



DATE: March 3rd, 2023

TO: Environment and Natural Resources Finance and Policy

FROM: Andrea Lovoll, Legislative Director, Minnesota Center for Environmental Advocacy

RE: HF 81 (Jordan) Fish Kills

Chair Hansen and Members of the Committee:

The Minnesota Center for Environmental Advocacy (MCEA) supports HF 81 (Jordan) because it acknowledges the urgent need to develop a comprehensive interagency protocol for fish kill events that responds to public health and environmental concerns.

Minnesota's current fish kill response guidance is inadequate to the scope, scale, and severity of the problem, and needs to be updated through a comprehensive protocol for several key reasons. First, the current fish kill guidance has not been able to effectively address the sources of contamination. In fact, fish kill events have increased in intensity and frequency: the Rush Creek fish kill in July 2022, where over 2,500 fish were killed, was the fourth major fish kill in the Winona County area since 2015. As outlined in this bill, the development of an interagency protocol will provide the opportunity to identify and recommend relevant laws and rules, such as feedlot rules, that need to be amended to better address the sources of contamination and prevent fish kill events in the future. Second, the current guidance minimizes the public health risk of fish kill events and does not provide a communications plan or health risk assessment for people in the vicinity whose water supply may be contaminated.

This bill has specific provisions to ensure that the protocol that is developed responds to community concerns and strengthens the overall fish kill response in Minnesota. As with toxic spill events, one of the most important issues is to ensure that data collection happens as quickly as possible to increase the likelihood that the source of contamination can be identified. Towards that end, the bill creates a mandatory duty to report fish kill events for state or county officials who work with natural resources or agriculture and requires the protocol to identify a rapid response team of interagency staff and/or an independent contractor that can travel to the site of the fish kill to collect samples within 24-48 hours of the incident. Another key issue is to broaden the type of data that is collected: the current fish kill response guidance is limited to surface water samples and fish samples, but this bill broadens data collection procedures to include samples from tributary streams to the body of water where the fish kill occurred, private wells with landowner consent within a ½ mile radius, and nearby soil and groundwater. This is critical because the contaminants may travel overland or underground to reach the site of the fish kill, especially in areas with karst geology where fish kill events have been concentrated.

Finally, and most importantly, this bill addresses the inadequacy of the current fish kill response guidance from a public health perspective. Fish kill events are a dramatic symptom of the widespread contamination of surface and groundwater resources from sources like agricultural land management practices. Especially in areas like the karst region of southeastern Minnesota, where precipitation and surface water rapidly intermingle with groundwater, a fish kill event in a surface body of water is a strong indicator that groundwater resources may be contaminated as well. Because groundwater resources provide domestic water supplies for municipalities and private well owners across the state, public health must be a part of Minnesota's fish kill response. This bill recognizes that necessity through the mandate that the protocol include a

communications plan with a health risk assessment to notify potentially impacted downstream users of the surface water of the potential hazards, as well as those in the vicinity whose public or private water supply may be impacted. The inclusion of water samples from private wells – with landowner consent – within a ½ mile radius of the fish kill event is another way to ensure that public health concerns are addressed.

The Environmental Quality Board is the appropriate body to review the protocol, which clearly falls within its statutory mandate to “review programs of state agencies that significantly affect the environment and coordinate those it determines are interdepartmental in nature, and ensure agency compliance with state environmental policy” (Minn. Stat. 116C.04, subd. 2(b)). MCEA commends the opportunity for public review and comment on the draft protocol, to ensure that it adequately responds to community concerns.

HF 81 is a critical step to address the increased frequency and intensity of fish kill events and responds to public health and environmental concerns through the development of a comprehensive interagency protocol. For all these reasons, we strongly urge you to support the proposed bill.

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March 6, 2023

Representative Rick Hansen
407 State Office Building
House Environment and Natural Resources Finance and Policy Committee
100 Rev. Dr. Martin Luther King Jr. Boulevard
St. Paul, MN 55155

Dear Chair Hanson and Members of the Environment and Natural Resources Finance and Policy Committee:

I am writing on behalf of Minnesota Trout Unlimited in support of HF 81.

We also write to urge that the Committee amend HF 81 to include a provision requiring state agencies to identify laws, rules and regulatory practices that should be changed in order to prevent fish kills in the southeast Minnesota.

Minnesota Trout Unlimited is a grassroots conservation organization working to protect, restore and sustain coldwater fisheries and their watersheds across Minnesota. Our several thousand members living and working in communities around the state understand that activities on the land determine the quality of the water in streams and lakes, and the health of trout and aquatic organisms that live in these waters. We have been improving stream habitat since the 1960s. Since 2009 we have restored habitat in and along 100 miles of Minnesota streams.

In late July 2022 a large fish kill occurred on Rush Creek, a prized trout stream in Winona County. This is the fourth major fish kill within a 15-mile radius in the past seven years: the South Branch of the Whitewater River in 2015, Garvin Brook in 2019, Trout Valley Creek in 2021, and Rush Creek in 2022. Following the 2015 fish kill on the Whitewater River, the Department of Natural Resources developed a Fish Kill Investigation Manual in 2017 to guide future investigations by the MNDNR, as well as the Minnesota Pollution Control Agency and Minnesota Department of Agriculture.

The agencies' responses to the Garvin Brook, Trout Valley Creek, and Rush Creek fish kills illustrate that existing fish kill response protocol is not adequate. The agencies responses have been too slow, have failed to provide even basic information to the public in a reasonable timeframe, have failed to include early involvement by the Department of Health, have failed to notify nearby landowners whose drinking water might be impacted by the activities that caused the fish kill, and failed to address the systematic failures of current laws, rules and regulatory procedures in southeast Minnesota.

HF 81 will improve agency responses by:

- increasing the speed of the initial response on the ground
- integrating the Department of Health in investigations
- including a communications plan to notify downstream users and well owners
- requiring identification of laws, rules and regulatory processes that should be revised to prevent future fish kills
- requiring periodic update of the protocol
- codifying internal agency guidance to ensure the protocol is followed

For these reasons and more Minnesota Trout Unlimited urges the passage of HF 81.

Unique landscape and world-class fishery in southeast Minnesota.

The southeast corner of Minnesota is a unique area dominated by karst features such as sinkholes, disappearing streams, numerous springs, and steep slopes draining to cold trout-rich waters. Fractured and dissolved limestone at or near the surface and numerous sinkholes connect the surface of the land to groundwater systems and springs. Surface water runoff can quickly enter groundwater (drinking water) and streams. Even modest rainfall events can wash manure, pesticides, and herbicides applied to the land into streams and underground waterways. There are no natural lakes in this corner of the state and fishing here means stream fishing, primarily for trout.

The springs that emerge in the valley floors provide cold base flow that supports a world class trout fishery. This “driftless area” or “Paleozoic Plateau” draws anglers from around Minnesota, the region and world. An economic study conducted in 2016 determined that trout angling in southeast Minnesota generates more than **878 million dollars in economic activity annually**. The number of trout anglers has grown by approximately 20% since that study and the economic boon to southeast Minnesota and the State now likely exceeds **1 billion dollars per year**.

Provision needed to address inadequate laws and rules in southeast Minnesota.

The press releases and reports from investigations of devastating fish kills on the South Branch of the Whitewater River (2015), Garvin Brook (2019) and Rush Creek (2022) share similar conclusions and shortcomings:

- Applications of manure and pesticide being washed off the land by rainfall were identified as the likely causes each fish kill.
- Pinpointing the exact parcel or source of pollutants with 100% certainty is very difficult, due to the dilution effect of flowing water flushing the pollutants downstream before dead fish are discovered.
- The agencies are aware of how the karst setting accelerates polluted runoff into springs and streams.
- The agencies fail to acknowledge the continuing risk posed by applications of manure and pesticides given the karst topography and regular rainfall patterns.
- The reports fail to discuss the need to reexamine application rules or apply risk management principles to prevent future fish kills.

Enacting statewide fish kill reporting requirements and codifying an improved agency response protocol is important. However, in southeast Minnesota where all the major fish kills have occurred, the agencies (MDA, MNDNR, and MPCA) already know enough to identify laws, rules, and regulatory procedures and gaps that should be changed in order to prevent further fish kills in this uniquely

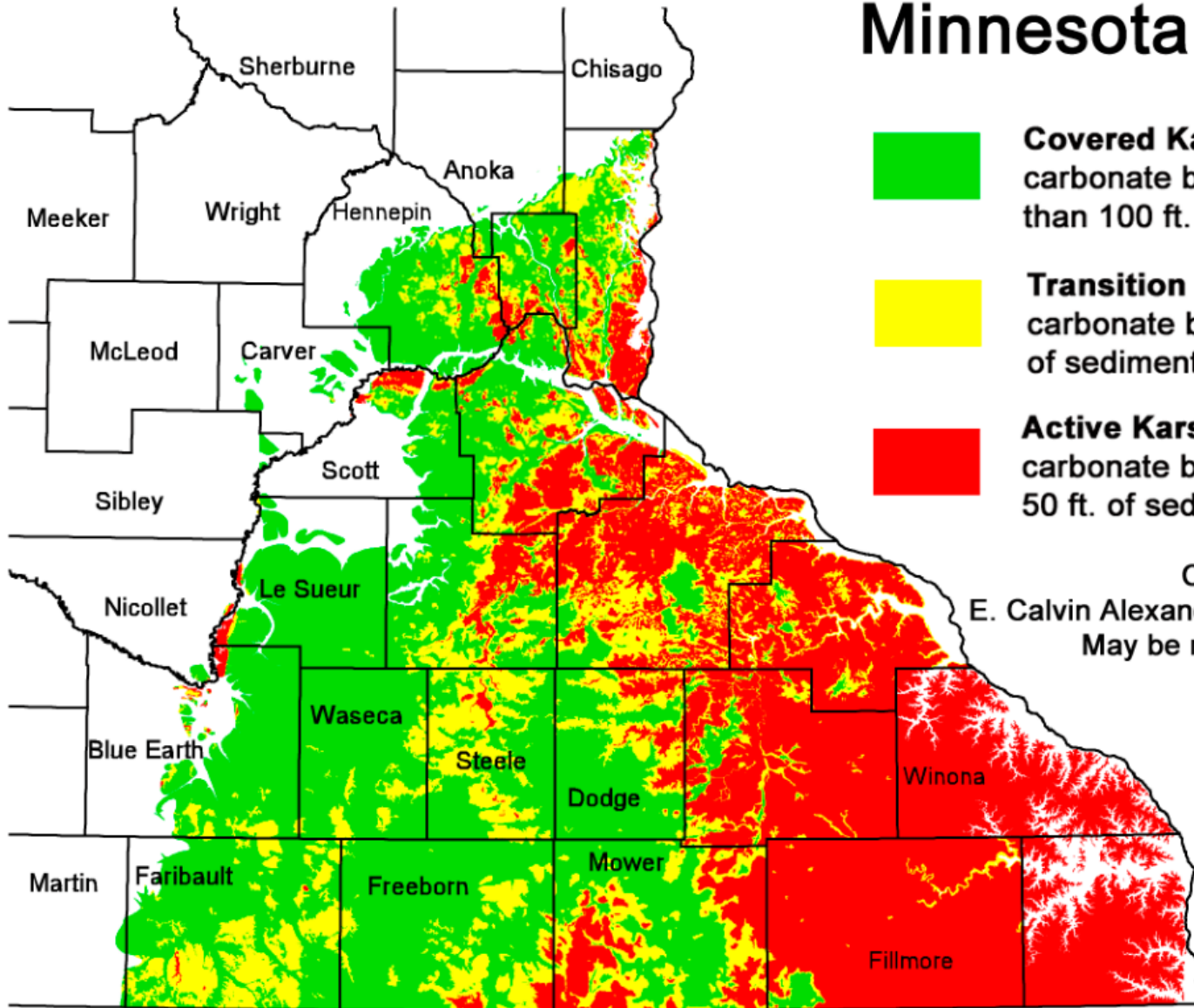
sensitive landscape. Consequently, we urge that the Committee amend the bill to include a provision requiring state agencies recommend changes targeted to southeast Minnesota to prevent fish kills there.

Sincerely,

John Lenczewski

Attachments (2)

Minnesota Karst Lands



Covered Karst. Areas underlain by carbonate bedrock but with more than 100 ft. of sediment cover.



Transition Karst. Areas underlain by carbonate bedrock with 50 - 100 ft. of sediment cover.



Active Karst. Areas underlain by carbonate bedrock with less than 50 ft. of sediment cover.

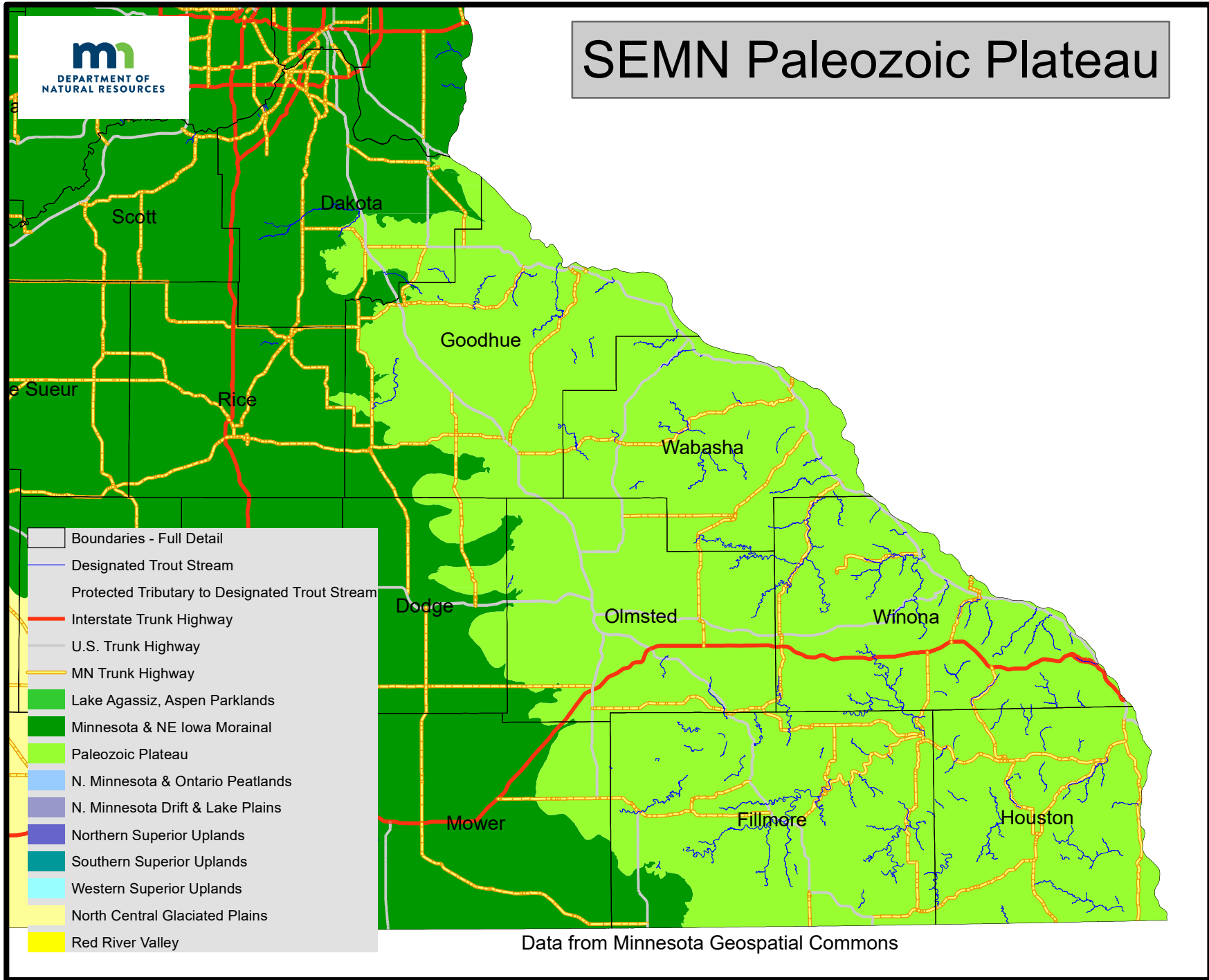
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50 0 50 100 150 Kilometers

50 0 50 100 Miles

SEMN Paleozoic Plateau



-  Boundaries - Full Detail
-  Designated Trout Stream
-  Protected Tributary to Designated Trout Stream
-  Interstate Trunk Highway
-  U.S. Trunk Highway
-  MN Trunk Highway
-  Lake Agassiz, Aspen Parklands
-  Minnesota & NE Iowa Morainal
-  Paleozoic Plateau
-  N. Minnesota & Ontario Peatlands
-  N. Minnesota Drift & Lake Plains
-  Northern Superior Uplands
-  Southern Superior Uplands
-  Western Superior Uplands
-  North Central Glaciated Plains
-  Red River Valley

Data from Minnesota Geospatial Commons

March 1, 2023

Testimony of Jeff Broberg for SF 68

Director Minnesota Well Owners Organization

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Former President Minnesota Trout Association, and Former Chair National Trout Center in Preston, MN

Why is Lewiston, MN the fish-kill capitol of Minnesota?

About every other year the area where I live has another major fish kill on a blue-ribbon trout stream. They are all the consequences of manure and pesticide applications before heavy rains, and they are all discovered a day or two the water levels have fallen and the fish are bloated and covered with flies.

I'm a geologist and an environmental consultant, and I have spent almost four decades on Winona County trout streams. I have personally witnessed six trout stream fish kills, five caused by farm field runoff.

The story is always the same: First the rush to apply manure and spray pesticides before it rains, then it rains killing all the trout, chubs, suckers and crawfish, the water falls and the bloated fish are reported days after the rain, agencies open an investigation and clam-up refusing to talk about the ongoing investigation and then months later we hear that "the rainfall killed the fish".

Today my oral testimony will focus on my experience with fish kills as a symptom of a much greater water disaster, the careless communications from the MPCA and fish kill investigators and how current practices are normalizing our drinking water crises in the karst region of Minnesota.

I wanted to supplement my oral testimony with a highlighted excerpt from a 2020 report delivered to the Legislature by the Minnesota Department of Health just one month before COVID closed us down..

The 2020 report "The Future of Mn Drinking Water: A Framework for Managing Risk", by the Minnesota Health Department and the U of M cited three classes of future action related to twelve criteria for improving Minnesota's water governance. I served on this stakeholder focus group. I think the report provides important insight and recommendations. HF68 directly addresses several of the recommended actions. The bold and highlighting are mine.

From: Calow, P., Lewindowski, A., Levers, L., and Kerby, E., 2020, The Future of Minnesota Drinking Water: A Framework for Managing Risk, 2020, sec 2,2, pg 21-23, and pg 25. retrieved from: <https://wrc.umn.edu/future-Minnesota-drinking-water>

“2.2. New actions as they relate to criteria

The need for an integrated response to drinking water management makes it difficult to parse the individual criteria of the Government Assessment Framework (GAF) in making recommendations for future improvements.

On the one hand, we see the effectiveness criteria that focus on appropriate integration of the authorities and a sound statutory framework as driving good governance; on the other hand, we recognize that public engagement, and the trust that goes with it, is a firm foundation for any good governance system. Yet having a systematic approach for reviewing the GAF criteria provides a pragmatic basis for assessing the current state of governance in Minnesota and for making suggestions about improvements. We have taken the systematic approach in what follows

2.2.1. Effectiveness Criteria Actions

The effectiveness criteria of the GAF relate to the need for integrated management at appropriate scales (criteria #2) and more coherence across sectors (#3). At the state level much of this might be facilitated by rationalization of responsibilities across the many (up to eight) agencies involved with drinking water.

The roles and responsibilities of agencies are clearly defined but the split in responsibilities between them for the quality of source water (including groundwater) and that delivered by suppliers to the public can give the impression of incoherence.

We shall return to this in Section 3.2. Communities will also be key in furthering an approach to water management that integrates solutions across sectors and jurisdictions. Continued implementation of the One Watershed, One Plan approach by appropriate economic incentives from state funds and/or bonding should be considered as part of the drive for better integration. It will also be important to ensure that development and implementation of these plans supports integration of surface and groundwater management, and integration across jurisdictions and water resource concerns, including drinking water source water, water quality, and cumulative withdrawals. Water Safety Plans (see Section 3.5)

are another potential tool for facilitating integration of watershed activities from source to tap. Effective delivery at all levels depends on adequate professional capacity. There is much to applaud in this state about the professionalism of staff from agencies to suppliers. **Yet our stakeholder panel identified weaknesses in professional capacity caused by workers being spread too thinly over diverse tasks, poor retention of staff, and resulting brain drain** from small suppliers. These might be addressed by sharing professional staff across multiple communities or expanded accreditation of administration in all parts of the water supply, similar to that of the Public Health Accreditation Board (<https://www.phaboard.org>), but involving independent local organizations. There was also the suggestion that the state should consider a water system rating that would allow communities to benchmark the outcomes of their processes against each other and provide a roadmap for change. The GreenStep Cities Program (<https://greenstep.pca.state.mn.us>) has been mentioned as a possible model. Ensuring adequate staffing, with appropriate scientific backgrounds to handle the complexities of drinking water, will also be important

2.2.3. Trust and Inclusiveness Criteria Actions

Finally, turning to the criteria of trust and inclusiveness, we agree with our panel surveys that there is a need for more focus on the stakeholders and their concerns and on their involvement in making decisions about the inevitable trade-offs and priority choices that occur in drinking water management . Engagement needs to go beyond education, communication, and gathering input to empower individuals and communities. Examples of actions that are empowering include

(a) giving consumers access to information, especially in acute situations, so they can act appropriately and trust that suppliers and MDH are protecting their interests;

(b) allowing consumers and suppliers to influence definitions of risks, priorities, and goals; or

(c) giving community leaders power to influence messaging and the channels of communication around drinking water issues.

An important step in improving trust and inclusion is for MDH and suppliers to expand their partnerships. This begins with defining key communities, identifying their leadership structure and communication Future of Drinking Water preferences, and working with the leaders to learn their priority concerns,

and identify the key messages that MDH and suppliers want to share with each community. Examples of distinct communities identified by the panels include

- (a) Some communities of color in urban areas who have distinctive perceptions of risks of tap water and prefer bottled water;*
- (b) Well owners who may have a more independent attitude toward government than other populations;*
- (c) Renters who may never see water quality and utility information; and*
- (d) indigenous communities who identify as water protectors.*

Health professionals were identified as one of the highest priority groups. Establishing two-way communication with this community could be especially fruitful for distributing information and identifying concerns and barriers.

Parents are receptive to the messages for protecting children's health.

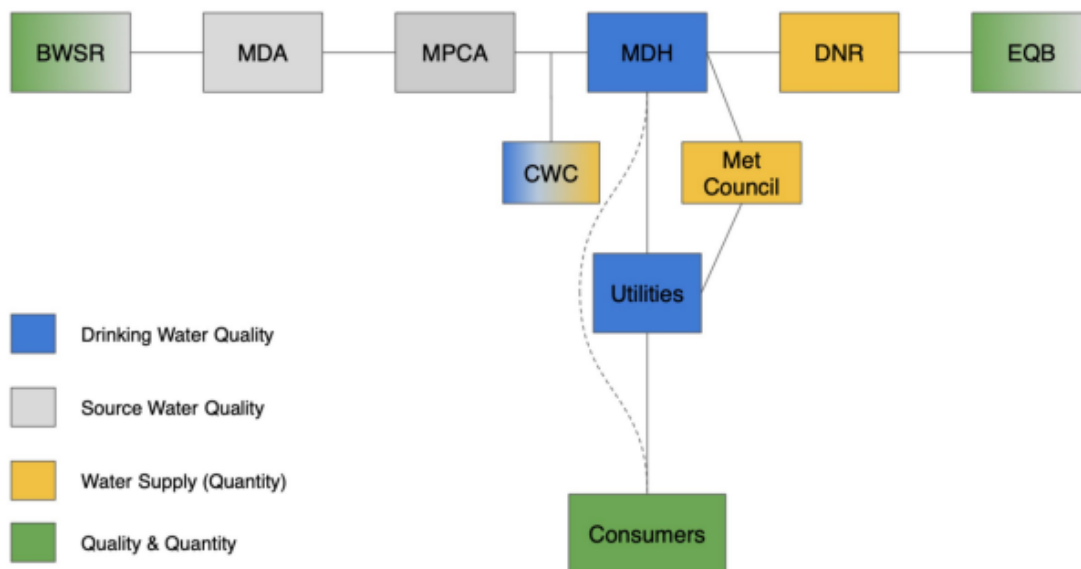
Pediatricians and other health providers may be able to provide information or facilitate water sampling. Broader engagement of consumers and suppliers opens the door to involve them in key steps of comparative risk assessment (CRA), i.e., prioritizing which concerns to analyze and setting values for alternatives.

Broad engagement addresses the challenge of explicitly integrating public concerns assessment with technical risk assessment in a way that recognizes the benefits and costs, and makes explicit the equity issues of interventions. Another opportunity for engagement is involving consumers in monitoring – both the collection of data, such as at the tap, and decisions about what is important to monitor. This would raise new challenges for quality control and data privacy.

A final opportunity for broader engagement is to involve suppliers and consumers in the GAF-based auditing of the trust and inclusion criteria. Diverse communities can help scrutinize the achievement of GAF criteria as they relate to public engagement, and also participate in defining criteria and setting goals. Drinking water communication – from both MDH and suppliers – is a balance of raising understanding of issues without prompting over reaction, and addressing parallel tasks of managing acute events alongside long-term engagement and water protection. While MDH and suppliers have done extensive work in these areas, there is room for expanding and further leveraging media, social media, phone apps, or other novel approaches.”

Figure 13: Horizontal and Vertical Relationships of Water Governance in Minnesota

This figure shows relationships between the main actors in drinking water governance, indicating primary responsibilities of each actor. It is not intended to comprehensively describe every responsibility of each actor. From left to right: Board of Water and Soil Resources (BWSR), Minnesota Department of Agriculture (MDA), Minnesota Pollution Control Agency (MPCA), Minnesota Department of Health (MDH), Minnesota Department of Natural Resources (DNR), Environmental Quality Board (EQB), Clean Water Council (CWC), and Metropolitan Council (Met Council).



MNWOO’s interest and concern for private well owners needs health advice from the Health Department, not from MPCA, DNR, MDA or BWSR. A public health campaign to alert nearby residents of the hazard, and to test their wells in sensitive areas is a needed step.