can understand.
	Education – Kids should be taught about where their water comes from where the drop of rain goes between the rain drop to the tap and what can influence water quality and quantity.
	GEIS should include educational component.
	Wants to see GEIS information go right to public like surface water monitoring data.
	Identify all stakeholders and have an open mind on what causes pollution.
	Keeping the process more 'local' is important.
	Educate the public throughout the process.
	Data will be available to more people.
Collaboration	GEIS presents opportunity to share data; change in farming practices; need data to make decisions.
	There needs to be better collaboration between agencies (MPCA, MDA, MDH, and local RGU).
	Everyone agrees we need to protect the water. Could the GEIS mesh views together and get best options for moving forward?
	Collaborative opportunity. Study could offer a consensus as to cause and effect toward a solution.
	Work together and fight it out! Aren't sure of benefit yet.
Action and solutions	Would really want the GEIS to lead to concrete action that improves water quality in the karst region. Perception that current environmental review structure is "all talk", "no walk", and full of bad/one sided decisions.
	GEIS is an opportunity to spur action on this issue.
	GEIS needs broad stakeholder buy-in. If not, no action will take place and groups will just become further entrenched in their "camps".

	<p>GEIS needs to have a process in place for implementing any actions/recommendations that the GEIS comes up with. If we don't know how to start moving forward after GEIS completed, more likely it just "sits on the shelf".</p>
	<p>Thinks GEIS is an avoidance issue to avoid doing an EIS so sees no purpose to the GEIS, there are already plenty of studies. Thinks the individual wanting to do a project should pay for the EIS instead of taxpayer money going towards the GEIS. Blanketing the area is not helpful and the GEIS will not result in a moratorium. Wants them to use studies they have already.</p>
	<p>Opportunity for action.</p>
	<p>Is this only going to be a study? Will this study result in action? So we can help smaller communities. Can we learn from it?</p>
	<p>The final outcome should provide clear recommendations.</p>
	<p>Not a big fan of studies – wants more action. Implement the nitrogen rule.</p>
	<p>Focus on implementation.</p>
	<p>Implementation is key – how to get widespread adoption of new practices.</p>
	<p>Make sure there is a 'manual of practices' rather than a huge unwieldy document like the Forestry GEIS.</p>
	<p>What are we currently doing now that contributes to the problem and what steps can we take to resolve the issue?</p>
	<p>A GEIS should provide actionable information on BMPs, forces behind the current situation that is resulting in pollution, motivators for change/improvement (educational, financial, social, markets), the ongoing impact of historical (past) practices that continue to contribute to nitrate pollution, such as sink holes being used as garbage pits and no setbacks in the past (e.g. hog barn phosphorus).</p>
	<p>Opportunity to create scalable solutions: We need to create solutions that accommodate large and small scale farmers. We can't do this at the expense of the "little guy." At the same time, large scale farming doesn't mean "bad." One sized solution will not work for everyone. The karst region is so unpredictable that what works in one area may not be best in another. Solutions need to be individualized to the extent possible.</p>
	<p>Level playing field for all participants (individual and small farms should be given the same opportunities to participate as large farms).</p>
	<p>Would like to see an emphasis on big picture and cross jurisdictional issues.</p>
	<p>Addressing the situation on a project by project basis can be viewed as personal rather than looking at the big picture issues and how to address them.</p>
	<p>This GEIS could be regional and that hasn't been done before; need to find out what real problem is; identify causes.</p>

	I largely disapprove that the GEIS is the mechanism that will most proactively address the issue in southeastern Minnesota in karst landscapes, concerning groundwater quality.
Emphasize science over politics	Facilitate decisions based on science and sound reasons – not emotions and politics.
	Decisions resulting from GEIS should be based on science, not emotions or politics.
	Focus on the Science, establish standards based on science.
	A GEIS will help to shift the conversation from emotion-driven to science-driven.
	A GEIS could analyze the situation more scientifically and comprehensively (land, air, water, soil).
	A GEIS could result in more accurate quantified data by using latest science, reducing emotion.
Trust	Would really like GEIS to restore trust in environmental review process and trust in state agencies (but not very hopeful that it will do so).
	Process should be collaborative, build trust.
	This should be an open process.
	The GEIS could help build trust if it is a collaborative process.
	The process, if done right, could build trust that is not there now.
	A GEIS ‘done right’ and ‘trusted’ may get landowners to ‘come out of the shadows’ (meaning they would willingly test their wells and participate in the process, rather than worrying their well is bad and that the government may come and shut them down.) Perhaps this process could instead have landowners ask for and receive help rather than being blamed or chastised.
	If GEIS is done with factual data and done fairly, it could increase trust and tell us honestly where the needle is so we can move it in the right direction. A snapshot in time.
	The GEIS could identify a wide range of solutions by having a good, open process.
	All stakeholders need to stay involved with the process, and a fair and unbiased process needs to be used.
	GEIS could help build trust. Process needs to be transparent.
Data and information needs	Opportunity to collect baseline data.
	Would like to see information on surface water/groundwater connectivity and spring sheds.
	Identify, collect baseline science on issue.
	Already have lots of information.
	Better, more clear information about how to use chemicals (appropriate rates, time of year, etc.).
	Recommend looking at long term trends – resiliency.
	Could establish a baseline (soil loss, nitrogen –based on soil type and organic matter).
	Make sure to test and test to make sure you really know what caused the pollution.
	Opportunities to provide facts & info that can be used by decision makers.
Opportunity to get and share information, and identify information to include.	

	Make sure quality assurance and quality control is used to get the data.
	Provide information regarding MN and Mississippi rivers re: soil and silt sedimentation.
	Find the areas that are the worst for contributions and work to solve issues there first.
	Karst geology is dynamic therefore we need to know how much of the problem is dealing with old contamination vs. new contamination.
	Need to update the regional sinkhole map.
	please request that the proposed GEIS include a "Geologic Atlas" (such as one done for Olmsted County by MN Geological Survey about 30 years ago) for each of the Counties proposed for the GEIS.
	A major opportunity would be to document and validate nitrate/ other pollutant ability to penetrate the karst geology and pollute ground water. Using that information, land use regulations could be written to best protect our water. Our water is finite and we need to protect it.
	Provide information for policy making.
	Would like to see data from multiple agencies in the GEIS along with an analysis of how individual agency data correlate with each other to find novel solutions to the nitrate contamination issue (perception that agencies are not sharing enough of their data nor are they collaborating together to find common solutions).
	GEIS should consolidate the different agencies work on nitrate, water quality, water quantity, health impacts etc. GEIS should get all this information in one place figure out how all the separate agency information can work together to identify problems and find solutions. We already have lots of information/data on this issue, need to analyzing it all together, not just from one agency's viewpoint/prerogative.
	Thinks it's good to synthesize all the studies into one better understanding and keeping agriculture intact. Wants scientific reasons for recommendations and policy proposals.
	GEIS should coordinate data and analysis from DNR, MPCA, MDA, MDH, and others to look for correlations in nitrate contamination (perception that agencies do not cooperate/coordinate their efforts enough expressed by many at table).
	Correlation between state and county regulations – more/better best management practices should come out of this.
	Data consolidation can bring existing information together in an easy to read, useable context, correct fragmentation that currently exists and identify data gaps.
	Bring all the data we have on the issue together in one spot (i.e. state and local data) so it can be collectively studied.
	Opportunity to educate farms, public, compiling data and creating implementation plan.
	Data will be aggregated from many sources, giving us a more comprehensive picture.

	The GEIS provides an opportunity to consolidate what is known about karst, groundwater contamination risk and the source and fate of nitrate contamination in the region in one place. While all the factors mentioned above have widespread scientific study and understanding in the scientific community there is almost no awareness, and even denial of the issues in the ag community.
	We could learn what we do not know about karst geology, animal feed lot pollution, and pollution by field application of nitrates and farm chemicals in SEMN. What we currently know could be compiled together.
	The problem is well understood, what actions can be taken with the information that is already available/known?
	There is a lot of information already available—what can people do on a daily basis?
	What new info would be gathered from the GEIS? There is lots of existing data – 20+ yrs.
	The GEIS must not lose what is already present.
	There is already a lot of data available.
	The GEIS does not need to re-do what is already out there.
	Current research needs to be used and current regulations are considered so compliance is not difficult or impossible.
	Study shouldn't re-invent the wheel.
	Need knowledge pulled together.
	Considering what we already know about nitrates in waters of SE MN, I don't know of other information needed that could be generated by the EQB. Faculty at the University of Minnesota continue to research management practices that will improve efficient use of N by crops and, at the same time, reduce movement to groundwater.
	I don't see many new opportunities as there has been other studies done recently that has provided much of the same information that a new GEIS would provide.
	Several specific studies mentioned including Discovery Farms work, recent publications from Mark Borchardt (USGS) on virus and vulnerable geologic settings;
	Take what we can from others that have already gone through this process (Wisconsin).
	Provide a cost vs. benefits analysis.
	Local focus – make sure land uses are understood relative to unique karst setting.
	There is more air and water pollution today. People needs to understand the cumulative effects.
	County approach to frac sand mining is an example.
	Does Wisconsin have good information and data that could be helpful to Minnesota?
	By the GEIS covering a wider geographic area it could make it easier for folks all across the region to benefit from the end product.

	A GEIS would take a holistic view – showing that there are many ways to solve the problem – different practices can have the same result.
	Suggest requiring below surface mapping for major developments (discussed Bellchester sewage lagoon).
Data and information on nitrates	GEIS should find ways to identify/monitor large nitrate source contributors. Clearly need more help and better methods of managing all sources of nitrate.
	There are data gaps in the contribution of manure used as fertilizer to the nitrate contamination of groundwater. GEIS should provide a better understanding of this particular nitrate source and its contribution % to overall nitrate load, particularly injection of liquid manure in karst region. This method seems to pose a potentially high threat to water quality in karst region if done improperly or if soil health/conditions are poor.
	GEIS should look at, analyze, and measure more than just nitrate levels in karst region. Nitrate is an indicator contaminant and GEIS should also look at pesticide contamination in areas with high nitrate levels.
	The GEIS should look closely at land use decisions and how much specific land uses could contribute to nitrate, but also other chemical, contaminations.
	GEIS should look at relationship between areas of nitrate/pesticide contamination and human health outcomes of those living in these areas. Are there higher rates of certain health conditions in specific areas of the karst region? Do health outcomes correlate with areas of groundwater contamination?
	GEIS needs to look seriously at soil health when analyzing nitrate contamination. Poor soil health leads to less nitrate/nutrient uptake which leads to greater leaching and contamination.
	GEIS should work to identify specific sources/contributors of nitrate. Can a chemical analysis of nitrate determine if it came from manure vs commercial fertilizer vs urban runoff etc?
	GEIS is an opportunity to place a moratorium on new large feedlots in the karst region so that the study can establish a baseline contamination level without having new sources of nitrate being added during the study.
	Would like more information on fertilizer/manure management practices. How can we further improve these to limit/eliminate contamination issues?
	GEIS should identify specific major contributors to nitrate contamination in the region, require them to solve this issue, and monitor their nitrate loads moving forward. Could use lysimeter to monitor nitrate after specific high contributing sources are identified.
	Inventory the range of nitrogen sources.
	ALL sources have to be considered; we are ALL contributors.
	Why are there differing concentrations of Nitrates in wells?
	Role of soil health in capturing Nitrates and preventing leaching.

	Wisconsin DNR/Nitrates study – utilize this to determine source of nitrates in groundwater in the region.
	Is there a percent of sources that have a greater impact or what is the percentage of sources and their impacts?
	Should be clear determination of prime contributors.
	Identify what nitrate load the water can handle.
	Goal to get N levels back to the level seen as a background level in nature.
	Opportunity to consider percolation of nitrates through aquifer and how to stop the downward movement to deeper aquifers.
	Opportunity to ensure wells can be free of nitrate.
	DNA testing is used in Wisconsin to help identify sources. In that case the source was manure.
	Consider isotopes to identify nitrate sources. GEIS is opportunity to combine multiple studies.
	The GEIS must be clearly organized and provide a united approach to managing nitrogen.
	A willingness to identify all sources and accept them. Cities are also viable.
	Look at historical nitrate in groundwater data... as related to how we got to the nitrate levels that we are at now.
	List all sources that contribute to the problem; prioritize, pick off low hanging fruit, find ways to mitigate problems.
	Include city contributions in study not just rural contributions.
	A GEIS could showcase successes in reducing nitrate pollution.
	One opportunity associated with a GEIS would be the ability to collect more nitrate data from wells in this area. Several people expressed the opinion that this data was necessary to provide a baseline on the current nitrate concentrations in the area's groundwater, determine trends, and compare to standards.
	Information on nitrate is needed on both a regional and an individual basis, to help inform regulating large livestock operations, as well as provide an assessment of nitrate concentrations throughout the karst region. It also must be housed in a central location.
	GEIS would provide an opportunity to document all nitrate sources in the area. More nitrate may be applied at a greater rate in urban areas compared to agricultural lands.
	Establish a baseline on current nitrate pollution if not already done. Such establishing on going well monitoring. Study trends in nitrate levels of wells and streams over the past recorded history.
	Research and comments already collected by Minnesota Department of Agriculture's SE MN Nitrogen Taskforce lead by Eric Nooker during the past 2 years should be included. There is also a treasure trove of studies and comments collected during the 4 public Ground Water Protection Rule hearings in SE MN before an Administrative Law Judge.

	<p>What is the source of contamination and how do we stop it? How long will it take to see reductions in nitrates in our aquifers and our wells if we stop adding nitrates to the soil?</p> <p>Hopefully a GEIS could identify the sources of nitrates that are found in ground water , whether it be natural occurring, municipal wastewater treatment either from the discharge or leaking utility mains within a municipal system, Haber/Bosch produced agricultural nitrogen intended for row crop production or animal manure.</p> <p>The greatest opportunity I see is determining how much of the groundwater nitrate comes from livestock farms and how much comes from crop farms. Currently, many activist groups are placing, what I feel is a disproportionate amount of blame on modern livestock farms.</p> <p>A GEIS would be beneficial in the following ways: a. provide a current and updated analysis of the threat of nitrate pollution in the SE MN karst region. b. provide a current analysis of the scope of the problems associated with nitrate pollution c. provide current analysis of what may be needed insofar as staff and expertise to contain, solve and prevent further contamination in the karst region.</p> <p>Identify major sources of nitrogen in aquifers. Identify major sources of nitrogen in streams. Identify pathways from sources into aquifers and streams. Examine effectiveness of each agricultural and feedlot operation BMP in preventing nitrates from entering aquifers and streams. Examine adequacy of current setbacks from sinkholes and other karst features. All this information must then be used.</p> <p>I would like to see nitrate sources tracked, to determine where nitrates are coming from, and where they go. Are the sources coming agricultural land uses? Are there outdated septic systems that could be upgraded? How many abandoned, unsealed wells are there in the study area? I'd like to learn more about travel time through aquifers, concentrations at different levels, and flow directions.</p> <p>Nitrate indicator for leachates, wants research to better understand it.</p> <p>At this time, I don't see any opportunities in doing a GEIS on nitrate pollution of groundwater in karst region. As Bobby King of the Land Stewardship Project (LSP) has succinctly written, "We know from the many studies already done that the groundwater in southeastern Minnesota is polluted by nitrates." We also know that livestock manure from factory farms is a major source of nitrates in the region's groundwater AND its surface waters. Given that knowledge, there is no sound reason for an expensive, time-consuming GEIS that would simply affirm those established findings while narrowly focusing on nitrates.</p>
Data and information on other contaminants	<p>Why do a GEIS on nitrate only? Why not include other contaminants like e coli, bacteria, etc?</p> <p>Concerns with salt on highways going into rivers and streams.</p>
Regulation	<p>Can you get people to comply (with BMPs or with existing or additional regulations)?</p> <p>Already have lots of regulations.</p> <p>Plan should go beyond regulations.</p>

	Recommend additional regulation.
	Opportunity to review current BMPs and Regulations and make recommendations.
	Opportunity to look at agency roles to reduce redundancy and streamline processes.
	GEIS process should consider shifting the burden of increased risk on the applicant.
	Culprit could be outdated policies - we can fix that.
	There are lots of existing/known BMPs/Regulations. The GEIS could evaluate the effectiveness of BMPs/Regulations.
	There should be better/more consistent implementation and enforcement of existing regulations.
	Could this process and its results take the place of existing regulations (e.g. replace a number of existing steps and permits) making it a 'net positive' for the farmers.
	Using the GEIS to limit the number of steps for producers could help build trust. GEIS could streamline future permits and provide a reputable base of information.
	Time spent on current regulations very time consuming. Many of the same rules and regulations that apply to large farms also apply to small farms with fewer resources to comply. Is aware that ag has to keep up with the times.
	GEIS could offer a way to offer an overlay and each (I.e., farmer) could streamline their individual process and not have everyone do a separate full document
	Take some regulation process off peoples' backs.
	Need strong regulations to reduce nitrate pollution, voluntary options are not enough.
	Minnesota already has very strong regulations on the books for agriculture and livestock facilities; a GEIS to specifically study the karst region of Southeastern MN is not warranted. The New Buffer Law was recently implemented by farmers at their own expense and the nitrogen rule will take effect in the near future. Right now, the most important step we can take is to give those rules time to work.
	GEIS will provide information essential for other stake holders so they better understand proposed projects.
	Would potentially save time & costs for future projects.
Water quality and environmental protection	Public would benefit from knowing when there are changes in water quality. How about index of water quality for each region? Suggests year to year comparison of bacteria, nitrate, and atrazine.
	Water quality data of today is reflective of land use practices of the past (this was a recurring theme). Current farming practices are much better than those used in the past;
	It is all about information. How much better can we make decisions with actual data about these areas? The formations- how they impact our water quality. This must be done to continue to protect our water supply. What better way to see how present land practices are impacting our water quality.

Well information	GEIS should look at not just nitrate levels in private wells, but also how wells are sited and the condition of wells. Information on how different topographies affect contamination trends (Hill Farm vs Valley Farm).
	Would like to see data comparison between wells that meet code vs. wells that do not.
	Wells in shallow aquifers should be out of the equation and shouldn't expect that water to be clean. Goal is to keep deeper aquifers clean.
	Opportunity – end goal is to provide wells free of Nitrates.
	Continue well testing to help identify problems. Will see nitrate problems in wells first.
	Data related to well construction.
	Nitrate testing for private wells currently is a burden on the homeowner, who needs to pay for the test, and this should be shifted to the government.
	My well is at 200 feet how far down do we need to go to get clean water? Need to shed light on the cause and help find solutions. I am at 22 parts. What are we to do when the numbers get too high?
	GEIS is an opportunity to test wells in karst topography areas now to establish a baseline.
Agricultural practices	Opportunity to share best practices: There are farmers who already have practices that help mitigate the problem and those practices need to be shared. New alternatives need to be developed and shared. In the end, whatever actions come out of this effort need to be practical, economical, reasonable and effective. In the end, everyone wants clean water.
	Process needs to engage farmers (most/all) in the process – farmers and their businesses/livelihoods will be directly affected. Possible venues to continue discussion: NRCS, SWCDs, commodity groups, publish in local papers. Need to plan around farming season busy times in spring and fall.
	How do we get BMPs implemented? Assess obstacles and barriers.
	Assessment of effectiveness of specific practices, BMPS.
	Assess local differences in feedlot approval; commenter noted that permitting requirements/restrictions vary by county, groundwater resources are regional, and feedlot development may steer towards counties with more lax regulations.
	What can we learn from how agricultural practices are managed in other karst regions?
	Opportunity to put moratorium on feedlots >1000 Animal Units until issue is understood.
	Best management practices – look at theses and how they are set up for farmers to use – maybe they are not adequate?
	How many people are following best management practices?
	Hope the GEIS will result in better BMPs.
	Evaluate manure/fertilizer application rates so they are based on protection of groundwater – not on crop output or yields.

Order EIS for all factory farms.
Put a moratorium on permitting factory farms until GEIS is complete.
Acknowledge the BMPs that are already being used by the agricultural industries.
See missing work with land owners, ex. U of M has recommendations for fertilizer applications. Farmer goes to elevator and they have their own recommendations of what goes on fields. If asked farms say they are following recommendations but whose. Anhydrous Ammonia is not recommended by U of M when ground it frozen yet elevators recommend. It is wasted and goes into environment.
A lot of self-reporting goes on with use of manure. I have looked at the maps and they eliminate large cities like Minneapolis yet they have 3% of Agriculture use of fertilizer. Urban area need to be included in GEIS. Lawn use of chemicals does take place. Big vs. small competition. Big Farms putting pressure on small farms putting them out of business. Agreed strongly with moratorium statement below.
Hopes GEIS is approved, there is a need. Would like to see a moratorium placed on new feedlots and animal related polluters during the GEIS process.
Should target agriculture, cities not a great contributor.
Need to answer questions related to size of operation.
Identify Ag. Practice issues – Large operations vs smaller operations.
More and better BMPs are needed.
GEIS should be about the science, but ag practices important too – tilling for example.
The GEIS is an opportunity to review agricultural practices.
GEIS should consider impacts of cumulative applications/practices.
Would want moratorium on feedlots until GEIS is developed.
Large animal farms are already regulated. Saying big farms are bad is not appropriate.
animal ag does a better job of managing/applying manure than past generations.
A lot of producers are good stewards and are using good practices. Sometimes driven by economics, sometimes by precision agriculture.
Concerned that a study will focus on one aspect; be very one-sided and will blame mostly agriculture. Is concerned that results could drive small farmers out.
Promote grass based/pasture operations, disperse livestock over larger areas of land.
GEIS will provide information essential for producers if it is reasonable to propose a project.
Include crop farmers and livestock farms in decisions, Large/medium/small farms should all have a voice.
Are the steps ag and others have taken more recently increasing or decreasing the problem.
One opportunity for a GEIS would be to place limits on fertilizer and manure applications so they are not excessive.

	<p>One participant, a farmer, expressed the opinion that fertilizer manufacturers are encouraging over application of their product. This same participant also felt that limits needed to be placed on fertilizer and manure applications, and this must be abided by.</p>
	<p>One participant expressed that another opportunity associated with a GEIS is the highlight the need for more perennial crops in this karst region in Minnesota. This person mentioned that the state of Indiana as a done a good job with this and the state of Maryland pays farmers to plant cover crops.</p>
	<p>The state of Maryland pays farmers \$50/acre when land is taken out of production.</p>
	<p>I've heard a lot of concern about CAFO's and how the impact drinking water. This is an important issue, but I believe the use of synthetic nitrogen fertilizer needs to be studied as well.</p>
	<p>The University of Minnesota has published research showing that "alternative cropping systems reduced the amount of water lost in tile drainage by 41 percent compared to a conventional corn-soybean rotation. Alternative farming practices also reduced nitrate-nitrogen losses by between 59 and 62 percent in two out of three years.</p>
	<p>I feel that this would finally close the restriction that livestock face to further expansion. I support the effort.</p>
	<p>Minnesota needs to set standards for the placement of CAFO's in the Karst areas of the state and regulate the amount of nitrogen fertilizer that can be applied to corn fields. We are certain that this will be viewed as heresy, but we believe that the current farm economy is so bad, because farmers are in a never-ending struggle to produce more corn, using more nitrogen, more herbicides, and more insecticides.</p>
	<p>It is critical that we fully understand the risks associated with CAFO siting. In my experience nothing is stable in the karst area. I've had sink holes develop in the last three or four years on top of Irish Ridge - Yucatan Township, Houston County - for no apparent reason.</p>
Climate change	<p>Does extreme weather exacerbate impacts in SE Minnesota?</p>
	<p>Minnesota Department of Health climate change and pollution report – what climate change issues in the region could affect nitrate issues/contamination (increased flooding and overland flow). New best management practices needed?</p>
	<p>Also need to account for changes in climate and associated impacts.</p>
	<p>I believe it is critical to do a GEIS to get an understanding of just how sensitive the karst is. I think it is also important because I believe the current rules are out of date with what is happening in our area. We are seeing "100-year floods" every year. The MPCA policies that are in place aren't effective in dealing with these catastrophic events that happen every season of the year in southeastern Minnesota.</p>
Public health	<p>Is there a correlation between cancer rates and nitrate concentrations?</p>
	<p>Poll local hospitals for submissions of patients exhibiting nitrate poisoning.</p>

Cost, funding, and economic impact	Concern with MPCA doing an EAW on a project that was over the county Animal Unit limit and why did they spend taxpayer money on EAW for this?
	Economics and environment are not in opposition. A healthy environment is related to a strong economy.
	The cost of the GEIS is too high.
Other	GEIS information and analysis should help us make better, more informed decisions about land use. We need to do a better job with these land use decisions at protecting the land and human health.
	GEIS should collect data on soil health in karst region and report overall soil health of different land use types.
	Forestry GEIS – good laws came out of the study.
	Animal Agriculture GEIS is very big. Anticipate this GEIS will be bigger. Data gets lost in bigger documents.
	GEIS could be a catalyst for change.
	The letter that commissioner John Linc Stine wrote to David Frederickson, the chairman of the Minnesota Environmental Quality Board does a good job of outlining the need for GEIS. Minnesota's Pollution Control Agency publication, "Karst In Minnesota" further supports the need to move forward with GEIS.

Table 3: What concerns do you have about doing a GEIS? And are there ways to address those concerns?

Public and stakeholder outreach, engagement, and participation	Relationship with decision makers is often vertical, not horizontal. If one goes to a public meeting or hearing, people are told how to talk, how long to talk, what they can and cannot talk about, etc. Democracy in this sense is very limited.
	Importance of scoping must be emphasized and managing stakeholder expectations.
	Concern that GEIS won't get buy-in from all stakeholders in order to enact meaningful change. Address this concern by actively involving diverse stakeholders in scoping, not just involving those that "show up".
	Buy-in requires education. If stakeholders are educated, it's easier to get buy in.
	Public buy-in is critical—hard to have these discussions with neighbors.
	Sense that project proposers are "clients" and interested citizens are "irritants."
	Not everyone who should be involved will be involved.
	We can only hope for an open process that encourages participation.
	Concern that everyone's voice will be heard. Should not just be defined in Saint Paul – this needs to be an open process.
	GEIS needs to properly define ALL stakeholders, not just government and the usual suspects ('everyone who drinks water is a stakeholder').
	Process needs REAL community engagement.

	<p>Have an aggressive plan for communicating the outcomes of the GEIS (e.g. social media).</p> <p>Have an aggressive plan for educating stakeholders about the data that is aggregated/collected that also includes an evaluative component (e.g. field audits) to ensure maximum outcomes for the GEIS investment.</p> <p>Concerns would be addressed by holding a public meeting with those who will be in charge of this decision, those who will implement the work, making sure that ALL avenues of inquiry/research are explored, expertise in personnel who can address the scope of this project are present.</p>
Collaboration	<p>There is a need to contribute and collaborate.</p> <p>Concern that a coordinated effort across state and local jurisdictions is needed: This problem reaches across multiple agencies in state government. This needs to be a coordinated effort across those agencies. Solutions need to overcome the tendency for silos in government to work independently. And how does this get coordinated with federal policy? The history of crop farming is dictated by federal subsidies, insurance, etc. and markets. How does that get folded into our situation?</p> <p>Need coordination of current conservation efforts.</p> <p>Local issues need to be considered.</p>
Action and solutions	<p>Concerned that this is another “empty” report/study that doesn’t lead to any action.</p> <p>Concerned that the state agencies are not serious about wanting to improve/change the status quo. Could show seriousness by taking action steps to reduce nitrate while GEIS is in progress and not just waiting to see what GEIS concludes (i.e. moratorium on new feedlots during GEIS).</p> <p>Concerned that state agencies will use an ongoing GEIS as a reason not to take current action. That the state will delay making any decisions until a GEIS, of an unknown timeline, is finished and a concern that a finished GEIS could still mean no action/decisions are made.</p> <p>Concern that there is a lack of understanding/preparing for the system change that real action will require. That even if good recommendations come out of a GEIS, the state will be unable to implement the recommendations.</p> <p>Concerned that the GEIS will be greenwashing (participant defined greenwashing as appearance of protecting health/environment, but in reality nothing changes or is done; All flash no substance).</p> <p>Concerned that GEIS won’t change anything, there’ll be no action. Big culture change is need, can GEIS do it?</p> <p>Concern that a report doesn’t change anything: At the end of the day, this is all about making change happen. Doing more of the same got us into our current state. We can’t just kick the can down the road. The way in which we develop the GEIS, the actual GEIS result, the sharing of the result, etc. all need to be aimed at action. The public needs to feel and see that action orientation.</p> <p>Resources would be better used for implementation, not further study.</p>

	Define specific action items as part of the process to address to problem.
	It is kicking the can YEARS down the road – we already know we have a problem – recommends moving directly to regulation.
	There are four things we can do right now: 1) additional education 2) utilize existing resources and programs 3) invest in U of M research and development in the agricultural industries 4) better enforce existing regulations.
	Worried it will just be another report that sits on the shelf.
	Would suggested changes from GEIS even be implemented?
	It seems like we are “arranging the deck chairs on the Titanic” by spending money on studies rather than taking action based on current data.
	We already have enough data to start working on the problem.
	Worry that the GEIS results will be placed “on the shelf” but not communicated aggressively.
	Modify the GEIS to emphasize immediate actions based on data analysis.
	Concerned that once again a study will only go so far and that it will not bring about any change. We have had contamination in our well for over 30 years with no change in legislating farming practices to reduce the amount of nitrates going into the water.
	I have no concerns about the state doing a GEIS. I have great concerns about the state NOT doing a GEIS. A fear that is out there is that if the state finds contaminated wells, abandoned wells, or leaky septic systems, the state will then require landowners to address those issues. Which is great for groundwater, but puts the landowner on the hook for what are often costly repairs that have little state funding.
	Is the GEIS for all sizes of operations? One process for small and large?
	Conduct a regional southeastern Minnesota groundwater in karst plan versus a GEIS.
	Fund a study instead of an EIS. Also, make more efforts by the EQB and MPCA to build a relationship and greater understanding of the farming community.
Emphasize science over politics	Concern that GEIS will be written to achieve political goals and not science based. Doesn't want pre-conceived goal such as a moratorium.
	Not politicizing process, don't jump to conclusions.
	Concern that politics will derail meaningful action: We need to keep the focus on “How do we keep our water safe?” and not “Who is to blame?” We can't get caught up in taking sides on this issue. Communications need to be respectful. We need to address both the sources of the problem and the fate of the problem if we just “kick the can” down the road. Data and research need to be seen as reliable and valid with third party involvement to provide credibility.
	It's up to the legislature and executive branch to make this decision and develop policies without being watered down by lobbyists.

	Process and GEIS should be based on science, not politics.
	There are no black and white answers...too much grey, worried that decisions will be made on a political basis and not on science.
	Concerned about science denial, obfuscation and misdirection by those supplying and applying the nitrogen who are trying to evade responsibility for the consequences.
	It must be scientifically based and should not be based on township or county policy or historical activity.
	Do the parties that do this GEIS have a stake in the need and/or outcome of the GEIS? Are they or will they be ready to "OWN" this project? Will there be opportunities for those experts in this field to share their expertise in a fair and impartial manner without the hint or bias of a political "agenda"?
	Answer questions objectively with science and don't rely on one source for your information.
	No preconceived notions from the start – begin with an open mind.
	Don't go into it looking at a problem caused by 'animal ag' vs. 'city' vs. ____
	Process needs to be fair and not through the eyes of someone with a biased opinion.
	Get bias out of research used in GEIS.
	The best way is to do a complete and comprehensive GEIS done by impartial researchers who are knowledgeable in the karst topography. Offer landowners incentives for having their land mapped to indicate the karst features.
	Participants must be carefully selected and cannot have a vested interest.
Trust	Will only be beneficial if trust and stakeholder buy-in is achieved.
	Who gets to determine scope of GEIS? Scoping determines outcome. Lack of trust in state agencies.
	Trust is key on both sides.
	Process should be predictable.
	This is a good old boy club. Distrust the process.
	Agencies are inconsistent.
	Do not trust Agencies, process is not trustworthy.
	Need to hold EQB accountable.
	Honest study, simplification, no Band-Aid approach.
	This process could be a farce. This is a high-profile project, would like to see a budget on exactly what you're going to do.
	There is a worry that even this meeting summary will have a slant – make sure all comments are shared and published.
	Have an independent company conduct or facilitate the GEIS.

Data and information needs	There already is a lot of farm-scale data available, however it is not compiled. The issue with all of this data is about ownership – who owns the data? Can everyone get access to it/use it to make decisions? The data would be helpful.
	Not enough information on how sources impact the problem to determine solutions.
	More information and greater understanding of the issues is needed.
	We don't need a study to know what needs to be done right now."
	Existing data in too many places and is not being incorporated in decision making, and some data is purposely omitted i.e. shallow well data in one past known study was omitted for fear it would skew overall intent of study. Shallow well data would be useful now but it is lost.
	There is already enough information.
	Define 'how we got here' (e.g. doing a Fall fertilizer application, which did not used to happen).
	Need to be very clear on the data and the # of tests done (e.g. '10% of wells are polluted is different if the # of wells tested is 1000 instead of 25).
	Information doesn't focus on the right thing... i.e. focus on a tree when the focus needs to focus on the forest.
	The age of water in the studies to help identify when/what caused the problem.
	Please request that the proposed GEIS include a "Geologic Atlas" (such as one done for Olmsted County by MN Geological Survey about 30 years ago) for each of the Counties proposed for the GEIS. Second, please contact Terry Lee @ 507-251-4818 and his colleague, Kim Crawford (now residing in Winona?). These men conducted studies of Nitrate contamination of wells and aquifers in SE Minnesota.
	Compilation of the scientific data and repacking the data at an 8th grade comprehension level. More graphic data at a field scale. Scale is a major consideration. Most farms do not recognize that karst occurs on their farm. Licensing for fertilizer application is karst terrain.
	Ask hard questions, peer review the input for accuracy and adhere to a strict timeline in other words do good unbiased work or don't do it all. Seek out another source for input. Beta test by asking two or more individuals or agencies for the same work see if the data correlates.
	Collect and study currently available data before collecting more.
	Concerned about the lack of use of existing data in the County Geologic Atlas, Web Soil Survey and investigative studies by the Minnesota Geological Survey, MNDNR, MPCA, Department of Health and Department of Agriculture.
Additional cost and time to do the study is not justified as we already much of the information. Is this study just going to confirm that, or will we actually learn something new from the GEIS? We already know the best practices to mitigate the risk of nitrates. Practices have been implemented in recent years to mitigate nitrate.	

	<p>I am not in favor of a GEIS at this point. A lot of the Data is out there, we know the sources of nitrates (ag, residential, urban, and naturally occurring background). And we know how to reduce it (reduced use of N, better manure management, better septic systems, improved city sewer systems...) GEIS could lead to unintended consequences during the time it takes to do the study.</p>
<p>Data and information about nitrates</p>	<p>Do we know where the nitrate comes from? What are the actual sources? This proposed GEIS came about because of the denial of a feedlot permit application, but there are many other sources of nitrate here in the SE, including commercial nitrogen, urban, rural septics. Test water for caffeine/common drugs to see if the source was human septage.</p> <p>Also – what about crop farmers? If we are going to grow corn, we can/(should/need) to change management, example, do split nitrogen applications.</p> <p>The problem is that row crops have expanded/taken over land that was previously used for grazing and hay. There is less animal ag in SE MN, so less of a need for hay. The GEIS scoping process needs to take into account this land use change over time.</p> <p>Nitrate results from MDA’s Township Testing Program in the SE are disturbing, hopefully we can keep testing. Where’s the old data that was collected from wells in the past? Data privacy issues sometimes prevent us from viewing/using the data.</p> <p>Must address all sources of nitrates – not just agricultural.</p> <p>Concern with Nitrates in groundwater from animals and amount of farmable acres for manure spreading.</p> <p>If there is an assumption that everyone contributes to the nitrate problem or that there are many sources (not just large animal operators).</p> <p>Information on sources of nitrates and a better understanding of lag-time for nitrates to reach aquifers/drinking water would be helpful to better inform the public.</p> <p>Concern that we aren’t addressing nitrate issue throughout the state.</p> <p>Not including all sources (rural vs. urban).</p> <p>One participant recommended that the EQB support the proposed GEIS. This person felt this would help inform other efforts to curb nitrate pollution in the region.</p> <p>This person felt the nitrate issue in this part of the state can be addressed without a GEIS. This person mentioned that changes did not occur as part of the past animal agriculture GEIS and was concerned this would be a result of the proposed nitrate GEIS.</p> <p>The smaller populations of rural areas might not have the ability to draw the attention of the majority population but clean drinking water free of nitrates is a problem for everyone, rural or urban.</p> <p>One needs to understand the change in farming practices over the past recent years. Application of nitrogen being closer to plant needs reduces chances of nitrogen leaching. The current nitrates in the</p>

	ground water may be from natural sources or from lawn fertilization from decades ago. Maybe we should make sure the gathering of samples is not flawed.
	We need a baseline reading to see if the tests are getting better or worse. Blue Baby syndrome was discovered in the '40s I believe, before commercial fertilizer was widely used. High nitrate may be a natural occurrence we have to deal with. In southern Dakota county, why doesn't the DNR let Irrigator's draw from shallower wells to take contaminated water from the aquifers?
	I'm aware of studies that have been done decades ago that showed no impact on water quality. Is there a way to determine the source of nitrate? Point source vs. non-point source.
Data and information on other contaminants	Only scoped to one pollutant, Nitrates. Need to test air quality, surface water, health, nutrients, and bacteria.
	GEIS should include more pollutants besides nitrates– pesticides, bacteria too.
	Study should not be limited to just Nitrogen. Wants GEIS to look at chlorides/phosphorus/chemicals
Regulation	Concern that GEIS will lead to more regulations that will make it even harder on farmers to sustain their lifestyle and provide for families.
	Lack of enforcement on current laws is an issue that needs to be addressed first/need more compliance with current laws.
	Belief that if the GEIS is conducted, that the study would lead to more regulation. Typically regulations come down fast and hard and it's hard for farmers to change/adapt that fast. In reality, farmers can't change without becoming informed about the issue and what to do about it. Need education/information and incentives to help make land management changes.
	Spend GEIS money on increased enforcement.
	Lack of enforcement is an issue – MPCA allowed 4 failed manure lagoons to operate for 10 years and animal waste be discharged into a ditch for 8 years.
	Concern with lack of enforcement on behalf of MPCA.
	Good science doesn't matter without enforcement.
	Regardless of GEIS, officials are not doing their job via enforcement so how will a GEIS change this?
	More inspections/enforcement is needed.
	Regulations are a result of rules not being followed.
	Farmers don't comply with Conditional Use Permit required Animal Units.
	There are a lot of regulations in place, but little enforcement.
	Who should enforce violators?
	When permit is applied, manure plans can be transferred w/no real record of where manure is entering watersheds.

	Not a lot of transparency in permitting process—have to request data rather than it being readily available.
	There is often not enough funding to enforce existing rules.
	A GEIS would not enforce current policies already in place.
	MPCA endorses agronomic rates not environmental rates.
	Concern that there be a misunderstanding of differences in BMPs and regulations between different parts of the state.
	Concerned about GEIS leading to future regulations without funding to meet regulations.
	Only add regulations if absolutely needed. Everyone wants clean tap water.
	Any new regulations should add value. Must have transparency.
	Results apply to all (including government, Xcel Energy, MnDOT, etc.). (e.g. when it comes to popping a hole in the ground, there can't be exceptions for some people and not for others).
	Fear of additional regulation's being pushed to local units of government to administer.
	More regulation vs. less regulation and who is going to carry out additional regulations, where does the funding for that come from?
	Numerous data studies have already been done by the NRCS and University of Minnesota, Discovery Farms of Minnesota and Wisconsin on nitrates and water quality. I understand these studies are already the bases for MPCA rules in Minnesota. They already are some of the most strict regulations for doing business in the Midwest.
	Concerned that the information gathered will not get incorporated into new rulemaking and BMP development/revision. That the study will be dragged out and individual projects approved during the long interim.
	I'm concerned that the corporate proponents of factory farms would obtain state permits while such a multi-year study was underway, and before its conclusions were implemented. Do avoid that, the State of Minnesota should have a moratorium on issuing any permits for polluting factory farms.
	To quote the LSP's Bobby King, the proposer of such a large agricultural facility is asking for public permission to build "and the public has an interest in making sure that the proposer's desire to profit does not come at the expense of the community; it's about getting it right so private profit does not come at the cost of public harm."
	AgriGrowth believes the Agency should work with farmers to provide them with best practices and also the incentives to adopt them. Other ways that the Agency can address this sensitive region of the state include better enforcement of existing regulations and reallocating existing clean water fund dollars to tackle this issue.

	Concerns could be addressed with rules and regulations. Unfortunately, not everyone is considerate of their neighbors and willing to protect the environment that they live in.
Environmental review	Concerned about variances getting granted to rules.
	Does not want GEIS to change the existing EAW/EIS processes.
	Make sure to do rule revision and rulemaking for fertilizer application, feedlot operations, etc. Do not exempt projects from environmental review and do not change the calculus of when an EIS should be required for an individual project on the hope that the study will address the potential impacts at some time in the future.
	There has never been a project specific EIS on feedlots and concerned that the GEIS will be used as an excuse for no project specific EISs in the future (particularly feedlot EISs).
	MPCA can force an EIS for a big farm operation but they never do. Why? There should be an EIS on every operation prior to building and have them prove they are not going to harm the little guys and pollute.
	Need project specific EISs.
	Former MPCA Commissioner Stine failed to use power to order EIS by law. Neighbors and scientific experts had information. Need to use laws already in place.
	Will people use best practices? MPCA has trust issues and has never asked for a GEIS in 25 years. Want a fair process.
	Concerned that a GEIS will result in the MPCA not ordering required Environmental Impact Statements. There were two operations proposed in the karst region which should have had Environmental Impact Statements done but these were not ordered by the MPCA. A couple of group members felt that this might be addressed by the new MPCA commissioner, Laura Bishop. Another felt that reinstating the MPCA Citizen's Board also might help address this concern.
The Minnesota Pollution Control Agency should do a project-specific EIS (rather than a sweeping GEIS) on every proposal for a factory farm in the karst region. Meanwhile, a moratorium on issuing any state permits for such facilities should be imposed.	
Water quality and environmental protection	Concerned that the GEIS will not improve water quality (surface and ground).
	People currently do not have drinkable water.
	Serious water pollution problems and something has to happen.
	Aquifers need to be taken into consideration. For example, if you are on the Jordan aquifer the pollution is also coming from the Twin Cities and needs to be taken into account.
	I strongly encourage the state of Minnesota to move forward with GEIS. The quality of our drinking water and preventing the pollution of our ground water for future generations mandates the need. We only get

	<p>one chance to do this right - if GEIS is not required and future projects with multi million gallon manure pits are allowed to contaminate our ground water, it's too late.</p>
	<p>I have no concerns about doing a GEIS. This is about making sure we can protect the drinking water for generations to come. I have read where some are concerned about spending states limited resources on this study-really. Water is a limited resource and we are concerned about the few dollars we are going to spend. Please, put a price tag on water quality for my grandchildren. I have buffer requirements on my land.</p>
	<p>We purchased property years ago in Houston County because of the pristine beauty we found there. Our well was tested in 2018 and is currently clean and safe - we want to keep it that way and are counting on the Minnesota Environmental Quality Board to help us.</p>
<p>Agricultural practices</p>	<p>Concern that animosity toward one portion of agriculture (feedlots) will lead to rash decisions that will negatively and disproportionately affect other sectors of agricultural community (especially family farmers). One size doesn't fit all, need common sense and flexible solutions.</p>
	<p>We need to get back to more sustainable land use practices and concerned that the GEIS won't emphasize this or provide for realistic ways for farmers to convert to sustainable ag practice (Farmers need more support to remove the fiscal risk of attempting to go against the status quo of Big Ag and Big Money)</p>
	<p>Not all manure is equal. Dried vs liquid manure should be analyzed separately. Liquid manure injection into soil seems way more prone to contaminating the groundwater especially if applied to unhealthy soil or over top of tile drains. GEIS should seriously look into manure application best practices.</p>
	<p>Even if we don't/won't ever have all the data to make a decision on this issue, can we recognize the best practices that farmers are currently using?</p>
	<p>We won't need a GEIS if all the farmers in this area would sit around tables like we are tonight and figure out how to address this issue together.</p>
	<p>Concerned with runoff from farmland</p>
	<p>Agriculture is a global business and market forces and demand for corn (federal farm bill) far outweigh anything we can do here in SE MN. We have to change the crops we grow, we can't be competitive in the global market. Don't worry about federal policies – let's control what we can.</p>
	<p>Concern with impacts to steams and runoff from farmlands.</p>
	<p>Feedlots treated differently in different counties due to local politics.</p>
	<p>If large feedlots continue to be permitted (>1,000 animals) on a project by project basis, the problem continues with no end in sight.</p>
	<p>Start mapping manure plans.</p>
	<p>Management of manure is not size dependent. In many cases larger operations manage their manure better and follow the rules more than smaller operators.</p>

	<p>Many farmers and the agricultural industry as a whole want the same goals of improving and protecting water quality and recognize that things need to be done. Sometimes though, it really comes down to the bottom line- the economic factors of compliance.</p>
	<p>“Small farms and corporate/industrial farms have a fundamentally different impact on the environment. We have the potential to see another ‘dust bowl’ environmental response. Money is not the optimal way to make decisions.” This topic was the most emotionally charged at our table. It was pointed out several times that we are not in agreement about what a corporate farm is verses a small family farm, or the impact each has on the environment. Management activities vs. size was discussed as part of this.</p>
	<p>Past job with plan review of feedlots. Small feedlots are more of a polluter than the bigger operations. Bigger operations can store their manure 6 month so they do not apply during times that it may not be environmentally useful i.e. spreading on frozen ground. Feedlots need storage.</p>
	<p>There are a lot of regulations regarding manure that need to be managed. They have a commissioner that is in partnership with one of the farming operations in their township. At least small farmers use cover crops.</p>
	<p>Concern that once GEIS process is initiated, there will be a rush to get permits (feedlot) for large number of animals to circumvent restrictive regulations that may result from GEIS.</p>
	<p>What can be realistically implemented where ag is protected by so much?</p>
	<p>Concern that ag practices change quickly and that technology will be ahead of the completion of the GEIS report – need to look forward.</p>
	<p>What is clear is that groundwater is a public asset. Concerned about large water use and large volumes of manure generation. Cares about how much farm operations expand.</p>
	<p>Animal Ag has evolved to reduce costs and feed more people. The market demands cheap meat.</p>
	<p>The small and medium sized farmers struggle economically to do some of the BMPs – ex. spilt manure app/GIS application. There should be some kind of support.</p>
	<p>SE Minnesota isn’t built for big farms.</p>
	<p>Farmers now have to account for every pound of nitrogen put on their land, and it changes if corn stalks are on or off field. What additional regulations would apply? Now needs to test wells twice a year. Zero water pollution allowed to leave land.</p>
	<p>Remember that drinking water problems impact livestock too – they don’t perform as well, etc.</p>
	<p>If a GEIS is done, could it call out and impact the individual farmer (and could the report be believed).</p>
	<p>Change narrative so farmers are not on the defensive over possible new rules.</p>
	<p>Farmers have a small voice but may be impacted the greatest.</p>
	<p>A five year delay during the study could allow many feedlots to expand. A moratorium during the study is mandatory. Could the money be better spent on education and farmer assistance programs? Farmers are</p>

	<p>in a bad place right now and cutting corners is tempting. There are a few great ag producers but I fear too many farmers will not comply with any rules that are put in place to protect water.</p> <p>The proposed GEIS does not allow the time for the recently passed nitrogen rule to have its intended effect and misses the opportunity to measure the impact of other newly enacted legislation such as the buffer law. Minnesota is already one of the most difficult and expensive states to get livestock facilities permitted. Adding more regulation, delay, and expense to that process is another hardship farmers cannot take.</p> <p>My biggest concern is that we will spend money trying to find out what we can already garner from tests being done. In addition, farmers in particular are doing a much better job of using less nitrogen per bushel of corn than they have in the past. we are also taking advantage of technological advancements for making split applications and placement of nitrogen to help alleviate excess loss and possible leaching.</p> <p>We have concerns that if nothing is done to control the use of Nitrogen and the establishment of CAFO's in sensitive areas, we will find ourselves unable to live in this area.</p> <p>Given the late notice (not to mention the fact that in most years we'd already be in the field) and the "limited space" it really doesn't appear you're willing to listen to any research or information about CURRENT, modern farming methods. On farm visits would give you a lot clearer picture of what's really happening in the only industry that feeds you.</p> <p>Listen to the farmers and ag-professionals in this state. Farmers are already using management practices that have been identified by research.</p> <p>Soil health is very important and shouldn't be overlooked in a GEIS about nitrate and groundwater contamination. Pesticides & Herbicides, like glyphosate, degrade soil health making the land more susceptible to nitrate leaching (dead soil doesn't take up nutrients). Need a better monitoring system of soil health before applying nutrients/chemicals.</p>
Feedlot moratorium	<p>Could be used as a political ploy – drag it out with studies so feedlots can be approved in the meantime. Wants a moratorium on large projects and concerned there won't be one while GEIS is in process. Letting feedlots go forward during GEIS could change the data set.</p> <p>Moratorium would address these concerns.</p> <p>Concerned the GEIS will not provide a Moratorium.</p> <p>GEIS will not have a moratorium and will be business as usual.</p> <p>Put a moratorium on feedlot expansion during the study.</p>
Climate change	<p>Concerned about the impact of climate change.</p>
Health	<p>Human health impacts need a larger role in this discussion. Yes groundwater is contaminated so how is that affecting the health of those living in these areas? Worried about the health of children especially a perceived increased in chronic childhood diseases. Are health impacts related/correlated with our impact</p>

	to the environment? Are there higher rates of any particular diseases/health conditions in the karst region that relate to the polluted groundwater?
	Nitrate pollution is a critical public health issue. Money should be spent in ways that produce immediate results (even small, short-term results).
Cost, funding, and economic impacts	Concern that the money left in the budget for this is not adequate: The cost for addressing nitrate levels after the water is contaminated make the dollars in the budget seem paltry. We can either deal with the problem upfront, or deal with the problem on the back end. We need to spend the dollars to get ahead of the curve on this problem.
	Given the reduction in funding, opportunities will be limited.
	Need funding for GEIS.
	600,000 budget is a lot of money to pay out just to listen. They say it is not a lot of money but for me who cannot afford insurance it is.
	Will take resources away from enforcement efforts.
	Concern about what the cost of clean water will be in the future – infrastructure requirements, water towers – and what will that do to landscape views? Cost of reverse osmosis filtration.
	Change in budget from \$2 million to \$643,000 is concerning. We are all here to share in concept of GEIS.
	Fears people won't take it seriously enough to spend the money needed.
	We have Clean Water Fund and farmers who installed buffers did not get funding. Clean Water Fund should be used for this.
	What if we spend all of the time and money and in the end, nothing happens?
	Concerned about costs associated with implementation.
	Secure funds to help pay for peoples time if they are helping with GEIS.
	Lack of funding to carry out the entire GEIS process...GEIS could wither and die on the vine.
	The cost-benefit of a GEIS has not been established.
	Concerned about the reduction in funding for the proposed GEIS from \$2 million dollars to \$643,000. Most were concerned that this budget reduction would limit the scope of the proposed GEIS.
	Possibly a waste of money, when there are greater needs in the State.
	It's not needed. I don't see any benefits from this activity. Considering the number of staff that would be involved and the time, this would be a total waste of taxpayer's dollars.
	My biggest concern is the cost, I don't believe we'll a good return for the money. I believe we should see if the actions we're currently taking will have an effect.
	Will the STATE of MINNESOTA fund this project with a FULL, 100% commitment?
	Increase Clean Water Funds available for well sealing, upgrading septic systems, and water treatment.

	Contaminated wells and related health issues and their economic drain/costs on people
	There is a concern within the arts and tourism industries that a loss of environmental health will impact the overall community health and economics.
	Economic side needs to be addressed. How can we make it economical for small farmers at the federal and state level?
	People expect cheap products – this has now moved to food – people demand cheap food.
	For widespread adoption of BMPs, it must make sense economically.
	Use the GEIS to explain the real cost of producing food – including externalities such as contaminated drinking water, poor health – society can't avoid the health costs of cheap food.
	Involve the big food buyers (such as General Mills) with the true cost of food production.
Timeline	Concern regarding length of time to complete GEIS.
	Interim reports might be helpful.
	Timeline of completion too slow to properly inform our current situation.
	The GEIS is a delay tactic and is too time consuming.
	Can the GEIS be comprehensive enough given the Governor's budget? How will this affect the timeline that already cannot effectively inform existing rules or ones about to be rolled out?
	Because of the long time frame for funding and conducting a GEIS the data will be obsolete (or worse – useless!) before it is published.
Influence of large business interests	Concern that there is a state agency staff bias toward business. Feels the permitting agencies work too closely with business they regulate. Relationship is too close and is reason citizens ignored.
	Concerned over the actual neutrality of GEIS process. Worried special interests/"Big Ag" will "put thumb on the scale".
	Concerned that status quo will prevail and that big industrial agriculture companies will still control outcome of these types of environmental issues.
	Worried that the scoping and decision making process is/will be too heavily influenced by "Big Ag". While participant agrees that many different stakeholders should take part in scoping, they shouldn't all get equal say. Priority to those who live in area.
	Concerned that "Big Money" will control the process. Need to rethink what a successful farm is, shouldn't just be profit and yield.
	Objectivity is critical. Don't let business drive the agenda, let science drive the agenda.
	Need a "fair" agreement between corporate and individual dollars. Corporate interests can influence the process monetarily (lawyers, political contributions, etc.) compared to individual stakeholders.
	Modern industrial agriculture must be involved but without taking over the process.

	Industry is taking too much water out of the ground.
	Concerned about regulatory capture and corporate takeover of agencies.
	The GEIS process does not allow the thoughts of citizens and small environmental groups, like the Land Stewardship Project, to be expressed well. It was mentioned that a GEIS takes a considerable amount of work and corporate agricultural companies have staff, including lawyers that can be sent to the meetings and workgroups associated with these large projects. An example of a recent silica sand mining project was given. As part of this work, the participant felt that industry and government experts' positions were given greater emphasis compared to the citizens.
	Don't let big ag (Corn Growers, Agri-Growth Council, Farm Bureau) run the show, as they often do, such as in the creation of MN's Ag Water Quality Certification Program, which allows a certified operation to grow continuous corn and still be certified.
Other	Recommendation that EQB Board and staff read the book Storm Lake by Art Cullen.
	People will do the right thing if given the education and funding for implementation.
	Concerned that results may be inconclusive.
	Concerned that the goals and objectives seem very nebulous – how will they be defined?
	What will the ER process look like in the future after the GEIS is complete will it result in not being able to comment on individual projects in the future?
	Maybe visits between farmers and city folks would be good.
	There needs to be a connection to the human factor – why do something different?
	The GEIS implementation should be handled LOCALLY. Local people need to be trusted to use the facts.
	Need more information before they could decide whether or not to recommend that the EQB support the proposed EIS. One felt that he/she did not have enough information on the alternatives to a GEIS.
	Concerned that for real change to happen we need a “culture shift” that requires serious and multi-stakeholder buy in. Isn't sure there's a cross-sector appetite for any real change
	The larger socio-economic impact needs to be considered as does the fact that farming is a lifestyle and a culture. Solving this problem requires cultural change. This is one of the reasons why trust building in the process is so important.
	Expecting neighbors to police neighbors and this is not right.
	Meeting expectations—can those be met and can GEIS lead to outcomes.
	GEIS is subject to legislator's whim.
	Funding, time, scope, dedication and resources, local community needs must be included.
	Would GEIS cause a visit to each farmer? What about the loss of property rights?
	Concerned about private property rights.

	Concerned about scope creep (address the issue & don't bring other issues into the process).
	It might be used to "greenwash" current polluting practices, wasting a lot of time, money and goodwill in the process.
	BUREACRACY and levels of management could produce a great report from a broad base of input or you could end up with an incomplete yawner that would get shelved because it was done poorly or had strong biased input.
	My only concern is that it won't be large enough! As I mentioned, Houston County hasn't been completely mapped for karst features. I am hoping that a GEIS will be comprehensive enough to create policies that will save our water supply in this sensitive area. I am also concerned about access to land. Hopefully landowners will be willing to allow the scientists access to investigate the area.
	I am concerned that the money could better spent helping farmers manage nitrate on their farms though grants, research or outreach. I am also worried that the EIS process is unnecessarily long and expensive. A simple study of the region might suffice. I also believe that much of this data already exists and an EIS might be redundant.
	Need to emphasize concern for the greater good versus the good of the individual.
	Clean water is a global threat, the final outcome needs to be for the greater good.
	The document can't just be large – it needs to be clear, direct, and in a usable format for lots of people.
	Information doesn't get out because it may not be viewed as favorable... i.e. company that pays for a research project and then doesn't want the findings released because it may not be favorable.
	Please do the study! Is there a down side to completing this study-NO.

Table 4: Given everything that you have heard tonight – from EQB, MPCA, and your neighbors at the table – do you recommend that the EQB Board support the GEIS?

Public and stakeholder outreach, engagement, and participation	Yes, GEIS should be performed and should include many stakeholders, but especially local farmers and citizens who live in the area as well as farm bureau and farmer unions.
	Consensus building will be a necessary component to achieve any level of success, especially in the way we define the problem and the language we use to describe it and the people involved.
	Collaboration is needed for both the GEIS to be successful and for addressing the core issues that brought us to this event.
	Clear there is a problem in SE Minnesota. Need cooperation and finding a dialogue that gets to solution.
	Interested in education, scope, and recommendations. Can't eliminate farmers.
Collaboration	U of M, State and Local officials need to collaborate to find answers.

Action and solutions	Hopefully the GEIS could identify new solutions for controlling/limiting nitrogen or will help refine current control methods. GEIS should look to provide menu of solutions, not a one size fits all since different farms and different sectors will have unique details/factors governing them.
	Maybe, if actually serious about wanting to reduce nitrate pollution (not convinced state really wants to act). Should take action steps now to address the already bad water quality. Don't need study to tell us it's polluted so shouldn't be waiting on GEIS to act. Actions should address current problem, GEIS should provide answers to stop things from getting worse/to this stage again. If no enforcement of control methods, no point. Citizen opinions matter and should be taken seriously in the process, not convinced they will be taken serious due to past experience in environmental review.
	No, direct efforts to on the ground implementation rather than more study.
	Skepticism that the GEIS would result in effective implementation.
	Not crazy about GEIS – let's get going with action.
	GEIS should be completed – it's the only solution.
	Action is what we need. There has been 20+ years of data. What is the road block, why is there not more progress?
	Work on the hard part - implementation/action.
	Yes, but need to find ways to mitigate issues not just issue another report.
	It depends - if a GEIS is undertaken, it must be fair, transparent, and comprehensive, and it must include action plans to address pollution.
	No, we should establish a baseline on nitrate conditions in private wells instead.
	The largest concern with conducting a GEIS is that it is a mechanism that requires a lot of effort, is complex, and has no guarantee that answers for progressive steps forward will be reach. It seems that there are other mechanisms that could be applied to addressing the regional issue of nitrates (groundwater quality) in groundwater in karst environments.
	I recommend that a GEIS not be done and that we continue to use avenues of testing available.
	Yes, especially if it leads to better rules and BMPs. There doesn't need to be a lot of invention.
	Emphasize science over politics
	I can't answer that without reading between the lines. Let's face it 90% of this is usually about politics and not a real problem.
	I would hope the EQB could set politics aside and do what's right for Minnesota to support the GEIS, if the final report is science based on fact.
Trust	Yes, but suspicious.
	Yes, but need technical experts to keep it objective.

	<p>Some Dairies Operate manure management systems as well. MPCA monitoring does not always represent the situations like when air quality samples were collected on the wrong side affected area. Results did not represent the situation. Loss faith in Department's abilities.</p> <p>Yes, as long as the study is done right and fair.</p> <p>Maybe (can see the value of the data but distrusts the process will be fair: an inherit distrust).</p> <p>First of all is it politically motivated? Do we really have a problem or a perceived problem? So far none of your information sent states a specific problem.</p> <p>Make sure the information is correct and transparent to the public.</p>
Data and information needs	<p>Can data be aggregated w/o a GEIS? Not sure GEIS is the best vehicle for getting/disseminating information. Agencies should be sharing data and aggregating it.</p> <p>Real value found in existing resources.</p> <p>If do the GEIS, use money wisely – use existing data, make it organized.</p> <p>GEIS is not worth it, if it is just a repeat of exiting studies/plans.</p> <p>Yes, as long as all existing data has been thoroughly analyzed and it isn't enough: then go ahead.</p> <p>No-I suggest you don't remake the wheel and use the plethora of information already available.</p> <p>Yes, but with caveats. Can't jump to diagnosis w/out the right information.</p> <p>Need to track pesticides sold, MDA controls the data. MDA focused on Nitrate in SE Minnesota in past (2006-07 ended) Assessments were not done due lack of funding. MDA is conflicted hard to hand out information on pesticide distribution due to the nature of the chemical being used for explosives. Need to measure how we are doing.</p> <p>Yes, identify gaps.</p>
Data and information on nitrates	<p>Concern that there is natural NO3 existing. We can to so much about. Do not exclude Urban area nitrate use.</p> <p>Addressing the nitrate pollution in groundwater is necessary.</p> <p>Haven't waited to see if the new commercial fertilizer rule has an impact on groundwater contamination.</p> <p>I think the EQB MUST support the GEIS. We need someone to do something about the nitrates in the water and to update the policies.</p>
Data and information on other contaminants	<p>Depends. GEIS needs to be fair, transparent, and above all comprehensive. Should look at more than just nitrate contamination, especially pesticides and needs to review health impacts in contaminated areas, needs to review the economics of agricultural business in the area to understand how we got to current practices and contamination levels, and should be looking at big picture solutions such as how to move our farming practice away from the chemical dependency we currently have. IF a GEIS can be this comprehensive then it can be useful, otherwise no change to status quo seems likely.</p>

	<p>Maybe. State agencies appear to have a lot of data on this problem already, but aren't collaborating enough to find correlations and solutions. If GEIS accomplishes more sharing and collaboration then great, but should be able to do this without a GEIS. GEIS would be useful if its focus isn't so narrow. More than nitrate pollutes the karst area groundwater. Nitrate contamination is indicative of other problems further up the chain. GEIS should take a more holistic approach. Supports helping family farms, those that live on their land, and don't trust absentee owners who likely only care for bottom line profit.</p> <p>Yes, but study should not be restricted to use of nitrates...karst is susceptible to contamination from multiple sources.</p> <p>My concern is that all parties need to have as much information as reasonably possible to guide people that are planning multiple types of land use developments that may increase nitrates & other pollutants affecting surface & ground water. Organizations taking positions to discourage or prevent development of such information seems to be irresponsible.</p>
Regulation	<p>No, we already have the regulations we need but not the will to enforce them.</p> <p>No, we expect the Groundwater Protection Rule to pass. Let's allow the law to begin to address the non-compliance issues first.</p> <p>Yes- the EQB should support the GEIS but am concerned with enforcement and that it will be scientific.</p> <p>No – Now is the time for action, use GEIS money for enforcement.</p> <p>Existing programs, rules and resources are more important than another study.</p> <p>There is a basal level of discontent with agency enforcement of existing regulation and what feels like moving in the direction of contradicting rules.</p> <p>GEIS would only be a start – without compliance, goes nowhere – is more of the same.</p> <p>Don't want the GEIS to be a "general permit" that would permit uses without being specifically reviewed and individually permitted.</p> <p>Yes, but goal post can't be moved...need regulatory assurance.</p> <p>During the Ground Water Protection Rule hearings in front of an Administrative Law Judge, it was concluded that a "one-size-fits-all" policy can't work given all the soil types and abrupt topography changes. As a farmer who faithfully participated in both the Taskforce and hearings, I very much feel your process is DOUBLE JEOPARDY and a huge waste of tax-payer \$\$\$\$.</p>
Environmental review	<p>No – History of EIS not being used from what she's seen from MPCA.</p> <p>Need enhanced environmental review process for all kinds of permits.</p> <p>GEIS is not the proper investment or response to the critical health issue facing the region.</p>
Agricultural practices	<p>Yes – Look at other types of agriculture that could be grown that don't need nitrogen. Could help come to consensus on best management practices to help clean up the ground water and surface water.</p>

	<p>The MPCA should order and EIS for every factory farm proposed in karst country. If there is any doubt as to how to immediately and expansively contaminants from surface water runoff penetrate deep into the ground and travel laterally through karst country, we here at Niagara Cave implore all EQB Agency Leaders and Citizen Appointees to visit us in Harmony, Minnesota, for a private tour to see first-hand what happens when water on the surface disappears into sinkholes. The lateral transport of water, soil sediment, and pollutants as well as vertical seepage of nitrate contaminated water are evident in the cave. We support funding for the study to be linked to a moratorium on factory farms over 1,000 animal units that will stay in place until the study is complete and its conclusions implemented.</p>
	<p>It was recommended that those involved in the GEIS visit farm sites of all sorts to really understand what is happening there.</p>
	<p>Recommended considering lands adjacent to Karst as well regarding impact of agriculture on water resources.</p>
	<p>GEIS should focus on BMP adoption barriers.</p>
	<p>Think of the impacts on different sized farms.</p>
	<p>Grass based systems need to be pushed.</p>
	<p>Look at U of M research, green manure, and cover crops.</p>
	<p>Need farmer lead councils.</p>
	<p>Will anyone look into the socio-economic implications of changing farming practices? Is there any proof that changing livestock/farming policies will produce an improvement? How will we know we did anything, but burden the public and private folks?</p>
Feedlot moratorium	<p>Maybe, with qualifications. EQB should take action now by putting a moratorium on all new feedlots until GEIS is completed. This would show EQB is serious about the issue and more trust would be put in the GEIS process.</p>
	<p>Will there be a moratorium on permits until GEIS is complete? What level of scrutiny of permits will occur during the GEIS development process?</p>
	<p>While completing GEIS there needs to be a moratorium on feedlots.</p>
	<p>I attended the meeting in Red Wing and since then had done a lot of thinking. I support it if there is a moratorium on feedlot expansion.</p>
Funding	<p>General, though not universal, support to move ahead but most of the affirmatives were conditional – primarily due to a perceived shortage of money devoted to the project and the concerns expressed above. One suggestion was to refocus the scope so that the reduction in dollars would still have an impact, albeit more limited than originally planned.</p>
	<p>Instead doing the GEIS study with entirely public dollars, a public-private partnership could provide the funds to conduct a joint study .</p>

	No. A total waste of time, man power, and not using tax payers dollars to solve water quality issues. The studies have already been done.
Timeline	Yes – As long as it’s timely and issues addressed so it not a waste of taxpayer money.
	There is an interest in learning more but there is also real concern over how long it will take.
	It could be beneficial but will very probably be “too little and too late.”
Other	Maybe, depends on scoping. If even playing field for all stakeholders in scoping process then some hope that serious action could result. If mostly an “empty” report leading to “business as usual” then there’s no point in performing GEIS.
	Can’t see where the GEIS would start and end”. – must have conclusions, outcomes.
	During scoping, look at new technologies (fertilizer application, monitoring, and equipment).
	Scoping process would need clear objectives (define and narrow scope).
	Each entity and person must be willing to take responsibility for their part in the problem and in the solutions.
	Does the state grant go to big chemical companies?
	What have we gained from GEIS on animal ag or forestry? Recommend moving ahead with this GEIS if the animal ag or forestry GEIS projects were effective.
	What were the results of the animal agriculture GEIS?
	Yes, as long as the study is done right
	Yes, because the rule making or other process options won’t be any easier.
	Yes, I support development of the proposed GEIS.
	Please do the study.
	No, AgriGrowth does not believe the EQB should support the GEIS.
	Yes, I emphatically support the GEIS.
ABSOLUTELY!! NO concerns whatsoever regarding this support. As a resident of SE Minnesota the "clock is running".	