

DATE: March 23, 2021

TO: Twin Cities Metropolitan Area Water Supply Policy and Technical Advisory Committees (MAWSAC and TAC)

FROM: Lanya Ross (Environmental Analyst) and Emily Steinweg (Senior Engineer),
Metropolitan Council Water Supply Planning

SUBJECT: MAWSAC and TAC Work Plan for 2021-2022

Request to MAWSAC and TAC Members

1. Review and provide input on the proposed 2021-2022 committee work plan

Background

The Metropolitan Area Water Supply Policy Advisory Committee (MAWSAC) is responsible to assist the Council in its water supply planning work. The Metropolitan Area Water Supply Technical Advisory Committee (TAC) informs MAWSAC's work by providing scientific and engineering expertise. This work plan, shaped by committee member input, will guide the committees' business and meeting agendas in 2021 and into 2022. The timing of the topics may shift, especially given uncertainties during Covid-19 pandemic. Committee chairs may modify the work plan when approving agendas.

Goal

This work plan is designed to support the committees' responsibility to produce, by 2022, a set of recommendations and supporting information around high-priority water supply topics to support the update of the regional development guide and related policy plans.

Policymakers and influencers will be better informed to develop and implement policies that achieve multiple benefits and reduce unintended impacts to water supplies, supporting statewide goals such as:

- Drinking water is safe for everyone, everywhere
- Groundwater is clean and available
- Surface waters swimmable and fishable
- Minnesotans value water and take actions to sustain and protect it

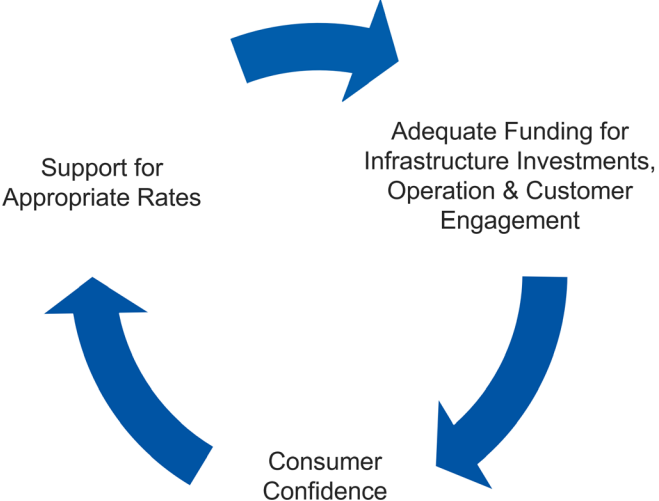
Recommendations to the Metropolitan Council and Minnesota Legislature may address technical studies, policy updates, collaboration, and/or funding.

Roles and expectations

- **Committee chairs** lead on committee goals/outcomes, approve work plan and lead meetings to achieve outcomes. Encourage member participation.
- **Council staff** design meetings, provide administrative support for meetings, facilitate meetings, implement relevant committee recommendations, and share information as requested
- **Committee members**
 - Review materials that are sent out beforehand. *Council staff will send materials a week in advance.*
 - Participate in the meeting – share ideas, experience and knowledge with intended audience. Share guidance and information with fellow members and Council staff that will be incorporated into draft reports, support letters to legislators or agencies, and/or project scoping, as appropriate. *Council staff will try to design meetings in ways to allow contribution in multiple ways for different communication/learning styles.*

Proposed meeting schedule and topics

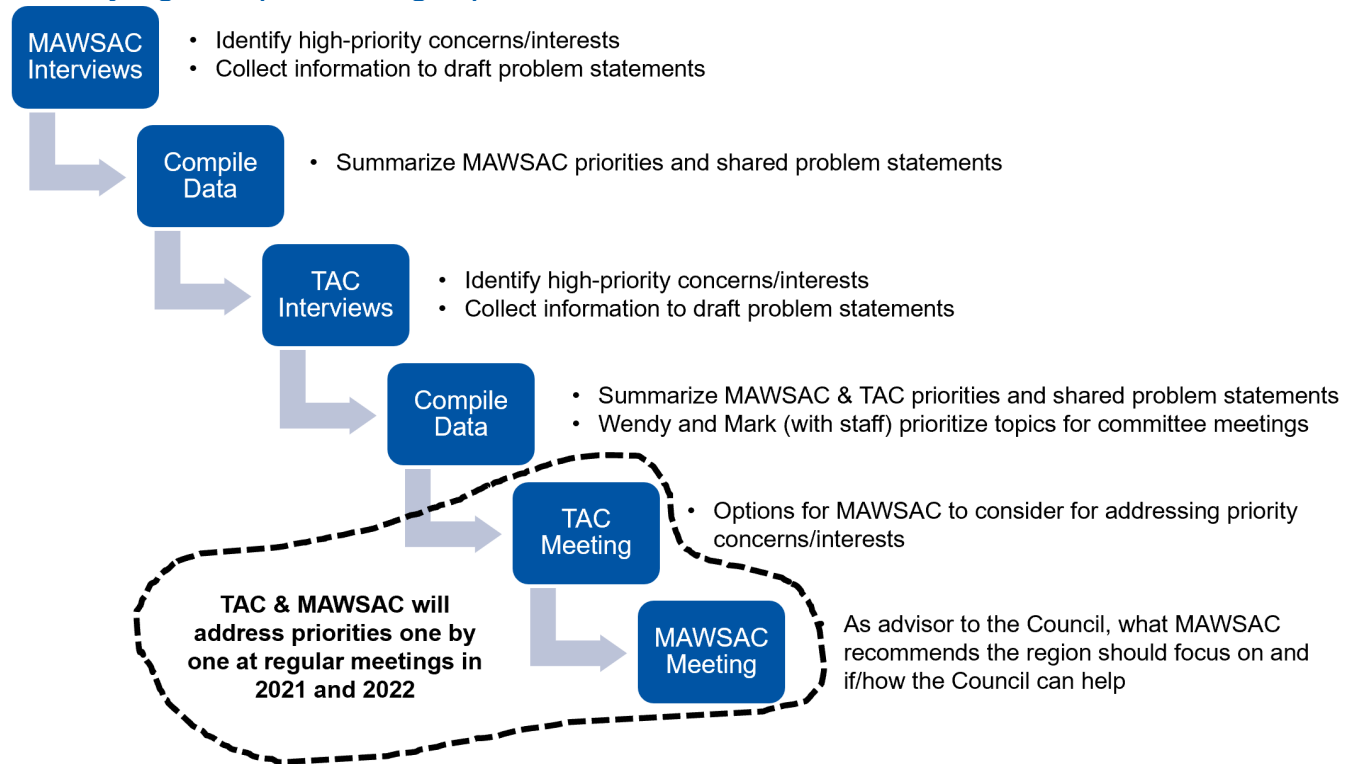
<i>Meeting Date</i>	<i>Topics (based on committee member input)</i>
March 23, 2021 MAWSAC & TAC	<u>Work Plan Kickoff</u> Committee members will leave this joint committee meeting understanding the work plan and committee member expectations, having provided input about meeting design preferences, and committed to participating.
April 20, 2021 TAC	<u>Contamination & Water Quality</u> <i>Problem statement:</i> There is always the potential of another contaminant emerging in our water supply. As a region, we are not always logistically best prepared to prevent spread or be responsive when new sources of contamination are discovered. <i>As committees form recommendations around this challenge, look for opportunities to:</i>
May 18, 2021 MAWSAC	<ul style="list-style-type: none"> • <u>Increase support for inter-jurisdictional coordination.</u> Contamination does not follow the bounds of individual political entities, therefore we can and should put in place mechanisms that will allow communities to better monitor for emerging contaminants, respond more quickly in a more coordinated (less duplicative or contradictory) way, and communicate more clearly to residents and businesses so that they can trust their water supplies are safe and secure. • <u>Clarify roles and financial and logistic responsibilities</u> for communities, regulators and other involved entities.
June 15, 2021 TAC	<u>Intersection between Land Use & Water Supply</u> <i>Problem statement:</i> Many of our current water quality problems came about because we didn't realize the implications of our land use – and related industrial and commercial waste – years ago. We have opportunities to make choices now with our current land use that help prevent the kind of legacy contamination that past land use practices have caused. <i>As committees form recommendations around this challenge, look for opportunities to:</i>
July 20, 2021 MAWSAC	<ul style="list-style-type: none"> • <u>Increase support for inter-jurisdictional analyses and coordination.</u> Considering the overlap of source water protection areas, the challenges that hinder local actions to protect source water need to be better understood, coordinated, and incentivized. Certain areas contribute more than others to the number of people drinking that water and should be prioritized (ex: where DWSMAs overlap). • <u>Clarify roles and financial and logistical responsibilities</u> for water utilities, community planners, regulators and others.

<i>Meeting Date</i>	<i>Topics (based on committee member input)</i>
August 17, 2021 TAC	<p><u>Groundwater-Surface Water Interaction</u></p> <p><i>Problem statement:</i> Water supply sustainability comes down to understanding water budgets: the amount of water moving through the regional water system; how water flow affects contaminant migration, including between ground and surface waters; how water can be used or reused without doing damage to connected resources; and how different conditions affect limits.</p> <p><i>As committees form recommendations around this challenge, look for opportunities to:</i></p> <ul style="list-style-type: none"> • <u>Increase support for research and technical analysis.</u> While research exists for different components of the water budget, we still lack substantial understanding about the connections between those components. Changes in climate and management practices are also increasing our uncertainty about how ground- and surface waters interact. • <u>Increase support for inter-organizational coordination,</u> particularly around stormwater and groundwater permitting and planning.
September 21, 2021 MAWSAC	<p><u>Infrastructure</u></p> <p><i>Problem statement:</i> One concern regarding water supply sustainability raised by MAWSAC, TAC, the Council, and other stakeholders is maintaining the ongoing sustainability of the region’s water supply infrastructure.</p> <p><i>As committees form recommendations around this challenge, look for opportunities to:</i></p> <ul style="list-style-type: none"> • <u>Increase support for secure funding sources</u> to allow utilities to act nimbly and equitably in addressing changing water demand and climate, aging infrastructure, earning consumer trust, and addressing water quality needs. Addressing one concern is likely to address other concerns, as shown in the figure below.
October 19, 2021 TAC	<p><u>Infrastructure</u></p> <p><i>Problem statement:</i> One concern regarding water supply sustainability raised by MAWSAC, TAC, the Council, and other stakeholders is maintaining the ongoing sustainability of the region’s water supply infrastructure.</p> <p><i>As committees form recommendations around this challenge, look for opportunities to:</i></p> <ul style="list-style-type: none"> • <u>Increase support for secure funding sources</u> to allow utilities to act nimbly and equitably in addressing changing water demand and climate, aging infrastructure, earning consumer trust, and addressing water quality needs. Addressing one concern is likely to address other concerns, as shown in the figure below.
November 16, 2021 MAWSAC	 <p style="text-align: center;"> Support for Appropriate Rates Adequate Funding for Infrastructure Investments, Operation & Customer Engagement Consumer Confidence </p>

<i>Meeting Date</i>	<i>Topics (based on committee member input)</i>
December 2021 <i>Subregional Work Group Forum</i>	This event will be designed to connect the work of MAWSAC and TAC to subregional and local efforts, ensuring local perspectives inform regional policy and strategy recommendations.
January 18, 2022 MAWSAC & TAC	<p><u>APPROVAL</u></p> <p>MAWSAC and TAC approve report to Metropolitan Council and Legislature.</p> <p>The report will include a set of recommendations and supporting information around high-priority water supply topics to support the update of the regional development guide and related policy plans.</p> <p>Policymakers and influencers will be better informed to develop and implement policies that achieve multiple benefits and reduce unintended impacts to water supplies, supporting regional and statewide goals.</p>

Work Plan Development Process

Identifying and prioritizing topics



Committee member perspectives (2020 interview comments)

Water Quality & Contamination

There is always potential for another contaminant we didn't know about.

How can we be prepared and responsive if groundwater contamination is discovered? How can we communicate effectively with residents?

We just did a study for a centralized groundwater treatment system to address manganese and found the aquifer able to sustain projected growth. Unfortunately, we only have one aquifer available to us, and we have concerns about anything happening to that one source.

It is hard to help people understand their water is good to drink and valuable when Superfund sites make the news. People call wanting to know how their water is kept safe. We communicate about how water comes from a deeper source, is tested, is treated, etc.

Consider that PFCs are likely to show up in surface water bodies everywhere, not just groundwater.

I am concerned with communities affected by both White Bear Lake and 3M. How will drilling more wells will be a solution if the White Bear Lake lawsuit and resolution is not settled?

Chloride level in Mississippi River is not currently a concern for water supply treatment.

The amount of deicing and anti-icing chemicals that hit the road cause concern. It is only a matter of time before that starts to show up in municipal wells and will cost money to treat. If chloride levels are too high, it will require treatment the city currently doesn't have (like RO).

Larger-scale, city-owned and maintained stormwater reuse or infiltration projects can provide a higher comfort level. If some kind of surface water contamination happens, there is less worry about where it is going – the stormwater flow has been mapped and managed.

We have no control over the area upstream of Minneapolis and St. Paul, just opportunities to shut off the intakes. Our role is more reactive. Modeling helps us plan and respond.

In order to succeed on drinking water protection goals with land in agricultural use, crops need to be protective of water quality *and* make money.

Of the list of things we [public water supply utility] hear from the public on, people aren't too concerned about the quality of the water or the rates. Every now and then we'll get an email from someone questioning something, but it is few and far between.

From a practical standpoint, dealing with infrastructure involves a different pot of money and more acute impact on residents than source water quality. People pay more attention more quickly when infrastructure is at risk versus the more nebulous goal of protecting water quality (source water protection).

Chloride is also a growing interest. Half of the wells tested in the county have chloride, and people care about this.

Regulatory considerations might change with elections and changes of administration, who is in the White House and changes at EPA. Will there be a new pollutant to focus on or changes in acceptable levels in water system? It is important to keep our fingers on the pulse of that.

City staff were relieved when the last MS4 was released and required an engineering report for sites located in a DWSMA, because now the city isn't the bad guy requiring additional stormwater management work; it's a requirement from outside.

Source water protection doesn't follow the bounds of individual political entities. That effort crosses those lines and requires coordination.

In a perfect world, we have a better sense of what areas really matter for controlling the quality of water entering surface water-based drinking water systems. We know what pollutants to really worry about, which need standards, and which need monitoring. We have a mechanism to prioritize pollutants.

Funding and investment to protect and improve water quality are needed, particularly for low-income individuals for private well water treatment systems

We would like data about potential contamination in our county, but we don't have it. I'm concerned about the lack of resources in our county – how to get testing in our area?

Climate change is also a priority, particularly better understanding how that may impact source water

Land Use Planning

Consider that many of our current problems came about because we didn't understand the implications of handling industrial/commercial waste many years ago. Are we creating problems now with our current land use or industrial practices that our communities will have to address 50 years from now?

I feel that Met Council is siloed and "this is the way we've always done it". Those local comprehensive plan requirements are not reflective of what's best for water supply sustainability. Could we have maps of areas that the region might not want to develop for water supply sustainability reasons?

How do we influence planners in the city who have entirely different objectives than water supply protection? What role do comprehensive plans play in guiding land use to protect water supplies? When our DWSMA extends into a neighboring city, how do we address source water protection?

From a planning perspective, one thing that might be useful to communities might be high level groundwater hazard maps (intersection of groundwater, geology, topography, infrastructure). There are opportunities to help communities plan using existing information and data.

We try to create a CIP for sewer infrastructure; we have capital projects envisioned with certain price tags. Then planning comes and changes land use. Why can we pivot on land use when underground infrastructure can't pivot? I understand that planners are in the business of bringing business to the city, and while I provide infrastructure to support that, I can't do that well if the goal post keeps changing."

TAC and MAWSAC could explore/consider incentives for increased density, focused growth in certain areas. Our city has worked hard to get reinvestment on the scale we've achieved, which benefits the region, and we could use help with this. How do we encourage redevelopment in areas we've already invested in?

The County does have working relationships with the farming community and is able to have discussions with them. Farmers are looking to sell for development. Some suburban edge communities especially have seen a huge increase in housing.

What are the costs and implications of maintaining or improving land use and waste disposal practices to protect the Mississippi River watershed as a source of drinking water for the Metro region?

Consider the implications of future growth, water demand, and the importance of the Upper Mississippi River Watershed. Do we need to be doing more substantial watershed protections upstream of the Minneapolis and St. Paul water supply intakes, analogous to what New York or Portland did for their watersheds? Is it even possible or practical to do, given that so much land is in private ownership?

The County is hoping to start restoring wetlands in recharge areas. Benefits include recharge of aquifers and nitrate removal. Also planning to continue converting agricultural land to natural areas, which can act as buffer for nitrate removal (paying farmers for easements).

Consider the competing uses and conflicts of land use. People feel romantic about farming, but the chemicals don't give me warm fuzzy feelings at all. How could we do smart development that leverages the beauty of rural landscape?

How are old practices still impacting our soils and waters? Farm application of chemicals can have an impact on water supply quality whether it was last year or a hundred years ago.

Groundwater – Surface Water Interaction

Sustainability comes down to understanding water budgets: how much water is moving through a system, and how much of that can you use without doing damage to connected resources (lakes, wells, etc.)? It is important to understand water budget and to consider what its limits are in different conditions (dry vs. wet). Do we know enough about future rainfall variability and intensity? What are implications for recharge?

One of the future issues people will need to tackle is how water supply, water use, precipitation and land use interact to impact surface water. This is an area that needs additional work – it's the tail that wags the dog: how do surface waters impact groundwaters and vice versa?

Are we looking at a new normal with weather and climate change? A foot and a half of increase in the water table elevation can make a big impact. Consider how much we rely on stormwater being able to infiltrate rapidly and what happens when we can't do that."

We are interested in more information on surface water-groundwater interaction with nitrates. The Vermillion River is impacting drinking water supplies with nitrate. Farmers want to use shallow irrigation water, but DNR is not allowing due to potential impacts on protected surface water levels.

One thing that concerns me a little is the emphasis on recharge and return of water to aquifers through rain/water gardens and the emphasis on recharge of wastewater, which may come back to bite us later through emerging contaminants (ex: viruses, PFAS, etc.). I worry about contamination happening inadvertently.

The region could consider doing a large-scale infiltration project that is monitored.

It would be great to have data on how to keep healthy lakes healthy. All we are doing for water supply and surface water is related, after all.

How are current wet conditions being considered in our understanding of true water availability? Are we getting the full picture on water quantity? Do we see the full cycle?

In the Anoka Sandplain, a lot of comments heard in subregional work groups were from cities feeling like they were being penalized for trying to infiltrate. Could commercial and industrial developments reuse instead of infiltrating stormwater? Are there water reuse options available on a smaller scale? Are there things our business community can be doing to reuse stormwater? This info could be shared as developers are working on their plans. Highlight low cost options or highlight practices with highest ROI.

Site by site (ex: rain gardens) aren't a long-term solution because of the maintenance needed. Maybe the city needs to look at reuse on a broader, more regional scale to supply irrigation.

As reuse gains interest and popularity, what is the level of treatment needed for safe use and what is the public concern (or not) over quality?

Reuse has to include a safety component: is this safe to put in our water (example: pharmaceuticals)?

It's almost impossible to meet the stormwater requirements, particularly in DWSMAs. How can the city/ developers meet stormwater requirements if infiltration isn't allowed? Reuse opportunities might be a good option instead. However, the decision-making process on stormwater reuse projects is confusing, depending in part what the purpose of the reuse will be (potable vs. nonpotable). It would be helpful to see more movement or discussion on it.

Reuse is a challenging topic. My past experience with stormwater reuse left me with the perspective that it won't happen when no one steps up to own it or regulate it. Considering reuse of wastewater as a water supply option is almost ridiculous – if we can't figure it out for stormwater, we won't be able to figure it out for wastewater. Somebody has to step up and say "I've got this and this is what it will look like", and I don't know who that can be.

Infrastructure

That consumers have confidence in drinking water infrastructure is fundamental to a community's operation.

It is important that city councils and managers understand the value and cost of their city's water supply system.

The utility invests in infrastructure improvements to reduce risk from drought and from flooding.

My number one priority is funding for infrastructure renewal and replacement. That ties into water efficiency and conservation in that use directly impacts revenue, which ties into water rates and equity. Those three different are linked tightly.

It was part of our thought process when we did renovation: 'Is there anything critical that isn't going to last another 50 years?' If so, let's plan to make changes. Put the right team together, work it through methodically. It takes a little extra time, sometimes, but it's the right thing to do.

Challenge for future planning: understanding the problems that must be addressed over the long-term, which will require significant financial resources.

MAWSAC and TAC could help develop or encourage guidelines or rules at the state level to help cities to adopt for doing reuse.

We need to protect consumer confidence so that:
a) citizens remain secure in their understanding that public water suppliers provide safe and reliable drinking water, and
b) public water suppliers remain secure in their ability provide safe and reliable drinking water.

The city has a relatively large population who speak English as a second language; they may not be getting information about how good the water is.

We've seen issues with deteriorating infrastructure and decreasing peak day and average day water demands.

Public water utilities are like malls in some ways. Consider how malls size their parking lots for the heaviest use – that's how we build water systems. We overbuild to meet peak demand, and that affects rates. The rates people pay are higher than they ought to be.

Short-term thinking seems to be guiding the cost estimates of water supply alternatives.

The driver of rates is asset renewal. Looking out 20 years, replacement will be needed. We have to start planning that now, or else we will be staring at 40 million dollars' worth of work with no money to do it.

Planning and financing water reuse projects is clumsy to navigate.

The private septic systems in one rural city are all failing (\$10,000 to fix each) and the City was looking at WWTP for the city (outside MCEC MUSA). The city is interested in building its own system but has been unsuccessful getting funding from the legislature. Some communities are interested in working together but can't fund it all.

Water reuse creates a whole new system to maintain and removes the biggest customers from the water utility. This is a funding and implementation dilemma.

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The question remains: at what point does water become expensive or unaffordable?

It is unlikely that the metro can support future demand by relying on only groundwater over the next 50 years. I have a big concern about reliance on ground water when we have the river

Given water suppliers, Met Council, and MAWSAC focus on the reliability and sustainability piece of water supplies, it would be a shame to not use the river as a resource. Both groundwater and surface water sources should be evaluated as scenarios to address various water supply issues.

We're concerned about long-term sustainability of water supplies and groundwater, including in the east metro, and would like the Mississippi River to be considered an alternative source to address issues identified by multiple agencies.

Can SPRWS max their capacity and pump the drinking water into the ground?

The number of PFAS components being regulated will likely increase in the coming years. There is the challenge of treating private wells, and there will likely be the need for municipal well extensions and challenges for municipal treatment.

SPRWS is capable of increased treatment requirements, but are smaller systems capable? Regionalization provides cost effective implementation of new or improved technology to address future contaminants.

While there exist potential significant costs to treat a public water system, can we ignore private wells? That is an environmental justice issue.

What should be the regional approach to investment in areas that don't have sustainable water supply?

People don't care who deals with wastewater but care who handles drinking water; they want to oversee their own drinking water

It is important to make sure that the city maintains control of the utility.

What can be done?

A lot of data is collected, and communities have no idea how it is used. Demonstrate how it is used and package it in a way that is useful for various stakeholders to apply to their questions.

Maybe a meeting to encourage conversations between cities regarding cost of water supply?

MAWSAC is a forum to identify issues presented by the folks who have to manage them, and it is a forum to discuss individual and joint opportunities for solutions. MAWSAC is most important, from my perspective, for bringing these folks together to deal with issues and try to address them.

A campaign about the value and quality of our water.

Feasibility studies of rural water systems would be another research topic -looking at the feasibility of rural water systems or expanding existing water systems into areas with dense populations of private wells and septic systems.

MAWSAC could help by supporting infrastructure expansion and upgrade in rural centers with contaminated private and public wells. An analysis to see if bigger cities can provide to smaller (nearby) communities and private wells might be useful.

We need to package demand with conservation and groundwater monitoring and modeling to highlight when it will be needed to jump into reuse.

Cities are interested in streamlining reporting to government (minimize redundancy).

Focus analysis of water treatment system needs and costs on those who need treatment systems, and target conservation practices in areas that will have the best impact.

Can we have a shared plan for monitoring regional water supply sources that would clearly define agency roles and responsibilities? As part of WHPP, the city decided to seal those wells after communication with DNR. Then we heard complaints later asking for more monitoring wells in the city...

A next step is to understand if what we've done is working (water reuse and conservation)

Tabletop exercises are not required in the AWIA plans but doing this with multiple communities could add value. It may also be worthwhile to look at evaluating interconnections – are they documented with agreements for use, functional, any water quality issues with using them? There are many new people and conversations a critical for knowledge transfer.

A sound understanding about the implications of how citizens view their water may be something that needs to be on the radar screen for MAWSAC and Met Council.

It is critical to share information among cities, because what one entity does can impact others (example: pumping).

The Council and MAWSAC/TAC might help answer the question: How do we know if our water is affordable? When we start to answer that question ourselves, we can't because we don't have the data. We need household size and income linked to a water bill. Maybe the Council could help to the degree that census data could be refined and dug into more with the outcome of how to define 'this is affordable water'.

Bold decisions are needed.

I think the Council and MAWSAC can help develop tools and education information to help individual communities deal with issues: identify them and identify non-coercive ways of mitigating risk

Develop a map of existing information of water tables that are shallow and adjacent to water bodies with rapid infiltration to identify areas most susceptible to high water levels or slope failure. That would be a tangible planning tool that cities would find valuable.

Make sure regional policies for recharge/infiltration emphasize aspects like maintenance expenses and long-term operation of these conservation tools.

Does MAWSAC have a role in identifying and understanding land uses or other practices that could help lessen land use impacts on water supply quality and related treatment costs and in helping to communicate about those issues?

We need to address the elephant(s) in room. TAC especially has representatives from communities experiencing issues, but they don't talk about these issues in meetings. DNR is the one with authority, but they also don't talk openly about these issues. There are potentially difficult and politically unpopular decisions that need to be made.

Water reuse is very expensive to initially install. It would be impactful to do financial feasibility models to build more cheaply and get credits.

MAWSAC/TAC can be valuable by helping with guidance and support for best practices, sharing best practices, and coordination and collaboration - particularly for small counties without the resources that larger metro counties have.

Educational support would be helpful – sharing best practices. How can we educate the public?

The Met Council can best support water conservation/efficiency efforts by supporting local efforts and recognizing it's not a one size fits all approach.

It would be useful to have MAWSAC share input about rules and guidance given in the fact sheets from the MPCA and MDH on key contaminants in drinking and source water.