



## **Subcommittee on Minnesota Water Policy**

July 15, 2020

### **The Future of Minnesota Drinking Water--A Framework for Managing Risk A summary with legislative recommendations for the subcommittee**

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**This is a summary of a report prepared by staff and faculty from the University of Minnesota's Humphrey School of Public Affairs and the University of Minnesota's Water Resources Center. Funding was provided by the Minnesota Department of Health.**

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#### **Introduction**

The purpose of this effort and report was to identify opportunities for better managing risks to Minnesota's drinking water. The work involved a literature review, meetings and surveys with stakeholders. Stakeholders included research and policy experts from utilities, the water-technology industry, state agencies, as well as from legislative staff and representatives of well-owner organizations. This document is a summary that focuses on legislative recommendations in the report.

#### **Review of Results with Possible Legislative Actions Described in the Report**

Minnesota is recognized as having progressive drinking-water management. However, the future of safe drinking water is challenged by ever-increasing numbers of contaminants, a growing and shifting population, climate change, and aging infrastructure. The aging population in Greater Minnesota, shifts in population, and increasingly sophisticated and costly water treatment have all created financial challenges for communities. Consequently, advanced planning is considered to be a priority to ensure safe and sufficient drinking water while providing environmental protection. The University of Minnesota's report presents a framework for this planning effort. This document, by the Legislative Water Policy Subcommittee, is intended to briefly summarize parts of the report as they that relate to possible legislative action. **The legislative recommendations in this document are based on my interpretation of the report**

The report is substantial and can be assessed at the following link:

The UM report promotes a **Governance Assessment Framework (framework)** as a means for structuring a state water plan. That framework would address drinking-water risks from the source of water to delivery at the tap. This memo summarizes those portions of the report that relate to possible legislative actions. **The legislative actions highlighted below address the recommendations in the report in the opinion of the author of his memo. The report itself does not recommend specific legislation.**

1. **Improved Governance:** Minnesota is a recognized leader in providing safe drinking water. However, the state needs revised drinking-water policy to address challenges and changes. With as many as eight agencies involved, there is a perception of silos, turf protection, and non-cooperation among the agencies. To be effective, drinking-water governance and management needs to be better integrated and coordinated. Most agency staff believe that water management has improved as the result of the Clean Water Land and Legacy Act. The report does not exclude the possibility of consolidation of the authority for managing drinking water into a single agency but recognizes that there are good reasons for the delegation of authority across the agencies. All options need to be assessed in terms of cost effectiveness and equity. However, the report does recommend greater inter-agency cooperation and more transparency by making minor changes to the statutory framework that clarifies connections among agencies and reinforces common goals to both public health and the environment. **The report recommends the creation of a coordinating entity. In my opinion, this could be accomplished by charging an interagency coordinating team to provide a plan and an annual report.** This could be completed through an existing entity, such as the Clean Water Council's Interagency Coordinating Team. This existing team understands the collective work of the agencies and could efficiently reach out to incorporate recommendations from this report and from stakeholders. This effort, led by the Minnesota Department of Health (MDH), could provide the foundation for a drinking water framework, plan and reporting.
2. **Increase staffing for water utilities:** Safe and effective delivery of drinking water depends on professional and well-trained staff. There is a significant lack of qualified water-utility professionals. The greatest needs are with small utilities in rural areas which struggle to recruit and retain staff. Legislative direction is needed to promote training and retention of water-treatment plant staff, to encourage sharing of staff among utilities, and to encourage efficiency and consolidation of infrastructure and of staff. **Legislation is needed to provide support for curriculum programs at colleges, to establish a professional accreditation program, and to provide tuition support. Legislation also could provide support and a process to efficiently allow consolidation of utilities in those areas of concern. Finally, legislation would be helpful in providing assistance that encourages cost-effectiveness measures, and alternative arrangements, for affordable water treatment and distribution systems, as well as means to encourage the sharing of staff between communities.**
3. **Impacts of Climate Change:** Increased extreme weather events, associated with climate change, threaten water and wastewater treatment plants, leading to future contamination. Legislative

support is needed to plan for infrastructure changes that will be needed to mitigate potential problems. **Legislation should support and be based on priorities included in the Environmental Quality Board's State Water Plan.**

4. **Aging infrastructure (both drinking water and sewage)** is a growing threat to the delivery of safe drinking water. It can lead to additional sources of water contamination. **Additional funding is needed to upgrade facilities through bonding and other programs.**
5. **The Threat of Emerging Contaminants:** There is an increasing number of drinking-water contaminants related to industrial, agricultural, and domestic sources. They threaten drinking water and are exacerbated by population pressure, climate change, and aging water infrastructure. Population shifts from rural to urban areas have created financial challenges for small communities that make the purchase of sophisticated and costly water-treatment equipment difficult. Because many emerging contaminants are not fully addressed at the federal level, it is important to prioritize and manage them in order to make sound decisions about optimizing treatment between the source and the tap. Pursuing the wrong contaminants can lead to costs without benefits and waste resources

**The report recommends comparative risk assessments to assess the ever-increasing list of contaminants of emerging concern.** This process is currently used by the MDH for prioritizing some CECs. It generally is well developed, but needs to include development of health-based guidance values. The report provides recommendations about comparative risk assessments and associated cost-benefit analyses that could be used to make informed decisions about the excluding contaminants from drinking water at the source rather than at a treatment plant, or in the home. This would be an element of a proposed state drinking water plan designed to provide safe and sufficient drinking water for all of the residents of the state. MDH is suggested as the appropriate entity to develop these priorities.

6. **Water Safety Planning:** Localized source-to-tap risk assessments and management plans—water safety plans (WSPs) need to be developed. WSPs can provide transparent and flexible approaches to local drinking-water management. Localized source-to-tap risk assessments and WSPs provide a transparent and flexible approach to locally tailored drinking water management. **Legislative direction is needed to steer the preparation or a prototype plan that would combine water supply plans, wellhead management plans, emergency response plans, existing treatment and distribution network diagrams, and best operating procedures. This support would help produce a plan template and to fund a pilot in several cities by enabling MDH to work with suppliers to explore the advantages of WSPs.**
7. **Private and domestic wells:** The safety of water from private wells in essentially unregulated and more attention needs to be given to the safety of water from private wells. With the exception of the construction of wells, domestic wells outside of the statutory scope of MDH. The report recommends as **a positive change statutory requirement for well testing during the transfer of properties with wells.** This would protect buyers and send a signal that the quality of water from private wells needs to be addressed. Providing more readily available and accessible resources for owners to identify hazards associated with local aquifers, and wells of particular design and age, would also encourage them to develop their own cost-effective approach to

water safety planning

- 8. Citizen Engagement: Legislative support is needed to encourage greater citizen engagement in advocating for improved drinking-water safety.** The report calls for increased citizen involvement that includes empowerment and education. This could result in more public participation in defining governance criteria as well as setting goals. It also could be foster greater involvement in monitoring home tap water. MDH could seek to extend drinking water safety by leveraging partnerships with trusted organizations (such as health care professionals and teachers) and receptive audiences (such as expectant parents, trusted leaders and by targeting the media).

### **Stakeholder Survey Results**

The report includes the results of a survey of stakeholders and MDH staff. The survey evaluated twelve criteria related to water governance. The criteria are put into three groups:

- Effectiveness of drinking water governance and management
- Efficiency of implementation and delivery of drinking water, and
- Trust in the drinking water systems.

Along with explanations of each criterion, the survey provided opportunities for the stakeholders and MDH staff to react. **Results and feedback are available in Table 1 of the UM report.** The general tone of the responses was that, compared to other states, Minnesota is doing well in terms of drinking water governance; however there are many areas for improvement.

The report is substantial and can be assessed at the following link:

<https://www.wrc.umn.edu/future-minnesota-drinking-water>

### **Effectiveness Criteria:**

**Criterion 1: *State-level policy clearly defines the roles and responsibilities of each agency with regard to drinking water management, programming, and policy making for both private wells and public systems.***

**Criterion 2: *Drinking water is managed at the appropriate scale, emphasizing an integrated major watershed approach and that management is integrated across scales.*** This criterion considers whether water utilities have adequate autonomy while being able to coordinate with other municipal functions, other watershed authorities, neighboring utilities, and with state and federal agencies

**Criterion 3: *Drinking water policy is coherent, horizontally and vertically, across administrative and economic sectors including health, environment, energy, agriculture, and industry.*** This considers whether drinking-water policy across agencies allows for effective communication and coordination between agencies, has the ability to account for environmental, agricultural, and industrial and health impacts as well as impacts and links drinking-water

monitoring with health impact monitoring–

**Criterion 4: *State and local drinking water management entities have adequate professional capacity.*** This criterion considers whether sufficient expert knowledge, training opportunities, and numbers of employees exist at all levels, as evidenced by professional standards, career incentives, and support networks.

#### **Efficiency Criteria:**

**Criterion 5: *Processes and institutions are in place and are generating timely and relevant data about the water supply and risk management in a way that is suitable to guide policy, prioritize contaminants for attention and action, create transparency for customers, and provide opportunities for dialogue.*** This criterion considers whether information is available in forms that are useful for decision-making–

**Criterion 6: *Financial revenues are adequate, appropriately structured, and transparently, efficiently, and equitably allocated.*** This criterion considers whether revenue sources cover costs, provide equitable access to safe and sufficient drinking water, incentivize efficient and effective water management, and that data are documented and accessible.

**Criterion 7: *Sound regulatory frameworks are effectively implemented.*** This criterion considers if clear standards, processes, and overseers are employed and defined in regulations that promote equitable access to safe drinking water.

**Criterion 8: *State and local processes incentivize and foster innovation and flexibility in finance, sharing information, assessment, and engagement.*** This criterion considers if mechanisms for ongoing self-evaluation exist and are employed in a way that transparently and iteratively foster innovation for adaptation.

#### **Inclusiveness Criteria:**

**Criterion 9: *State and local drinking water agencies maintain integrity and transparency for greater accountability and trust.*** This criterion refers to what extent drinking water decision making processes, trade-offs, and relevant data are understandable and accessible to stakeholders, and whether feedback from stakeholders is received and responded to appropriately.

**Criterion 10: *Drinking water stakeholders have been clearly identified. Stakeholders are systematically engaged in interpreting needs and designing solutions to drinking water concerns.*** This criterion considers whether communication and engagement between stakeholders and drinking water managers and policy makers is responsive and interactive.

**Criterion 11: *Framework exist to identify trade-offs and prioritize choices across water treatment alternatives, sectors of water users, different types of communities, and generations of water users***

**Criterion 12: *Drinking water programs and institutions are regularly monitored and evaluated***

*for their effectiveness and fairness in delivering safe drinking water and managing risks. Most rated this criterion as either in development or in place.* This criterion considers if measurable indicators for effectiveness and fairness in drinking water are established, and to what extent they contribute to delivery of drinking water.

### Summary

Minnesota is a leader in providing safe drinking water. However, the state needs to develop drinking-water policy that addresses future challenges and needs. Aging infrastructure as a source of contamination, is increasingly being acknowledged as a problem. An ever-increasing number and diversity of drinking water contaminants threatens to contaminate source waters. Anticipated extreme weather events associated with climate change may compromise wastewater treatment and lead to further contamination. The report's recommendations focus on developing governance systems that can respond to emerging challenges in a way that commands public confidence. Key to this is coordination between the agencies involved in water management in providing a holistic response to drinking water. The report recommends that this should be underpinned by statutes that clarify the responsibilities of all involved in providing safe and sufficient drinking water. The report emphasizes a framework of principles and policy options that would provide the foundation of a state drinking water plan. The time is right for the development of this plan. Recommendations included in this report are intended to inform the preparation of this plan. The primary recommendations, based on my interpretation of the report, are as follows:

- Improved Governance
- Increased staffing for water utilities
- Addressing the impacts of climate change
- Increasing support for aging water infrastructure
- Greater emphasis on emerging contaminants
- Development of water safety plans
- Increased attention to private and domestic well safety
- Encouragement of greater citizen engagement in advocating for drinking-water safety.