2024-2028 Minnesota Drinking Water Action Plan

Contents

Introduction and Background

The Minnesota Department of Health (MDH) is developing a ten-year Drinking Water Action Plan that will guide Minnesota's drinking water management from 2024-2033. The aim of this plan is to regulate safe and reliable drinking water supplies throughout Minnesota, with an emphasis on equitable access. The Drinking Water Action Plan is being created with input from drinking water professionals and consumers. This report details the feedback collected from consumers during community engagement sessions across the state. The objective of these sessions was to further water equity in Minnesota by gathering public opinions through survey questions and engaged dialogue.

Report Purpose

This report synthesizes the data collected, examines the processes utilized, and makes recommendations for more effective and culturally sensitive engagement of drinking water consumers.

Executive Summary

From November 30, 2023 through 23

Figure 1: Community Engagement M

for water, and approximately 59% shared that they would be willing to pay more to ensure the safety of their drinking water. The majority of participants also expressed support for government assistance programs for private well owners. Respondents were asked about a specific list of Goals and Strategies provided by MDH — the most common response from participants was that they had no suggestions to add. Survey results also revealed that, in the next ten years, MDH's top concern should be maintaining and improving the quality and safety of Minnesota's drinking water. Lastly, participants indicated that equity needs to be a priority as MDH creates the Drinking Water Action Plan.

There were some unique variations in opinions based on location and private well ownership. These differences are further explored in the sections *D ffe e ce b S e* (p. 33) and *D ffe e ce f P a e We O e* (p. 39).

Engaging community members is essential to understanding Minnesotans' experiences with drinking water protection and delivery. The seven community conversations instigated by this project provided important insights and critical questions for MDH to examine during the final drafting of the Drinking Water Action Plan, as well as during its implementation. Community engagement needs to be an ongoing part of MDH's efforts to understand the impacts of drinking water policies and their execution. Furthermore, increasing cultural sensitivity and awareness, respecting the distinct needs of tribal partners, attending to the diversity of languages spoken, and prioritizing accessibility in communications will all be of paramount importance. (For a more thorough explanation of these points, reference the *Rec e da* section on page 44 and Appendix A on page 47.) Overall, it is imperative to have a statewide community engagement leader attending to consistency, as well as local partners who can reach specific communities and provide cultural context.

Research Objectives

The goals of this project were to understand 1) how Minnesotans obtain their drinking water; 2) if people trust their tap water, and to document what concerns might exist; 3) how people use and engage with their tap water; and 4) how people want to receive and share information about their tap water.

Additional goals included 1) building and strengthening trust in public institutions; 2) encouraging civic engagement; and 3) gathering candid public opinions on key MDH tradeoffs and issues.

Process and Methodology

Staff

MDH worked with the University of Minnesota and two Minnesota nonprofit organizations, Clean River Partners (CRP) and Freshwater, to lead these conversations. CRP was the project lead for the community engagement sessions, while Freshwater led the sessions with drinking water professionals.

The community engagement project was staffed by seven people from three organizations: Anne Nelson (MDH), Jennifer Tonko (CRP), Heron Mahr (CRP), Kris Meyer (Freshwater), Chyann Erickson (Freshwater), Alex Van Loh (Freshwater), and Alyssa Fabia (Freshwater). Each meeting was facilitated by two staff members: one from CRP, and one from Freshwater.

Community Engagement Principles

When approaching this project, staff intentionally planned and executed the meetings with three key community engagement principles in mind: two-way learning, meeting people where they gather, and working in partnership with the community.

Two-way learning was crucial to this project, empowering participants not only to listen and learn about their drinking water, but also teach the facilitators what issues were important in the community. The facilitation team approached the meeting from a non-hierarchical perspective, understanding that participants had invaluable insights to offer. Local drinking water professionals were invited to the meetings so they could take part in this two-way learning process, learning about resident concerns while presenting and sharing knowledge.

Project staff were determined to meet community members in spaces where they already gather. People are much more likely to attend and engage with meeting content if they are familiar with the space and feel comfortable being there.

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Lastly, project staff understood it was vital to work alongside community partners to plan and host these meetings. Partners who are embedded in the communities they serve have nuanced understandings of pressing concerns, preferred meeting spaces, and local networks that may be used for spreading the word. Participants are also more likely to attend a meeting and feel comfortable engaging if they see a familiar face from the community, or recognize the name of a local organization.

Application of Community Engagement Principles

Partnering for Equity: Community Selection and Outreach

In order to more accurately represent the concerns of all Minnesotans, project staff

Review Board (IRB) approval, proved to be barriers to inclusion within the timeframe of this project. Due to these complications, project staff were unable to schedule any community engagement meetings with tribal communities. This was a considerable disappointment, as the perspectives of those communities are vitally important. Suggestions for improving the tribal relations process in the future can be found in the *Rec e da* section (p. 44).

Project staff had also intended to co-host a meeting with the Minnesota Well Owners Organization (MNWOO) in Detroit Lakes, but MNWOO board members and the facilitation team were unable to confirm a venue. This was another disappointment, since staff missed an opportunity to hear feedback from private well owners in Northern Minnesota.

Pre-Event Preparation and Partner Compensation

Each community partner was responsible for coordinating the venue, marketing, refreshments, and childcare for their event. A stipend of $1,400 was available to the community partner to cover these costs. This stipend could also be used to cover staff time during the event. Additional funds for interpretation and transportation were available to facilitate community members' participation.

The project team understood that acknowledging the time and talents of partners would be vital when doing this community engagement work. Offering financial compensation reinforces the principle that every partner is valued and respected.

Translation and Interpretation

Since this project was designed to involve diverse communities across the state of Minnesota, it was important to provide translated materials that aligned with the languages spoken in those communities. Project staff submitted almost all written materials for translation into Somali and Spanish approximately a month prior to the respective meetings. Unfortunately, one key document could not be translated due to time constraints, so multiple Spanish-speaking participants were unable to answer a survey question referencing said document.

It was also crucial to have live interpretation at meetings with a multilingual audience. The funds

tape to wear on their shirt, alerting photographers and facilitators not to include them in any photos. After signing in at the welcome table, participants were invited to take a seat at one of the tables set up in the room. Tables and chairs were organized to direct attention to the front of the room while still encouraging conversation (e.g. multiple chairs per table, no chairs on the front sides of tables).

To begin the meeting, the facilitators introduced themselves, their organizations, the community partner co-hosting the event, and the drinking water professionals in attendance. The facilitators then provided some context about MDH and the Drinking Water Action Plan, to lay a foundation for the rest of the meeting. The schedule for the remainder of the meeting was shared with participants before moving on to the first activity. During this introduction section, a Mentimeter presentation with a slide about CRP, Freshwater, and their missions was projected onto a screen or blank wall. There was also a slide with the schedule.

The first activity was a water-tasting word cloud activity. Each table was set with a carafe filled with local tap water and a stack of compostable cups. Participants were invited to pour themselves a cup of water and pay attention to the taste. At this point, the Mentimeter presentation displayed the venue's WiFi information and a QR code for the word cloud. By scanning the QR code, participants were directed to a Mentimeter input screen with the following prompt: "As you taste this water, what words come to mind? What does it remind you of? Does it make you imagine anything? How would you describe it?" As participants entered their thoughts, their responses appeared on the projector screen in real time. To see the aforementioned word clouds, reference Appendix B (p. 50).

Following the word cloud activity, invited drinking water professionals gave brief presentations. Representatives from public utilities departments were asked to answer the following questions:

- Where does the water come from?
- How do you know it's safe? (Does it currently meet safe drinking water standards?)
- What is the water treated for? Why?

If in attendance, representatives performing well water testing were asked to answer these questions:

- Why does testing your well water matter?
- How often should someone test their private well?
- What should a private well owner do if they discover a problem with their well?

Participants were then invited to ask their own questions.

Drinking Water Survey

The questions for this survey were developed in partnership with MDH. This survey was designed to gauge personal drinking water habits. It was administered via Mentimeter. The QR code was projected on the screen/wall, and participants were able to submit responses electronically. There were also paper copies and pens for those who wished to submit handwritten responses. Participants were encouraged to respond to questions individually, to preserve the integrity of the data. However, some discussion was occasionally necessary to ensure comprehension. To see the surveys in English, Spanish, and Somali, reference Appendix C (p. 52).

Discussion Questions

After the first survey, participants collaborated with other individuals at their tables to answer a set of discussion questions. These questions were designed to stimulate conversation among neighbors. A large sheet of paper was laid on each table, along with a variety of colorful markers. Participants were encouraged to write down their responses to the discussion questions. To see the discussion questions and the answers from each site, reference Appendix D (p. 58).

Break

A five-minute break was built into the schedule to give participants a chance to use the restroom, get a drink of water, take more snacks, and socialize.

MDH Feedback Survey

Similar to the Drinking Water Survey, the questions for this survey were also developed in partnership with MDH. This survey was designed to gather public opinions on specific issues deemed important by MDH. The process for this survey was largely identical to the process for the Drinking Water Survey (i.e. QR code, Mentimeter

survey, paper copies available). Participants were still encouraged to respond to questions individually, but the facilitation team guided the large group through each question to promote understanding. The decision to take this guided approach was made due to the governmental and industry-specific terms used in some of the questions. To see the surveys in English, Spanish, and Somali, reference Appendix E (p. 66).

Closing Section

At the end of the meeting, the facilitation team thanked everyone for their participation and emphasized the importance of civic engagement. The facilitators also detailed the next steps in the process, including 1) how and when the community engagement report would be submitted to MDH and 2) when to expect follow-up communications. As participants prepared to leave, facilitators encouraged them to take home some handouts and briefly explained the gift card registration process.

Materials

Materials used varied depending on the design of the meeting space, but generally included a projector, extension cord(s), laptop, HDMI/VGA cord, PA system, blank wall/screen, paper surveys, large pad of easel paper, permanent markers, blue painter's tape, pens, tables, chairs, carafes, compostable cups, compostable waste bag/container, local tap water, registration forms, public water systems handouts, private wells handouts, handouts from MDH, gift cards, media release forms, and printed agendas for facilitators.

Additional materials included 1) refreshments supplied by the community partner and covered financially by the offered stipend; 2) fliers or other advertising materials (digital or print) supplied by the community partner and covered financially by the offered stipend.

Modifications

Since all community spaces are unique, adaptations to the meeting format were frequently made in the moment. Out of the seven communities engaged (Austin, Faribault, Lewiston, Little Falls, Northfield, St. Cloud, Twin Cities Metro Area), four required a tailored format. Below is a detailed account of the modifications made.

Faribault

The meeting in Faribault was incredibly well-attended, with 41 individuals participating. There were large numbers of both Somali-speaking and Spanish-speaking participants at this meeting. There was no Somali interpreter and only one Spanish interpreter present, which slowed the registration process. By the time registration had finished, the meeting was running about 15 – 20 minutes behind schedule. For this reason, the facilitation team decided to forego the water-tasting activity and the discussion questions to ensure there was enough time for the public water supply presentation, a brief message from the well water testing representative, and both surveys.

Northfield

The majority of participants in Northfield preferred not to use their smartphones for activities, so the facilitation team opted to create a handwritten list of answers from participants for the water-tasting word cloud. The list was written with poster markers on large sheets of easel paper at the front of the room.

St. Cloud

The facilitation team arrived at the St. Cloud meeting with surveys, registration forms, and all other materials translated into Somali. There were 30 participants, and 29 of them were Somali. Facilitators quickly learned that Somali is a largely spoken language, therefore reading materials and writing answers were not viable options for many participants. Because facilitators were not prepared for this complication, the registration process was particularly slow, even with live interpretation from Community Grassroots Solutions, the local partner. In turn, the meeting ran a little behind schedule. Facilitators made an in-the-moment decision to administer the surveys orally and gather participant comments via raised hands. Key takeaways from the surveys were as follows:

- The Somali community in St. Cloud needs more community meetings hosted by the city with live interpretation. These meetings will help Somali residents understand any current drinking water issues, and will also provide them an opportunity to voice concerns directly to city officials. Notices provided via phone call, mail, or utility bill are not effective because many Somali residents do not speak or read English.

- Buying bottled water was the drinking water method of choice for many participants in the room. They expressed that bottled water seemed like the safest choice, especially since some Somali residents had previous experiences with water insecurity and unsafe drinking water sources. At the end of the meeting, a few participants expressed that they now feel comfortable trying their tap water, thanks to the presentation by St. Cloud Utilities.

Another culturally-specific modification that needed to be observed during this meeting was Maghrib prayer, or sunset prayer, since essentially all participants were Muslim. Suggestions for accommodating prayer times can be found in the Recommendations section (p. 44)

Twin Cities Metro Area

The meeting in the Twin Cities Metro Area was hosted by the Environmental Justice Coordinating Council as part of their *T e P a e We L e O E e a J ce Se e* The drinking water community engagement project was only a small portion of the meeting, so facilitators had to prioritize what feedback would be most important for MDH. It was determined that the MDH Feedback Survey would be most valuable.

Project Timeline

July 1 – July 13, 2023	Identifying communities and partners
July 14 – November 29, 2023	Planning with partners, marketing, developing meeting format
November 30, 2023 – January 30, 2024	Hosting community engagement events
January 31 – February 14, 2024	Transcribing data
February 15 – February 29, 2024	Writing final report
March 1, 2024	Final report submitted to MDH

Reach

Austin, MN	23 participants
Faribault, MN	41 participants
Lewiston, MN	23 participants
Little Falls, MN	10 participants

Twin Cities Metro Area	46 participants
Northfield, MN	17 participants
St. Cloud, MN	30 participants
Total	**190 participants**

Drinking Water Survey Results

Out of the 190 participants who attended the community engagement sessions, 99 filled out the Drinking Water Survey. In this *D g Wa e S e Re* section, percentages were calculated based on the number of participants who responded to each question, not the total number of participants who took the survey.

How do you get your drinking water now? Why do you do it that way?

The most popular drinking water source among participants was city water directly from the tap (44.2%). Private wells were the second most common drinking water source, with roughly half the percentage (23.2%) of city water from the tap.

Figure 2: How do you get your drinking water now?

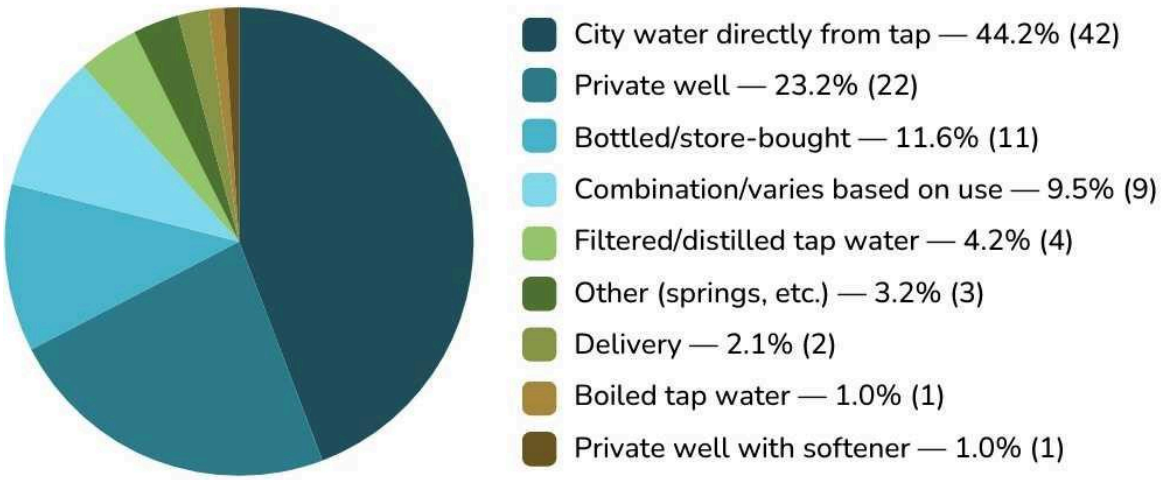


Table 1: Drinking Water Source Breakdown

Drinking Water Source	Number of Responses
City water directly from tap	42 (44.2%)
Private well	22 (23.2%)

Bottled/store-bought	11 (11.6%)
Combination/varies based on use	9 (9.5%)
Filtered/distilled tap water	4 (4.2%)
Other (springs, etc.)	3 (3.2%)
Delivery	2 (2.1%)
Boiled tap water	1 (1.0%)
Private well with softener	1 (1.0%)
Total responses	**95**

Though there were a variety of reasons why participants chose to get their drinking water in a specific way, the most common reason was health and safety, with 19 responses falling in that category. Three other reasons also stood out amongst the group; 13 responses mentioned taste/quality, 12 mentioned their location, and 12 clearly stated that they had no other options.

Figure 3: Why do you get your drinking water that way?

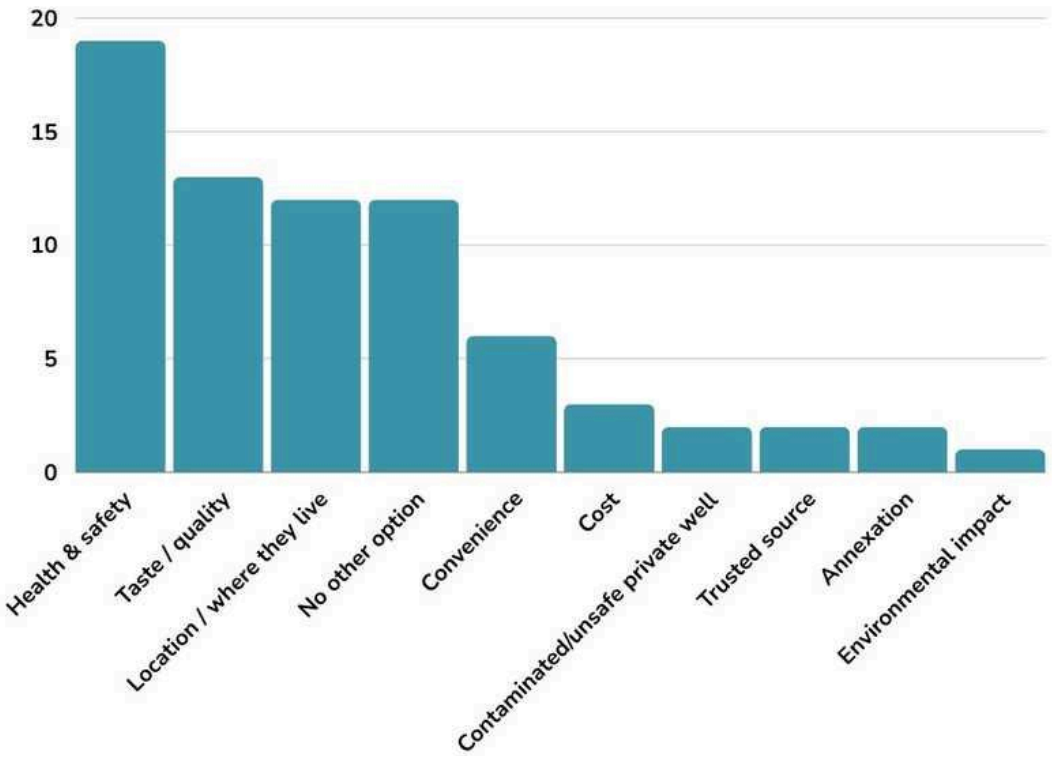


Table 2: Drinking Water Reasons

Reason Why	Number of Responses
Health & safety	19
Taste/quality	13
Location/where they live	12
No other option	12
Convenience	6
Cost	3
Contaminated/unsafe private well	2
Trusted source	2
Annexation	2
Environmental impact	1
Total	**72**

Do you trust your tap water? What concerns do you have about it?

Over half of the respondents shared that they trust their tap water (54.0%). The next largest group was on the opposite side of the spectrum, with 20.7% expressing that they do not trust their tap water.

Figure 4: Do you trust your tap water?

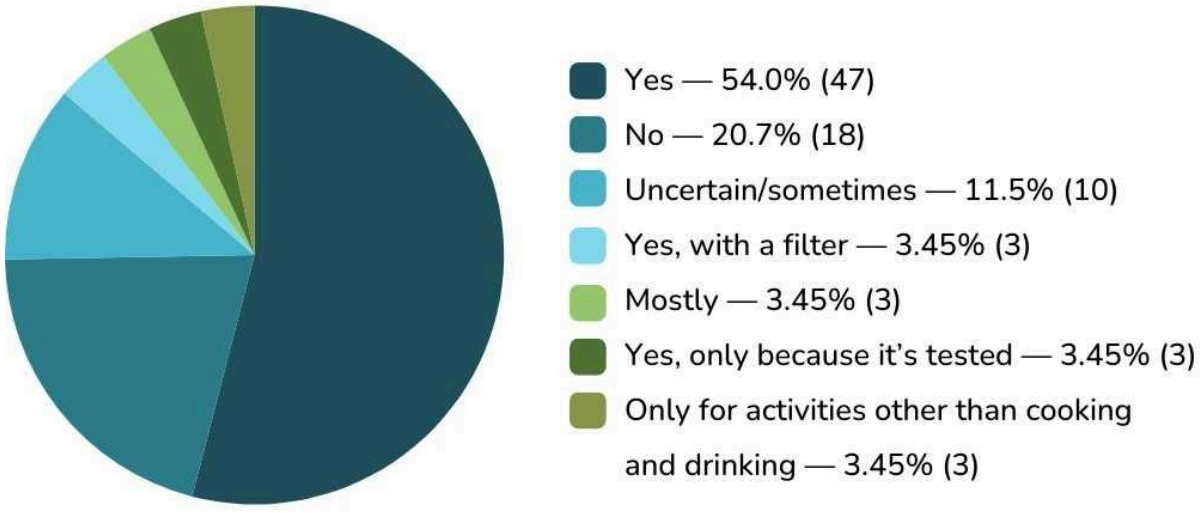


Table 3: Trust in Tap Water

Level of Trust	Number of Responses
Yes	47 (54.0%)
No	18 (20.7%)
Uncertain/sometimes	10 (11.5%)
Yes, with a filter	3 (3.45%)
Mostly	3 (3.45%)
Yes, only because it's tested	3 (3.45%)
Only for activities other than cooking and drinking	3 (3.45%)
Total	**87**

Respondents shared a wide array of concerns related to their tap water. The most common theme was at least three times more popular than all other themes: chemicals, contaminants, and hardness. 30 participants expressed concerns within this category.

Figure 5: What concerns do you have about your tap water?

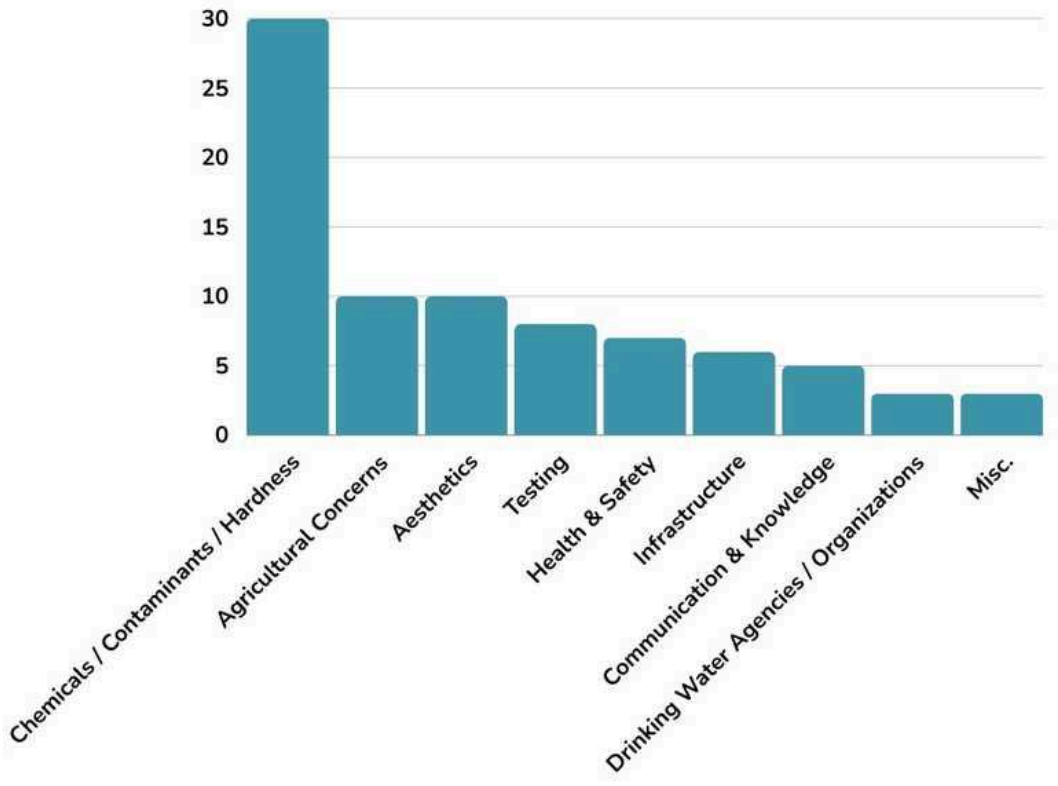


Table 4: General Tap Water Concerns

Concern	Number of Responses
Chemicals/Contaminants/Hardness	30
Agricultural Concerns	10
Aesthetics	10
Testing	8
Health & Safety	7
Infrastructure	6
Communication & Knowledge	5
Drinking Water Agencies/Organizations	3
Misc.	3
Total	**82**

Table 5: Specific Tap Water Concerns

Aesthetic Concerns	Number of Responses
Smell	4
Taste	4
Color (yellow, brown)	3
Testing Concerns	
Lack of testing	2
Infrequent testing	1
Incomplete testing	1
Untrustworthy testing	1
Insufficient funds for testing on their own	1
Infrastructure Concerns	
Old/rusted pipes	5
Distribution methods	1
Communication & Knowledge Concerns	
Lack of knowledge or information	3
Lack of communication when issues arise	1
Accessibility (e.g. annual reports are difficult to understand)	1
Concerns about Chemicals/Contaminants/Hardness	
Nitrates	6
Fluoride	4

Bleach	3
Limestone	2
Chlorine	2
Calcium	1
Iron	1
Manganese	1
Fecal Coliform	1
E. Coli	1
Radium	1
Road Salts	1
Agricultural Concerns	
Row crop agriculture	3
Pesticides	2
Fertilizers	2
Run-off	2
Poor management	1
Livestock feeding over wells	1
Voluntary BMPs	1
CAFOs	1
Concerns about Drinking Water Agencies/Organizations	
Lack of confidence in agencies and organizations	3
Inaction by state agencies	

Figure 6: How do you want to receive communications about your tap water?

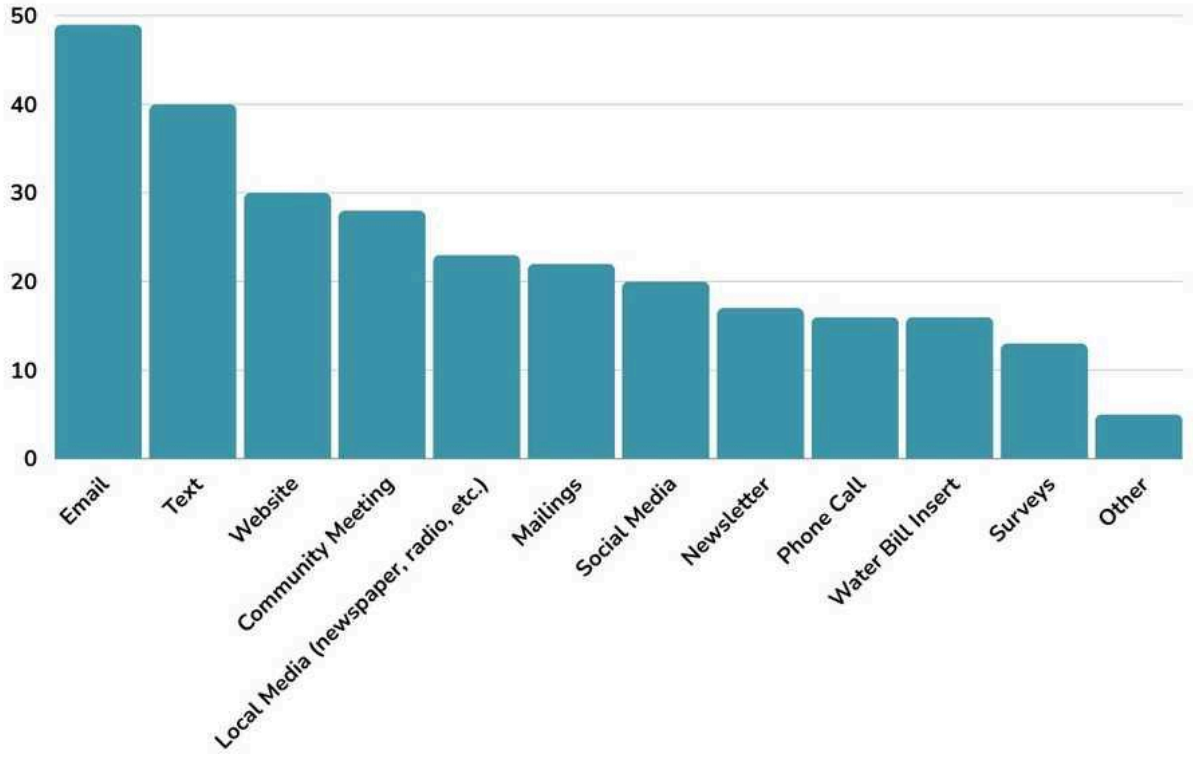


Table 6: Preferences for Receiving Communications

Method of Communication	Number of Responses
Email	49
Text	40
Website	30
Community Meeting	28
Local Media (newspaper, radio, etc.)	23
Mailings	22
Social Media	20
Newsletter	17
Phone Call	16
Water Bill Insert	16
Surveys	13
Other	5 (MNWOO and screening clinics both mentioned once)

How do you want to share feedback about your tap water?

The results for sharing feedback about tap water were similar to those for receiving communications, though slightly different. Text was the most popular choice for sharing feedback (40 votes), followed by email (36 votes). The third and fourth most popular choices were community meetings and websites, with 27 and 24 votes, respectively.

Figure 7: How do you want to share feedback about your tap water?

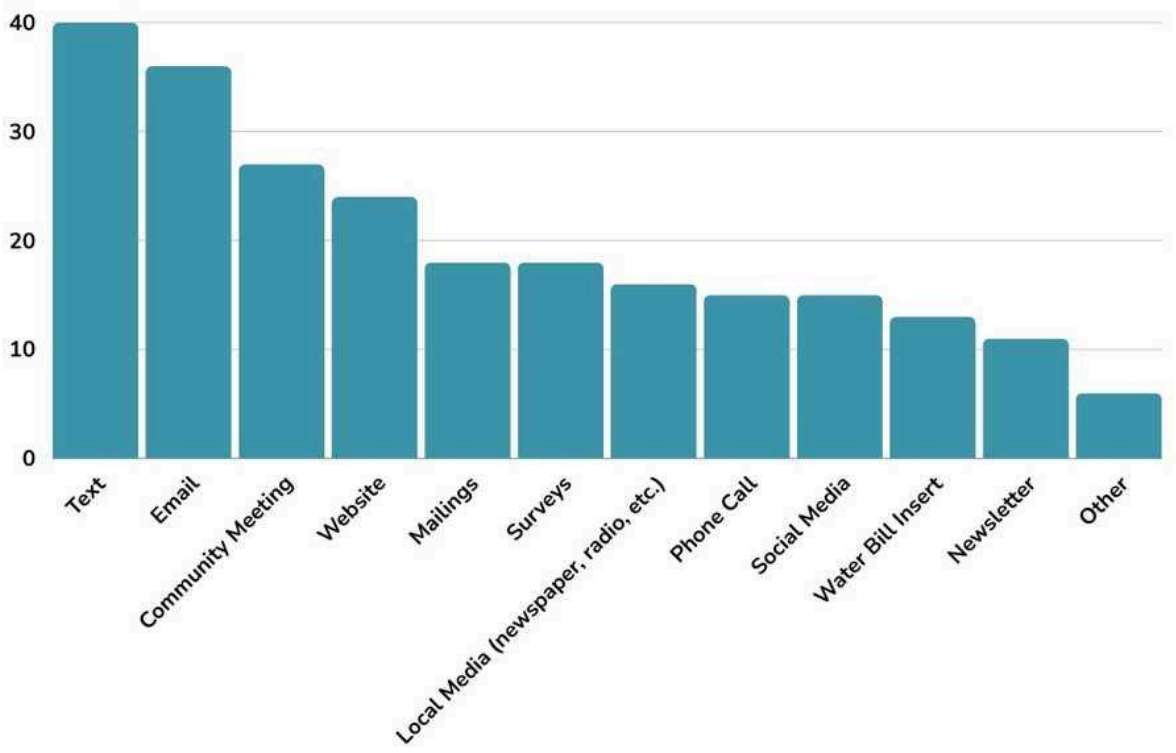


Table 7: Preferences for Sharing Feedback

Method of Communication	Number of Responses
Text	40
Email	36
Community Meeting	27
Website	24
Mailings	18
Surveys	18

Local Media (newspaper, radio, etc.)	16
Phone Call	15
Social Media	15
Water Bill Insert	13
Newsletter	11
Other	6 (MNWOO mentioned once)

MDH Feedback Survey Results

Out of the 190 participants who attended the community engagement sessions, 107 filled out the MDH Feedback Survey. In this *MDH Feedbac S e Re* section, percentages were calculated based on the total number of participants who took the survey.

Currently, Minnesota only has enforceable drinking water standards from the federal government. Should Minnesota develop our own state standards?

Approximately two thirds (67.3%) of respondents agreed that Minnesota should develop its own state standards. The next largest group was in disagreement, with 15 participants (14.9%) saying no to state standards.

Figure 8: Should Minnesota develop our own state standards?

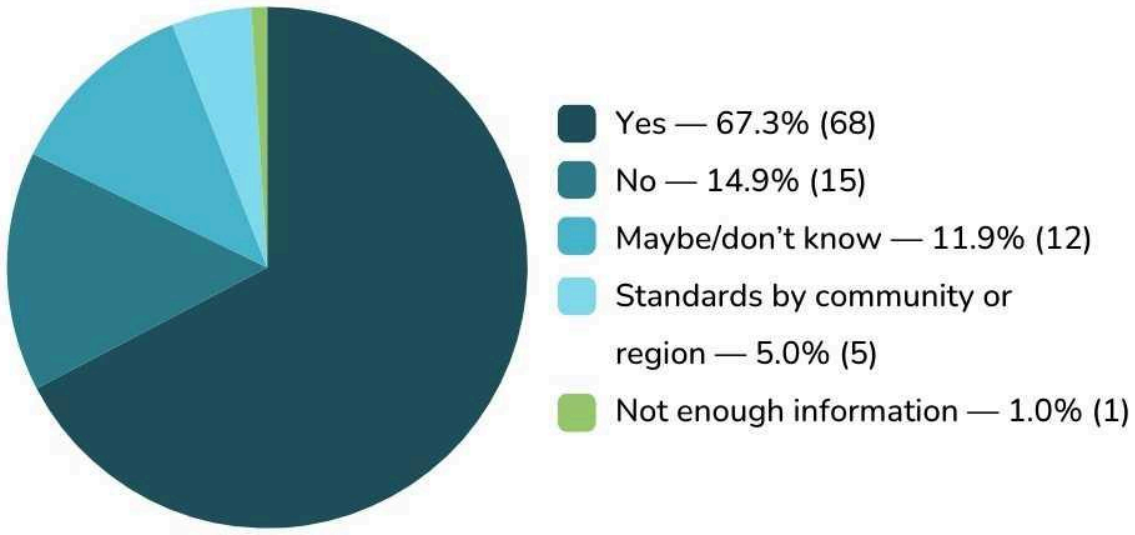


Table 8: Opinions on State Standards

Opinion on State Standards	Number of Responses
Yes	68 (67.3%)
No	15 (14.9%)
Maybe/don't know	12 (11.9%)
Standards by community or region	5 (5.0%)
Not enough information	1 (1.0%)
Total	**101**

Do you currently feel that you are paying too much for your water?

42.9% of respondents answered no, they do not believe they are paying too much for their water. The next largest group (26.2%) held the opposite opinion, stating that they are paying too much for their water. 15 private well owners and 4 apartment renters or mobile home community residents answered this question, and another 4 individuals answered N/A. Thus, approximately 27.5% of respondents could not meaningfully answer the question because they either do not receive a water bill, or their water fees are included in their rent.

Figure 9: Do you currently feel that you are paying too much for your water?

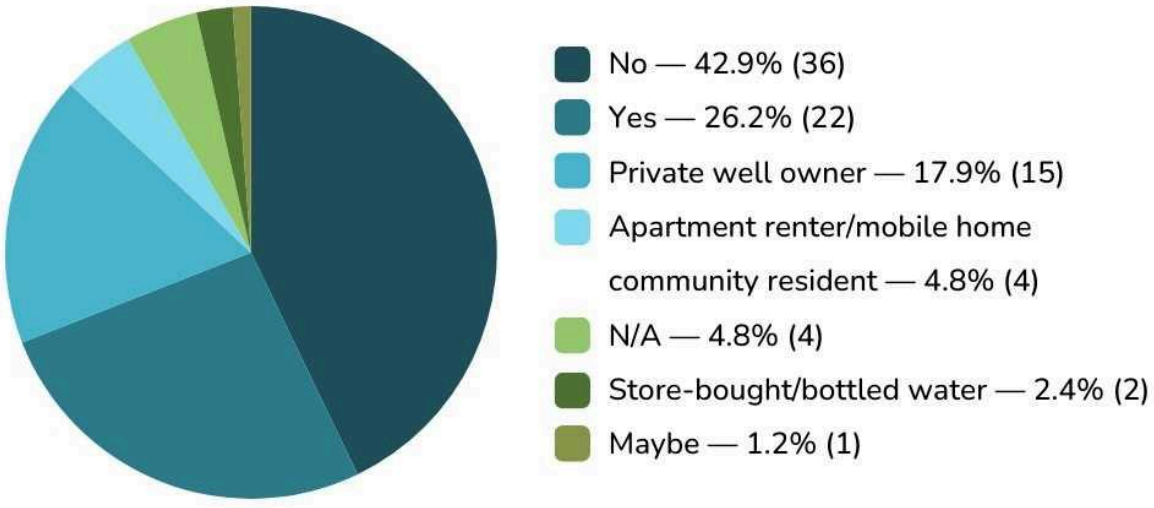


Table 9: Opinions on Current Drinking Water Prices

Opinion on Current Drinking Water Prices	Number of Responses
No, not paying too much	36 (42.9%)
Yes, currently paying too much	22 (26.2%)
Private well owner	15 (17.9%)
Apartment renter/mobile home community resident	4 (4.8%)
N/A	4 (4.8%)
Store-bought/bottled water	2 (2.4%)
Maybe paying too much	1 (1.2%)
Total	**84**

Would you be willing to pay more to ensure your water continues to meet safe drinking water standards?

A majority of respondents (59.3%) said they would be willing to pay more for their drinking water. Similar to the previous question, the second largest group held the opposite opinion, with 21.0% of respondents saying they would not be willing to pay more.

Figure 10: Would you be willing to pay more to ensure your water continues to meet safe drinking water standards?

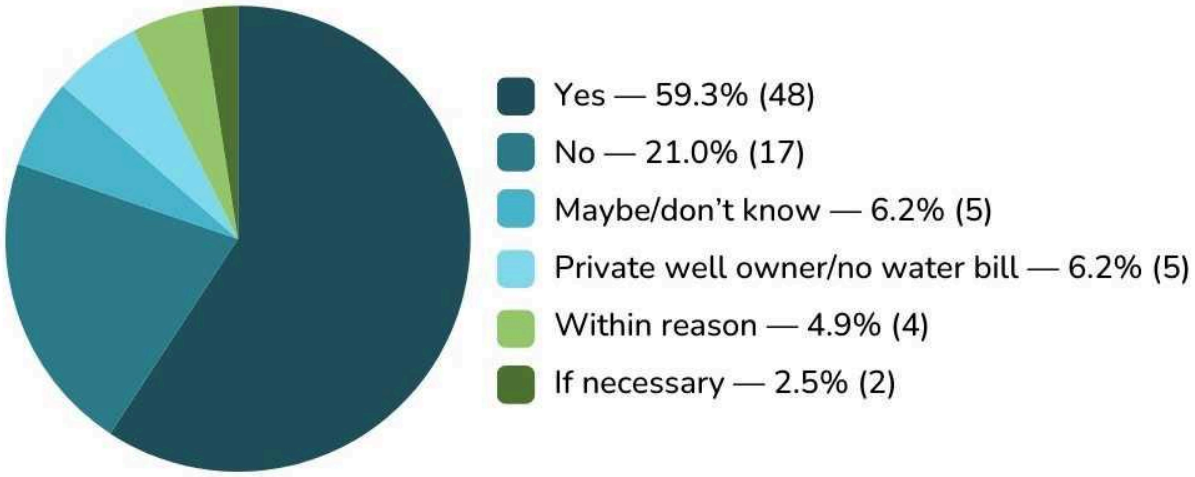


Table 10: Opinions on Paying More for Drinking Water

Opinion on Paying More	Number of Responses
Yes, I would pay more	48 (59.3%)
No, I would not pay more	17 (21.0%)
Maybe/don't know	5 (6.2%)
Private well owner/no water bill	5 (6.2%)
Within reason	4 (4.9%)
If necessary	2 (2.5%)
Total	**81**

Is it appropriate for state government to help fund household testing and treatment for private wells?

A majority of respondents (69 participants) agreed that it is appropriate for state government to fund household testing and treatment for private wells. Though the number of participants who disagreed was much smaller (22 participants), their beliefs were expressed in strong terms.

Figure 11: Is it appropriate for state government to help fund household testing and treatment for private wells?

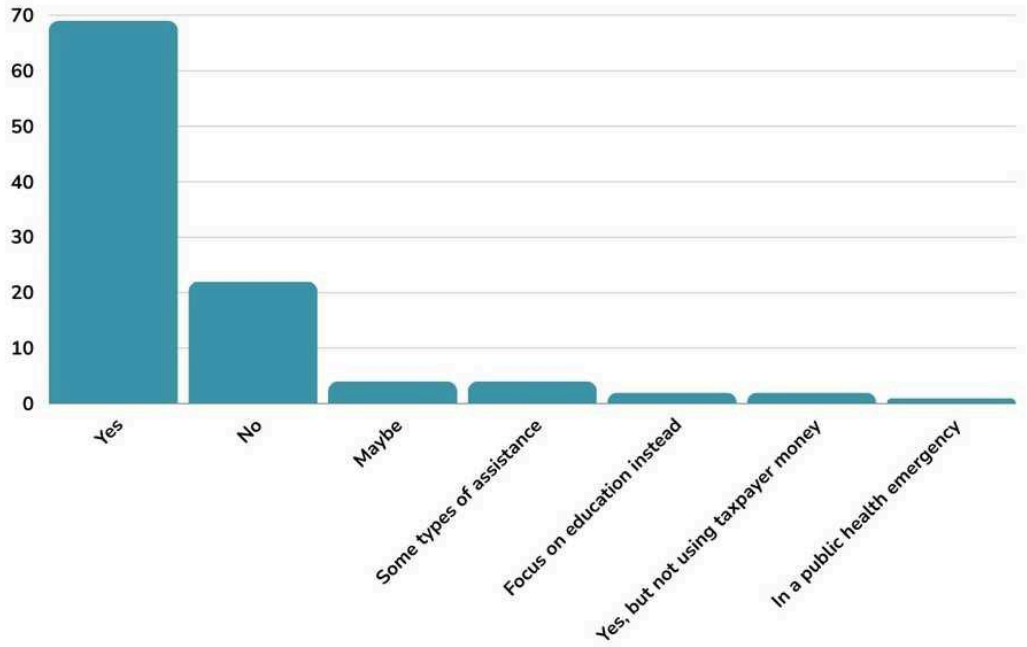


Table 11: Opinions on Government Funding for Private Wells

Opinion on Government Funding for Private Wells	Number of Responses
Yes, it is appropriate	69
No, it is not appropriate	22
Maybe	4
Some types of assistance	4
Focus on education instead (importance of testing, groundwater protection, etc.)	2
Yes, but not using taxpayer money	2
In a public health emergency	1

Table 12: Sample Responses about Government Funding for Private Wells

Affirmative Responses
I believe it is appropriate for government funds to support testing and treatment of private wells. The scale of this issue is beyond individuals circumstances.
Yes - a government's job is to TAKE CARE of its people - if we pay for public sports/entertainment, we should pay for public safety!
Yes. Private well users also have a right to clean drinking water, and they are likely not the responsible parties for the pollution. Priority should be for low income households.
Negative Responses
No - It's not tax payers obligation to fund testing for people who choose to have private wells. Private well owners can test their own water.
If they don't pay city taxes they should pay out of their own pockets.
If we have concerns about our wells we can pay for testing ourselves.

Looking at the list of Goals and Strategies from MDH, is there anything that you believe is missing from this list? Anything that jumps out to you?

The largest group of respondents (32 participants) felt that nothing was missing from the list shared with them. The second largest group of respondents (11 participants) commented on the accessibility of the language used, including complaints about vague/complex wording and not having copies in languages other than English. The third largest group of respondents (9 participants) felt that the Goals and Strategies

outlined by MDH should emphasize accountability and the enforcement of standards more directly. (Note: the Goals and Strategies handout can be found in Appendix F on page 72.)

Figure 12: Looking at the list of Goals and Strategies from MDH, is there anything that you believe is missing from this list? Anything that jumps out to you?

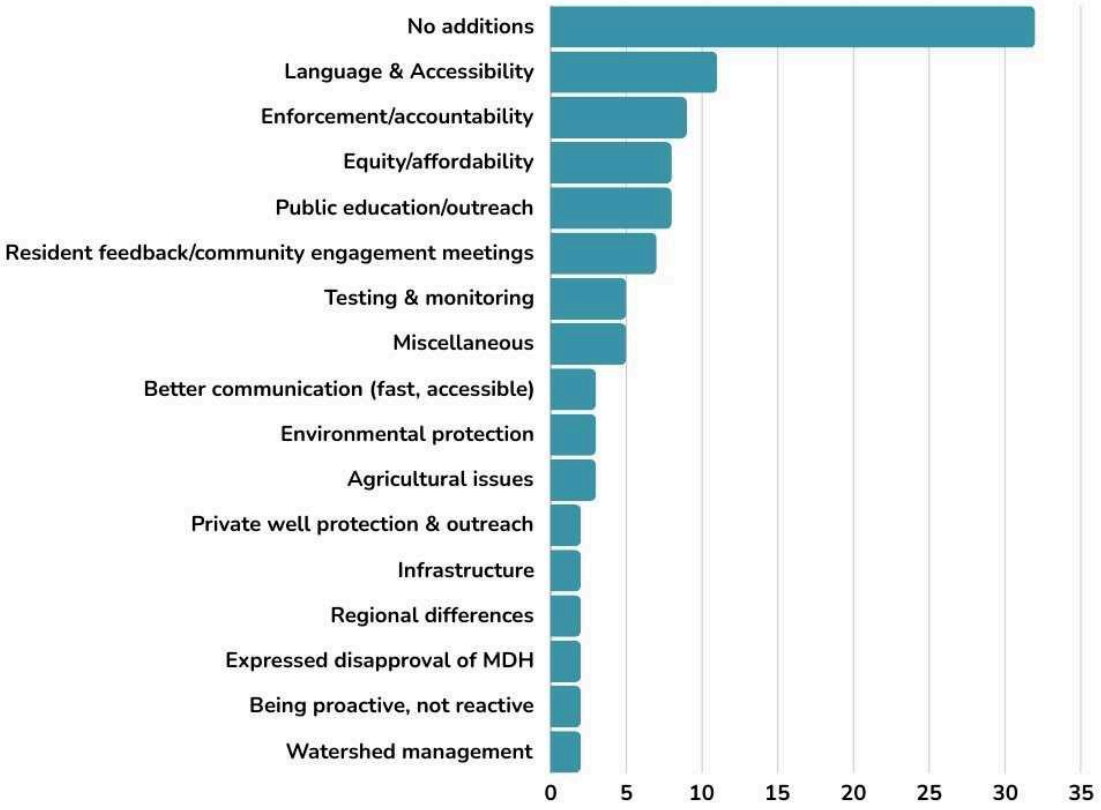


Table 13: Areas of Improvement for MDH Goals and Strategies

Area of Improvement	Number of Responses
No additions	32
Language + accessibility	11
(Translation into multiple languages)	7
(Intimidating/unclear/confusing language)	3
Enforcement/accountability	9
Equity/affordability	8
Public education/outreach	8
Resident feedback/community engagement meetings	7
Testing + monitoring	5

Miscellaneous	5
Better communication (fast, accessible)	3
Environmental protection	3
Agricultural issues	3
Private well protection + outreach	2
Infrastructure	2
Regional differences	2
Expressed disapproval of MDH	2
Being proactive, not reactive	2
Watershed management	2

Table 14: Sample Responses about MDH Goals and Strategies

Language + accessibility
What is a resilient drinking water infrastructure?
Prioritize emerging risks that present the largest public health burden - What does this mean? Seems like it is something to scare people.
Please translate this to Spanish so we can understand it better.
Enforcement/accountability
Credit should be hard to obtain ofor farms, businesses, or individuals who don't meet minimum standards for keeping our water clean.
They need to fine polluters! Not just slap their wrist! When a farmer pollutes, fine him. If a applicator puts it on take his liscince away for a year.
The science says that what we have been doing, i.e. voluntary BMP's, NO2 reduction plans, DWSMA's, etc. has not worked. Build higher level of accountability and enforcement.

What do you want the State of Minnesota to do for drinking water in the next 10 years?

The most popular theme among respondents was the maintenance and improvement of water quality and safety, with 35 responses. The second most popular theme was emphasizing and improving equitable access to affordable drinking water, with 19 responses.

Figure 13: What do you want the State of Minnesota to do for drinking water in the next 10 years?

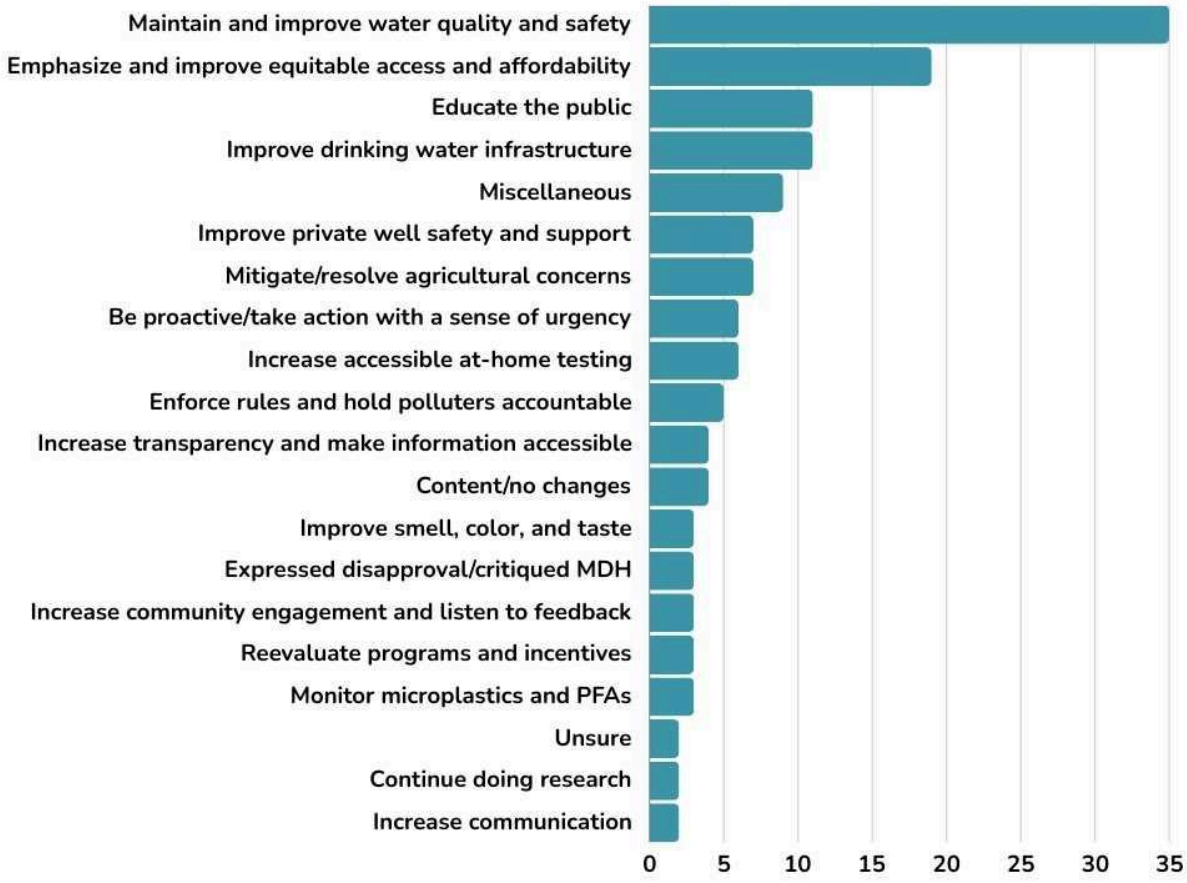


Table 15: Actions for the Next 10 Years

Action	Number of Responses
Maintain and improve water quality and safety	35
Emphasize and improve equitable access and affordability	19
Educate the public	11
Improve drinking water infrastructure	11
Miscellaneous	9
Improve private well safety and support	7
Mitigate/resolve agricultural concerns	7
Be proactive/take action with a sense of urgency	6
Increase accessible at-home testing	6
Enforce rules and hold polluters accountable	5

Increase transparency and make information accessible	4
Content/no changes	4
Improve smell, color, and taste	3
Expressed disapproval/critiqued MDH	3
Increase community engagement and listen to feedback	3
Reevaluate programs and incentives	3
Monitor microplastics and PFAs	3
Unsure	2
Continue doing research	2
Increase communication	2

Table 16: Sample Responses about Actions for the Next 10 Years

Maintain and improve water quality and safety
Please continue to analyze it so we can consume it safely.
Keep on monitoring the health, purity, and fair distribution of water for all and to take care of it like gold.
Maintain current safe levels.
Emphasize and improve equitable access and affordability
Ensure safe drinking water for all Minnesotans especially for communities of color, low-income communities, and children who are most vulnerable bear a disproportionate burden of environmental harm.
Prioritize the highest risk contaminants and communities that have historically been underserved
Ensure safe, affordable drinking water for all residents that balances the cost of treatment of water dependent upon the quality of raw water for treatment and the affordability for people in a region

What's the most important thing that you want MDH to know as they create this plan?

The largest number of respondents (18 participants) agreed that equity needs to be a priority for MDH moving forward. The second largest category was miscellaneous — a sample of those comments is provided below. The third largest group of respondents (10 participants) said that collaboration is key.

Figure 14: What's the most important thing that you want MDH to know as they create this plan?

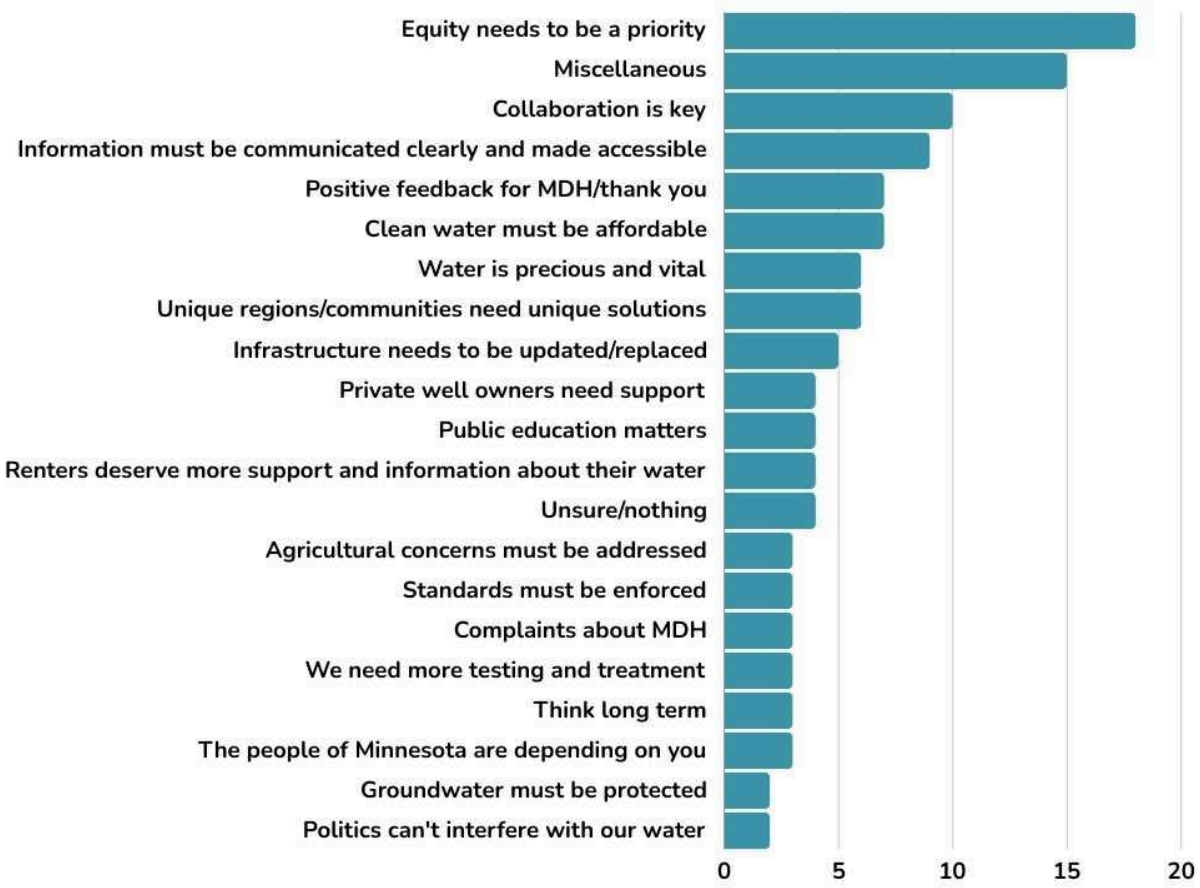


Table 17: The Most Important Things for MDH to Know

What MDH Needs to Know	Number of Responses
Equity needs to be a priority	18
Miscellaneous	15
Collaboration is key	10
Information must be communicated clearly and made accessible	9
Positive feedback for MDH/thank you	7
Clean water must be affordable	7
Water is precious and vital	6
Unique regions/communities need unique solutions	6
Infrastructure needs to be updated/replaced	5
Private well owners need support	4
Public education matters	4

Renters deserve more support and information about their water	4
Unsure/nothing	4
Agricultural concerns must be addressed	3
Standards must be enforced	3
Complaints about MDH	3
We need more testing and treatment	3
Think long term	3
The people of Minnesota are depending on you	3
Groundwater must be protected	2
Politics can't interfere with our water	2

Table 18: Sample Responses about What MDH Needs to Know

Equity needs to be a priority
Black, brown and indigenous peoples need to be the priority.
Everyone needs clean water, regardless of geography, income, education.
Step up and make sure all citizens to have access to safe drinking water
Miscellaneous
Leave us have control of our own wells.
That the water from the faucet does not taste like bleach.
Need to counter marketing of bottled water
Collaboration is key
That “we are all one” and that we should work together to protect, take care of, and distribute the best we can so we have more and the best water. Thank you for this meeting.
Continue to outreach

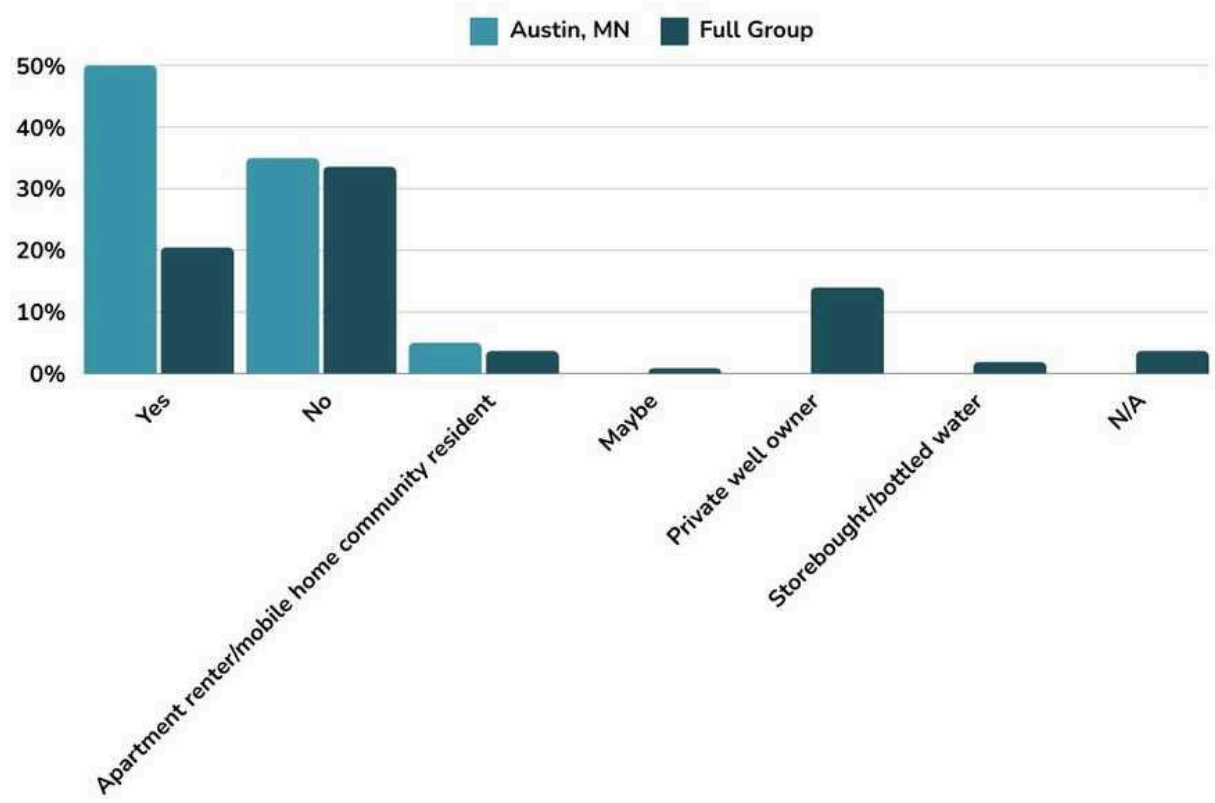
Differences in Austin, MN

The community partner in Austin was the Welcome Center, part of the Parenting Resource Center. A representative from Austin Utilities presented on the public water supply. There were no private well owners at the event. Attendees were a mixture of Latine Spanish-speakers and White English-speakers.

Paying Too Much for Water in Austin

The percentage of respondents in Austin who said they are currently paying too much for water was higher than that of the full group.

Figure 15: Opinions on Current Water Cost in Austin vs. Full Group



Differences in Faribault, MN

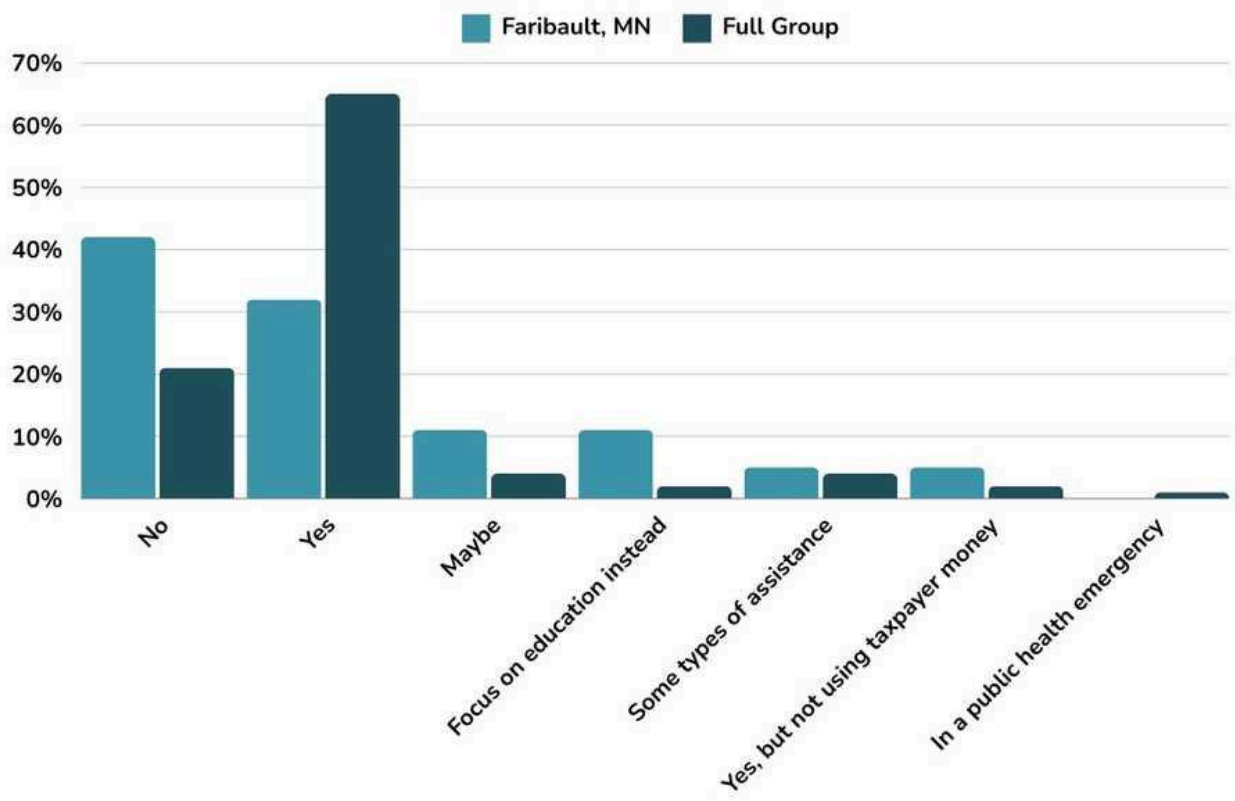
The community partner in Faribault was Growing Up Healthy. A representative from Faribault Utilities presented on the public water supply, and a representative from Goodhue Soil and Water Conservation District shared about private well testing. There

were 8 private well owners at the event. Attendees were roughly one third Somali, one third Latine Spanish-speakers, and one third White English-speakers.

Government Assistance for Private Wells in Faribault

The percentage of respondents in Faribault who disapproved of government assistance for private well owners was higher than that of the full group.

Figure 16: Opinions on Government Assistance for Private Wells in Faribault vs. Full Group



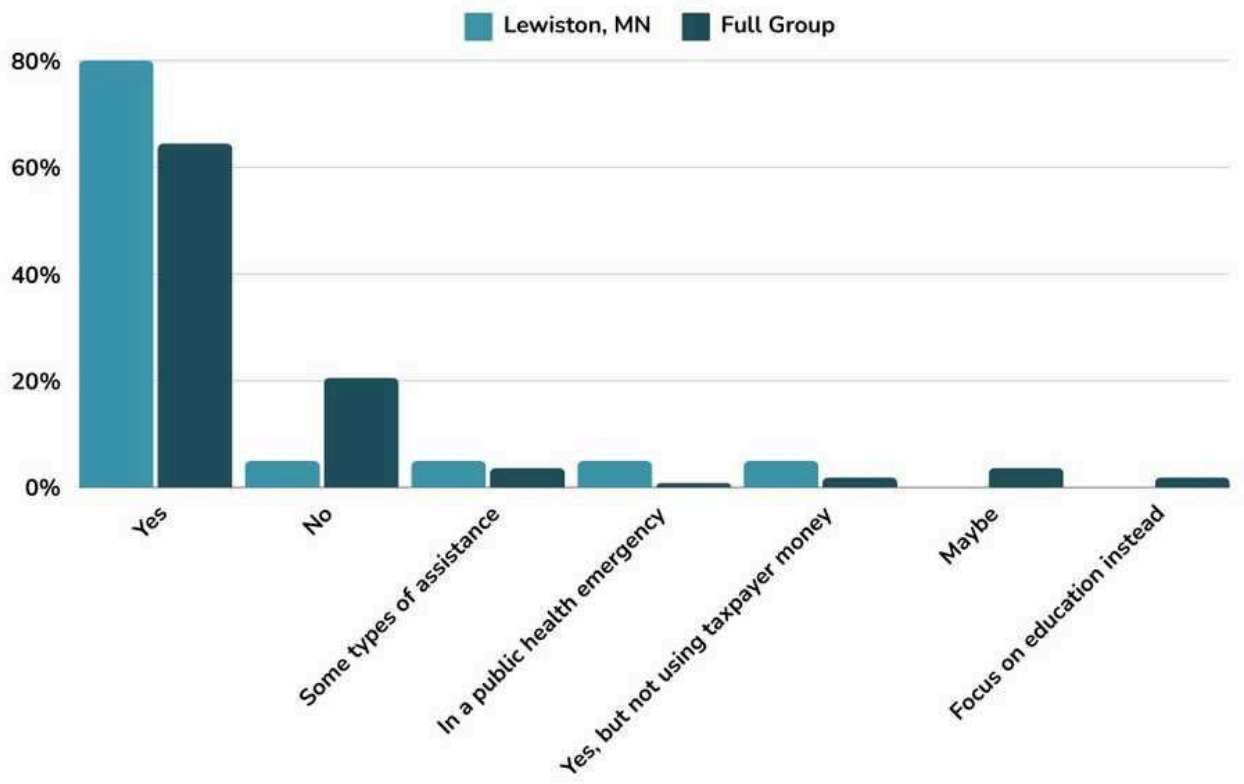
Differences in Lewiston, MN

The community partner in Lewiston was the Minnesota Well Owners Organization. There were 14 private well owners at the event. Based on a visual assessment, the audience was largely White or White-passing.

Government Assistance for Private Wells in Lewiston

Participants in Lewiston had an even greater level of support for government assistance programs for private wells than the full group.

Figure 17: Opinions on Government Assistance for Private Wells in Lewiston vs. Full Group



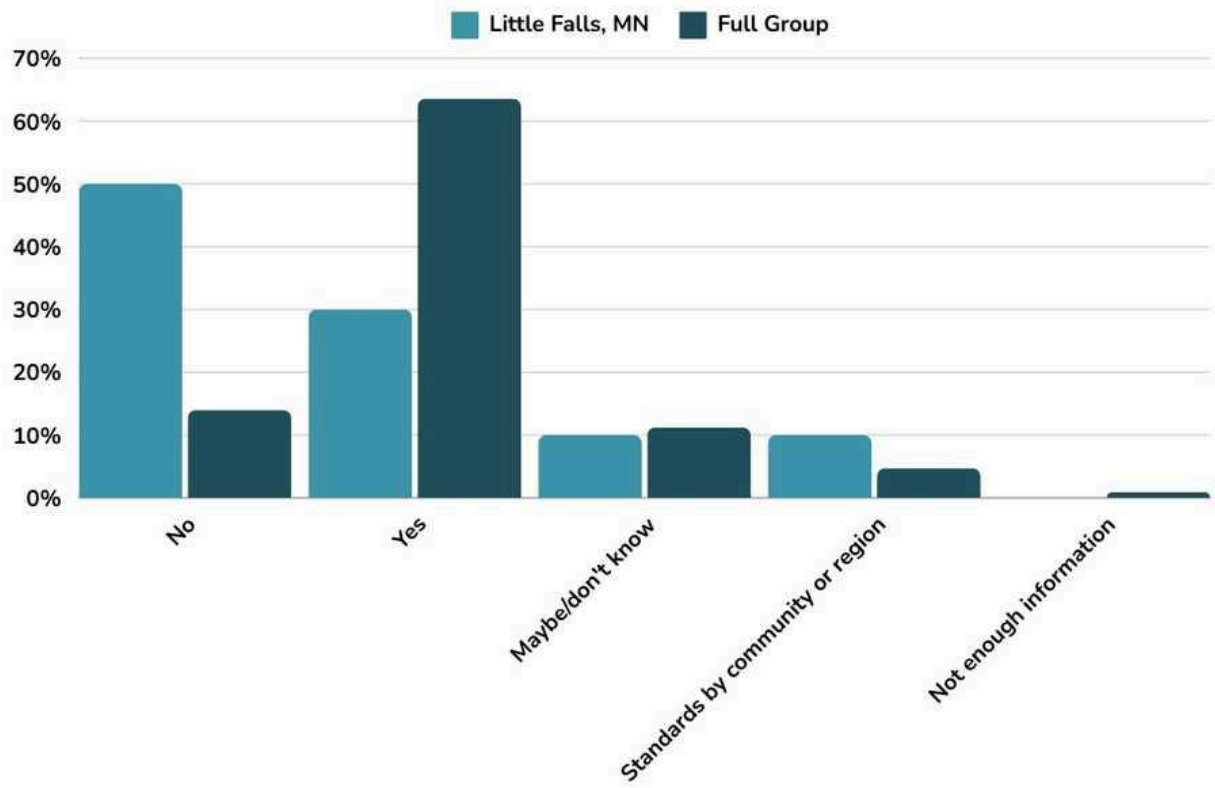
Differences in Little Falls, MN

The community partner in Little Falls was Little Falls Utilities. A representative from Little Falls Utilities presented on the public water supply. There were 2 private well owners at the event. Based on a visual assessment, the audience was entirely White or White-passing.

Opinions on New State Standards in Little Falls

In Little Falls, 50% of respondents were opposed to Minnesota creating new state standards for drinking water. In contrast, the full group was 63.6% in favor.

Figure 18: Opinions on New State Standards in Little Falls vs. Full Group



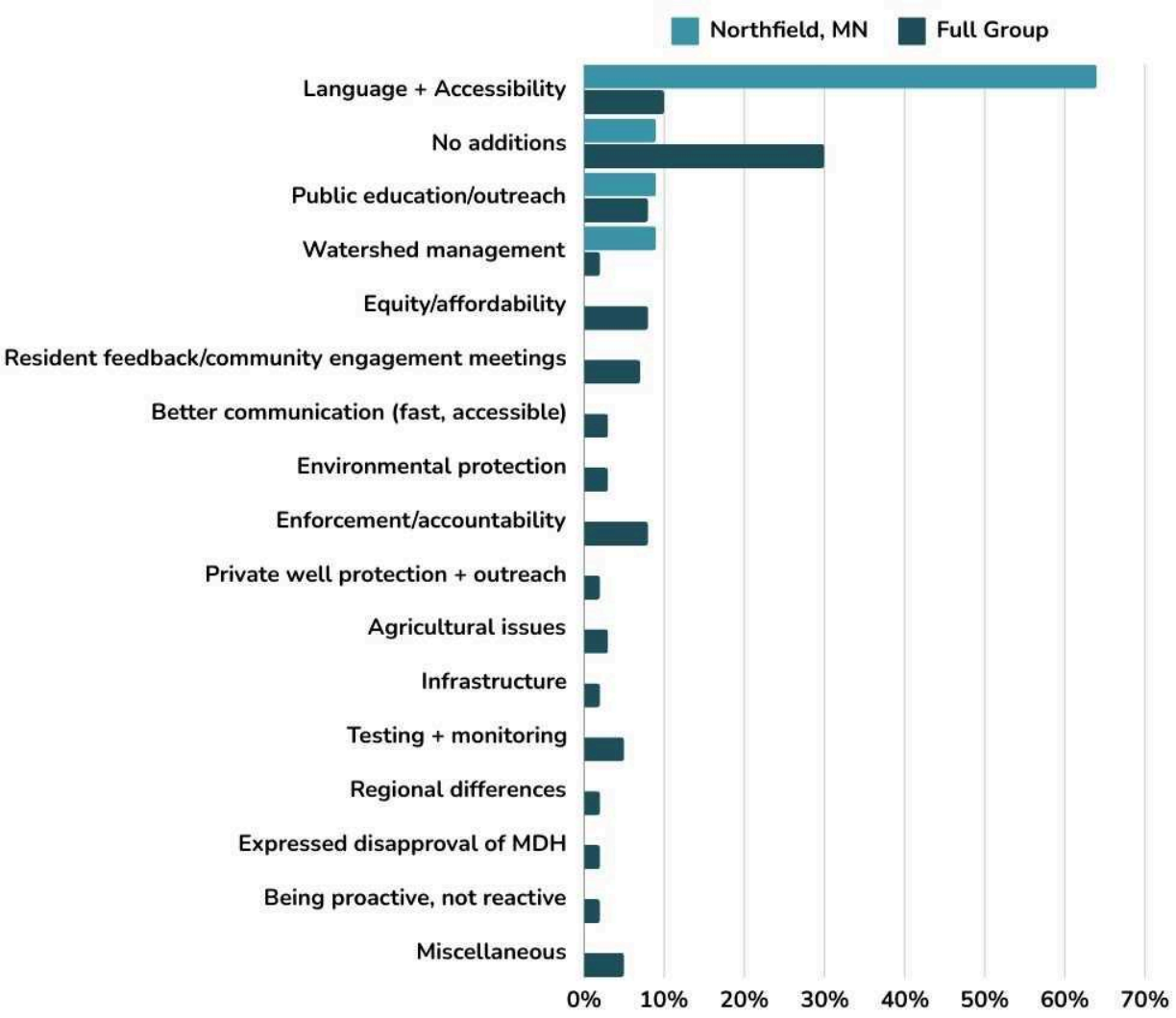
Differences in Northfield, MN

The community partner in Northfield was Growing Up Healthy. The facilitation team shared information about the public water supply, and a representative from Goodhue Soil and Water Conservation District shared about private well testing. There were no private well owners at the event. The audience was approximately two thirds Latine Spanish-speakers and one third White English-speakers.

Language Accessibility in Northfield

When commenting on the Goals and Strategies list provided by MDH, a large percentage of Northfield respondents shared that they could not understand the list because it was not available in Spanish. This percentage was much higher than that of the full group.

Figure 19: Goals and Strategies Responses in Northfield vs. Full Group



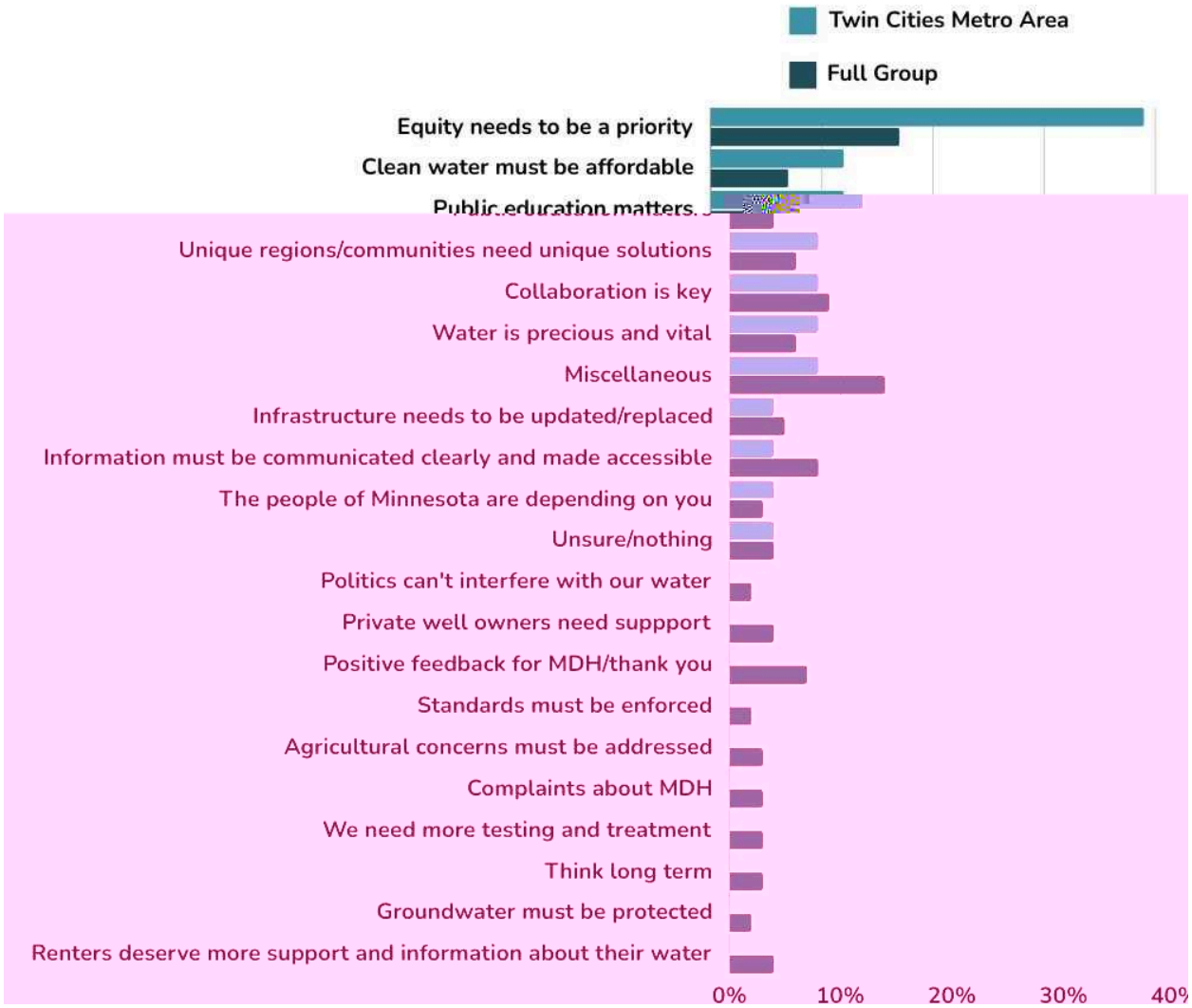
Differences in the Twin Cities Metro Area

The community partner in the Twin Cities Metro Area was the Environmental Justice Coordinating Council. A representative from Saint Paul Regional Water Services presented on the public water supply, and a PFAs expert from the University of St. Thomas shared as well. There were no private well owners at the event. The audience was almost entirely Black.

Twin Cities Metro Area: The Most Important Thing for MDH to Know

The full group of respondents indicated that equity is the most important thing for MDH to consider. In the Twin Cities Metro Area specifically, that sentiment was still deemed most important, but at a higher percentage than the full group.

Figure 20: The Most Important Thing for MDH to Know in the Twin Cities Metro Area vs. Full Group



Differences for Private Well Owners

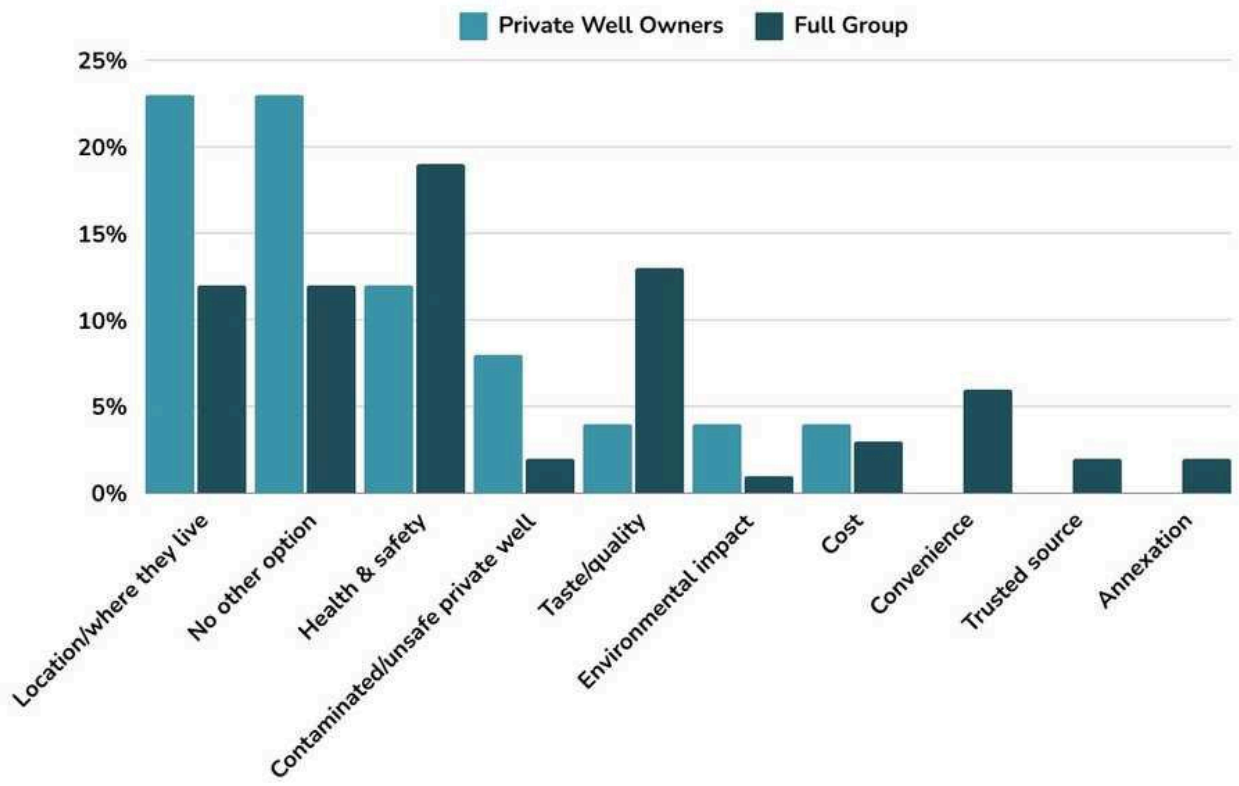
Though neither survey asked participants to identify whether they owned or used a private well, 26 participants self-identified as private well owners. The project team

was able to separate these responses from the whole and complete a separate analysis of the private well data. All 26 private well owners took the Drinking Water Survey, while only 16 took the MDH Feedback Survey. Below is a brief summary of key comparisons between private well owners and the full group of survey respondents. Percentages were calculated based on the total number of participants who took each survey.

Drinking Water Reasons for Private Well Owners

Among private well owners, the top reasons for obtaining drinking water in a certain way were their location/where they live and having no other option. The full group of respondents was not as beholden to location or limited options, as the top reason was health and safety. (Note: not all participants answered this question.)

Figure 21: Drinking Water Reasons for Private Well Owners vs. Full Group

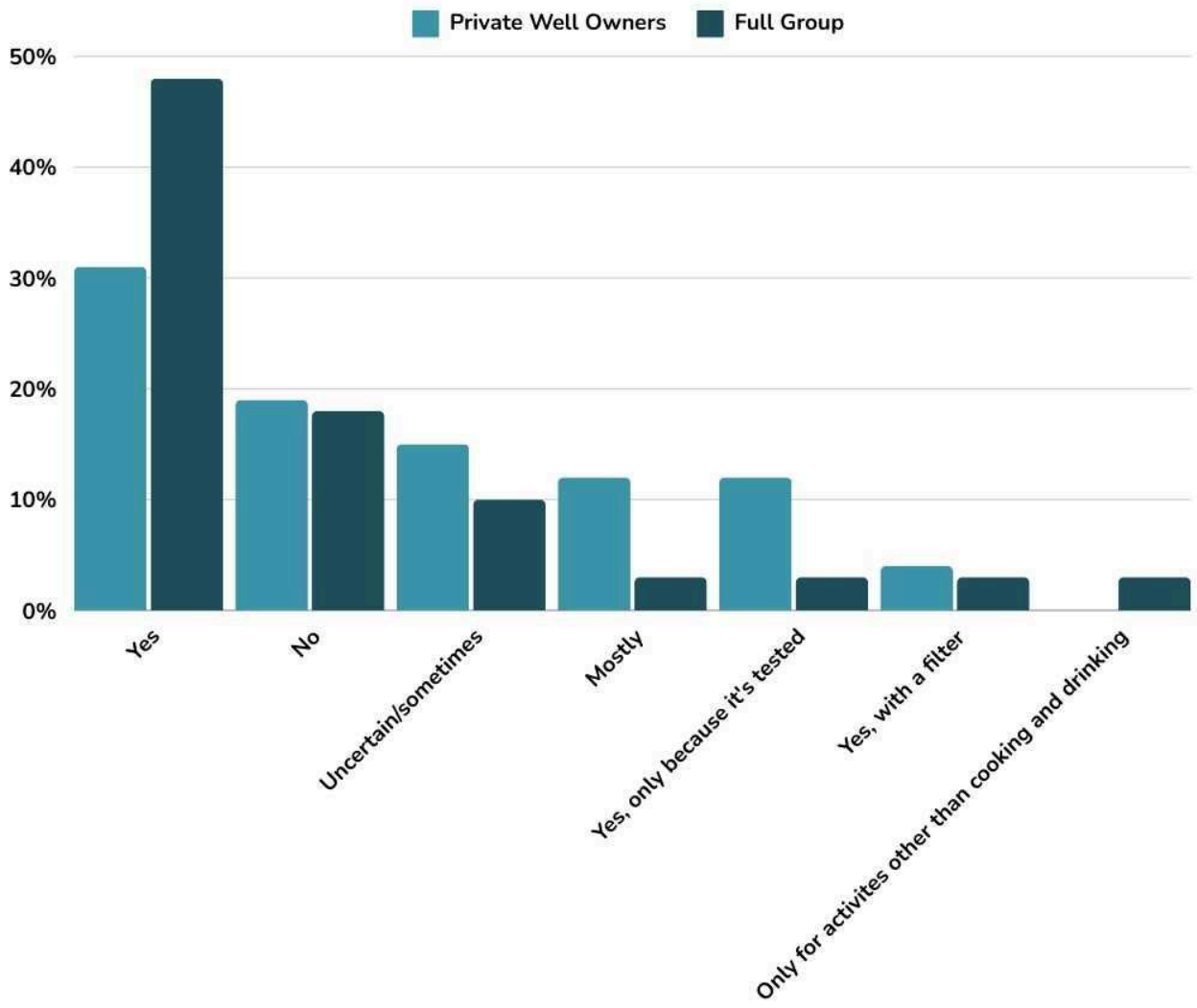


Trust in Tap Water Among Private Well Owners

The percentage of participants who felt they could trust their tap water was lower among private well owners than among the full group of survey respondents.

Additionally, the percentages of the following categories were all higher among private well owners than among the full group: yes, with a filter; mostly; uncertain/sometimes; yes, only because it's tested; and no. (Note: not all participants answered this question.)

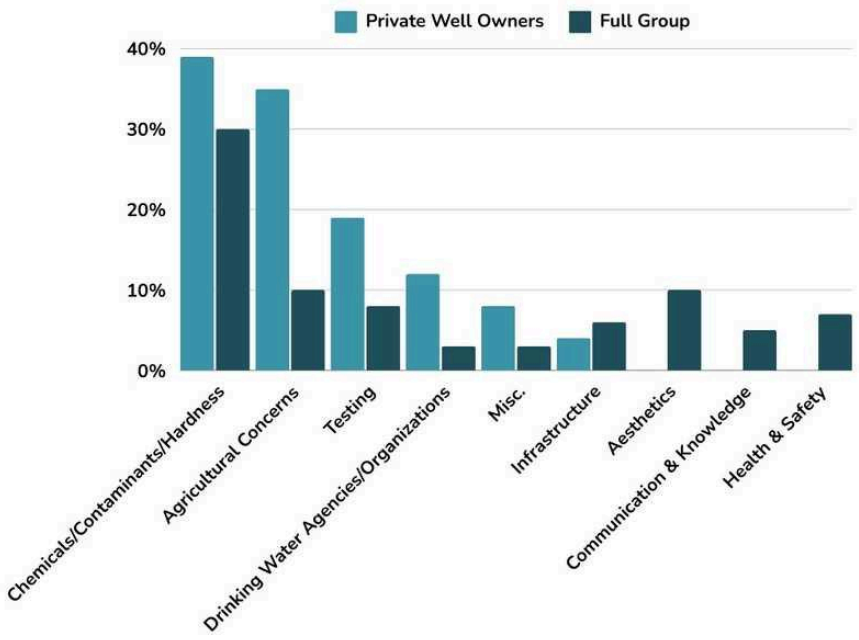
Figure 22: Trust in Tap Water Among Private Well Owners vs. Full Group



Private Well Owners and Agricultural Contaminants

Though the full group of respondents and the group of private well owners both shared chemicals/contaminants/hardness as their top concern, the prevalence of agricultural concerns was much higher among private well owners than the full group. (Note: not all participants answered this question.)

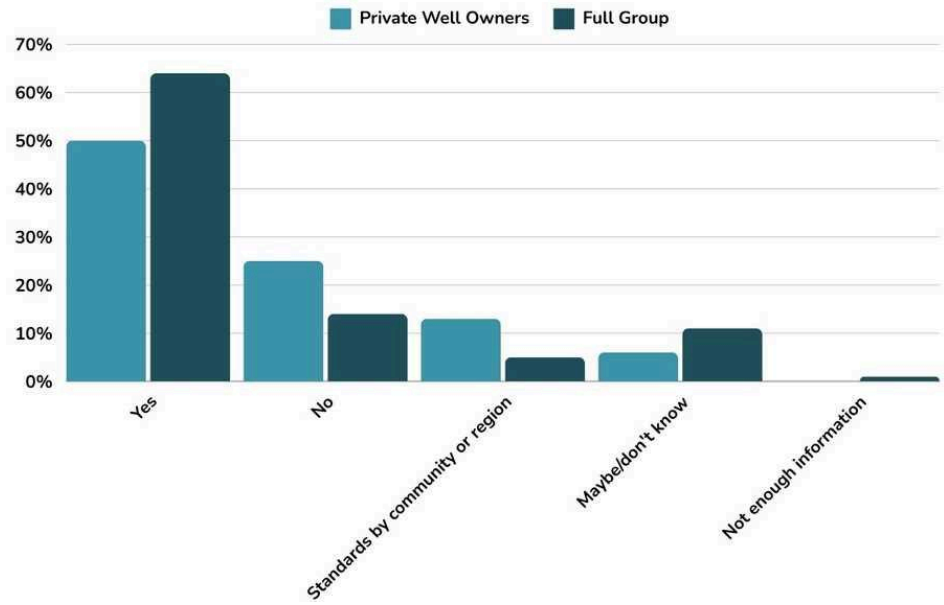
Figure 23: Tap Water Concerns Among Private Well Owners vs. Full Group



Private Well Owners' Opinions on State Standards

The percentage of private well owners who were in favor of new state standards was lower than that of the full group. The percentage of private well owners who were against new state standards was higher than that of the full group. (Note: not all participants answered this question.)

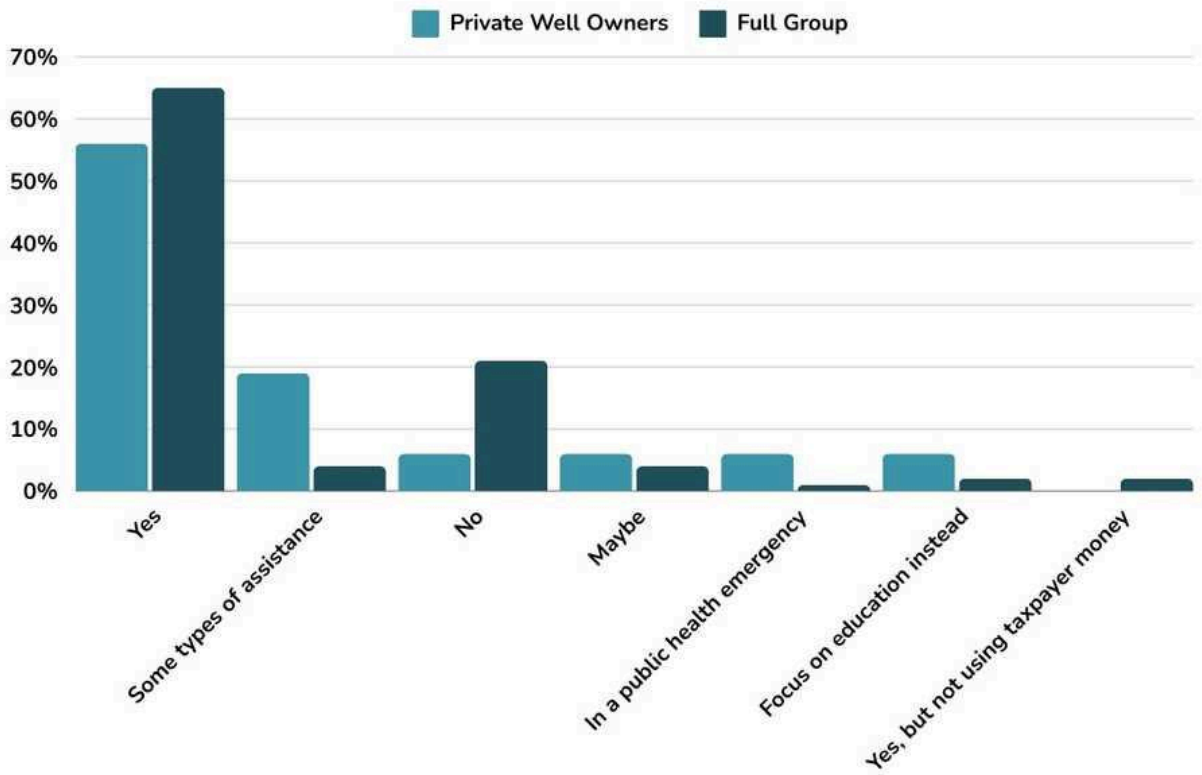
Figure 24: Opinions on State Standards Among Private Well Owners vs. Full Group



Opinions on Government Assistance for Private Wells Among Private Well Owners

"Yes" was the most common answer among private well owners and the full group, but the percentage of respondents who answered "no" was higher in the full group than in the private wells group. (Note: not all participants answered this question.)

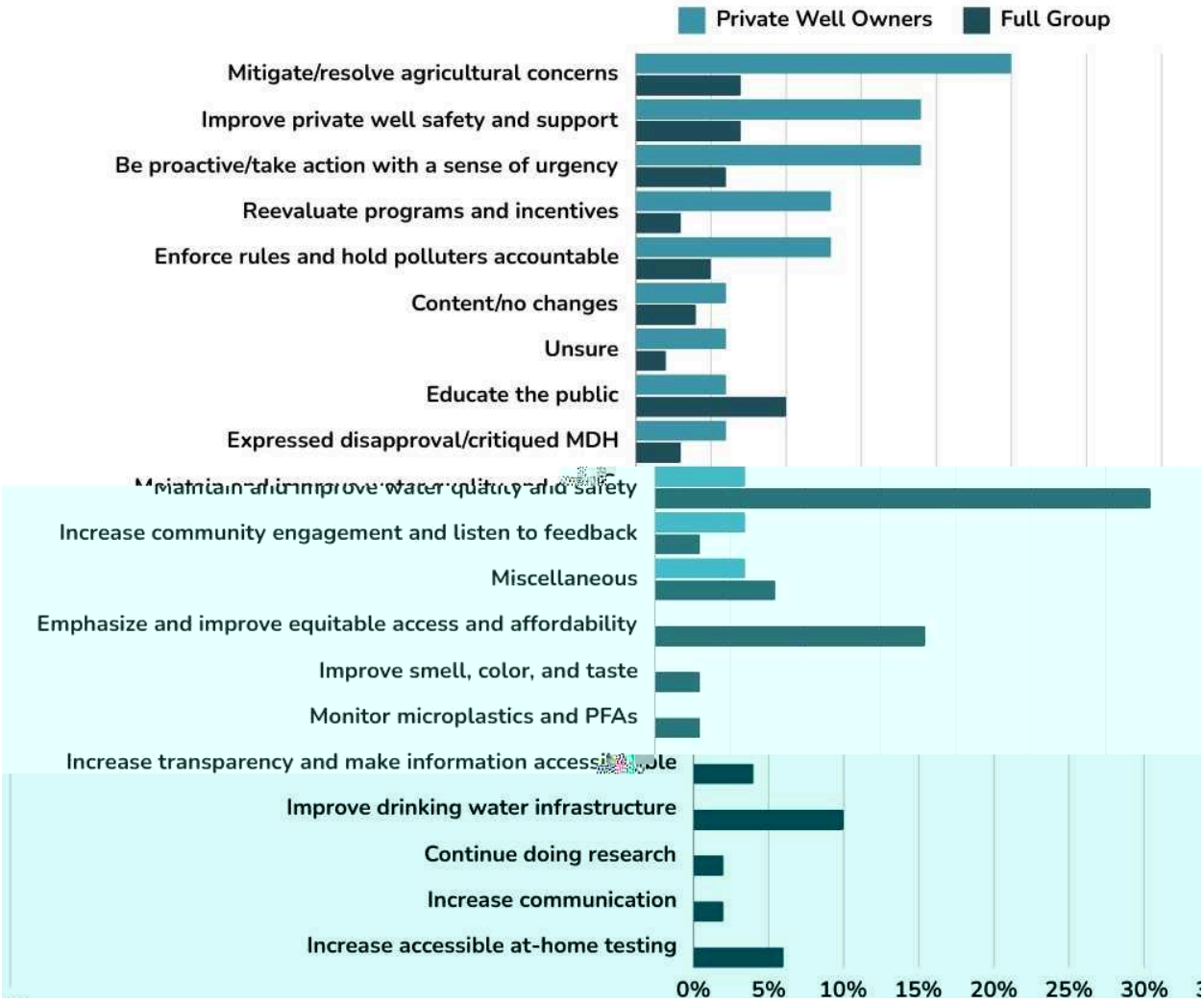
Figure 25: Opinions on Government Assistance for Private Wells Among Private Well Owners vs. Full Group



What Private Well Owners Want in the Next 10 Years

While maintaining and improving water quality and safety was the most important issue to the full group of respondents, private well owners' top issue was mitigating and resolving agricultural concerns. The second most popular issue among the full group was emphasizing and improving equitable access to drinking water, while private well owners had a tie for second between 1) improving private well safety and support and 2) being proactive and taking action with a sense of urgency.

Figure 26: What Private Well Owners Want in the Next 10 Years vs. Full Group



Recommendations

As MDH moves forward with the 2024-2033 Drinking Water Action Plan and beyond, it will be absolutely imperative to expand and improve community engagement efforts. In order to increase geographic reach, demographic diversity, and event accessibility, the timeline for such efforts should be longer. Additionally, it will be of utmost importance to center the three community engagement principles outlined earlier in this report: two-way learning, meeting people where they gather, and working in partnership with the community.

When approaching two-way learning, engagement staff must value the input of community members at a high level. The contributions of event attendees should bear weight and influence outcomes. Local drinking water providers should be invited to inform and learn. It is beneficial to have both a state and local presence at community engagement sessions, so participants can 1) trust that their concerns are being heard at the state level and 2) identify professionals in their immediate communities who can act as resources in the future. However, it should be noted that state representatives may not be the best choice for event facilitation, as their presence may decrease candidness and comfort. Simply mentioning that the state is sponsoring the event should be enough information for participants.

Meeting community members where they gather is key, particularly when trying to increase accessibility and turnout. People are much more likely to attend an event if they feel at ease in the space. For this reason, government buildings typically are not ideal, as they can feel intimidating, sterile, and for some populations, potentially unsafe. Instead, engagement staff should follow the lead of community partners, as they can recommend spaces that are trusted by the community and easily accessible by foot, car, bike, or public transit.

These community partners should also be compensated fairly with a larger stipend. Working in partnership with a community means valuing the distinct talents and insights they have to offer. Paying partners a larger amount would increase their capacity for planning, providing more opportunities for facilitators to ask questions and prepare for any necessary modifications. A heartier stipend would also show partners that they are appreciated and respected.

Participant stipends should be handled with care as well. When it comes to registration and distribution, remaining flexible will be essential. Compensation methods need to be inclusive, which means accommodating participants without known birth dates, participants who cannot write, and participants who do not wish to share personal information for privacy reasons.

Ultimately, equity needs to become a core value in MDH's community engagement work. Community relationships need to be approached with a higher level of cultural

sensitivity; the processes and wishes of tribal partners need to be observed and respected; materials and meetings need to be accessible for speakers of all languages; and communications need to be disseminated in ways that make sense for the communities receiving them. For a more detailed discussion of these topics, reference Appendix A on page 47.

Appendix A

Lessons Learned

To expand upon the *Rec e da* section, below is a collection of key lessons learned during the Drinking Water Action Plan community engagement process.

Communications

The results from the Drinking Water Survey communication preference questions indicate that text and email will be the most efficient forms of communication for sharing information and soliciting feedback, followed by community meetings and websites. However, this is not a one-size-fits-all solution; it is important to consider which communities might not be reached by these forms of communication, and how to better reach them. For example, text may not be the most effective method for reaching a rural well owner in their seventies, but a newsletter, mailing, or phone call might be. Additionally, for communities that typically do not disseminate information through written materials but rather via word-of-mouth — either due to literacy concerns or because the language is predominantly spoken rather than written — videos in the appropriate language with English subtitles may be most useful. In summary, when sending communications and seeking comments, it is best to determine what modes will be suitable for the specific community you are targeting.

Cultural Sensitivity and Awareness

In future community engagement efforts, it will be vital for MDH to partner with community organizations and do research in order to adequately prepare to engage with diverse populations in a meaningful way. Such preparation will allow facilitators to be more sensitive and knowledgeable about specific cultural traditions, such as the five daily prayers of the Islamic faith.

When it comes to prayer breaks specifically, it would be considerate of MDH to have a supply of prayer rugs on hand, so Muslim participants do not have to improvise in the meeting space. Prayer breaks should also be built into the schedule and treated as a legitimate part of the agenda, not as an interruption.

Demographics on Surveys

Future drinking water surveys should have questions about demographic information, so responses are easier to sort and synthesize. For example, surveys should ask about private well ownership, housing type (apartment, mobile home, etc.), and perhaps income.

Gift Cards and Registration

The ClinCard gift cards used for this project proved to be particularly perplexing for community partners and participants. The token numbers required for card identification were sometimes confused with other numbers; trying to activate a card with a participant's birth date did not always work on the first try; and the amount of personal information required for activation felt intrusive for many participants. In particular, tribal communities expressed concerns about sharing any degree of personal information, as they wanted to maintain community privacy and felt uncertain about data storage and the roles of the University of Minnesota and state government. In the future, finding a simpler gift card system would be ideal.

Language Accessibility

As was noted by multiple survey respondents, materials are not useful unless they are translated into the appropriate language. For future events, staff should ensure that documents are submitted to translators at least a month before the event. There should also be enough copies of translated materials to meet the needs of the group.

Future community engagement meetings with multilingual audiences should have at least two live interpreters: one to translate meeting content, and another to assist with registration and transcription. It is necessary to provide writing assistance, as some

phone service. It may also be helpful for facilitators to bring an expanding file folder to meetings, so completed surveys can be filed away in an organized manner.

Timeline

In general, a project like this should have a longer timeline (at least two additional months) to allow for deeper communication with community partners and adequate planning time. A more expansive timeline would also invite the possibility of planning multiple meetings in each community. Hosting two events at different times — potentially at different locations within the community — would broaden the demographic spread of attendees and increase accessibility for participants with varying schedules and commitments.

Additionally, it would be more logical to hold sessions like these during the spring, summer, or fall; community members will be more likely to attend an event when the ground is clear and the sun is shining.

Tribal Relations

When engaging with tribal communities across Minnesota, it is important to consult with the tribal council of each band or tribe, or to notify other appropriate authorities (including the Minnesota Indian Affairs Council). The tribal council should be approached with any project ideas before other community members are contacted about co-hosting. Additionally, staff should reserve enough time to go through each tribe's research approval process (e.g. the Institutional Review Board or tribal research board), which can take multiple weeks.

Water management should be considered when collaborating with tribal communities, as tribal partners will need to assist in the navigation of each reservation’s unique management practices for water systems and/or private wells. Tribal water quality standards may also differ from the water quality standards set by state and federal government, so it is vital to be aware of and sensitive to those distinctions.

It should also be noted that many of the tribal communities in Northern Minnesota mentioned that winter is not an ideal time for community meetings, as the roads are not always plowed and transportation can become difficult.

Appendix B

Word Clouds

Figure B1: Word Cloud from Austin, MN

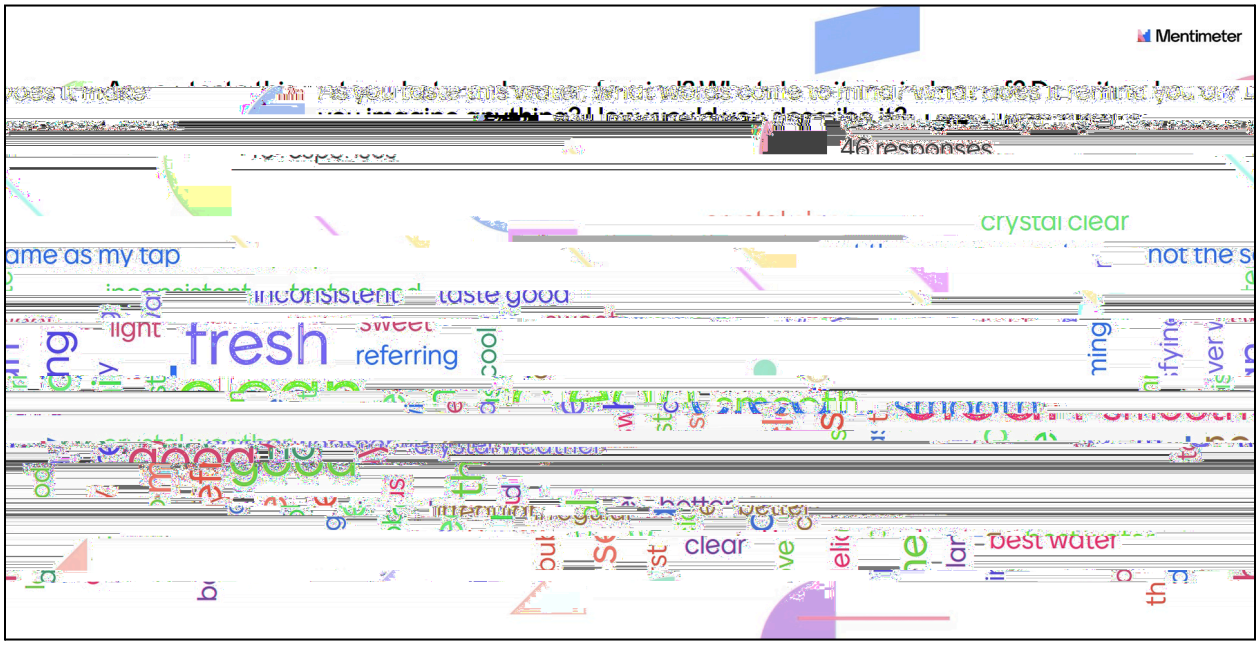
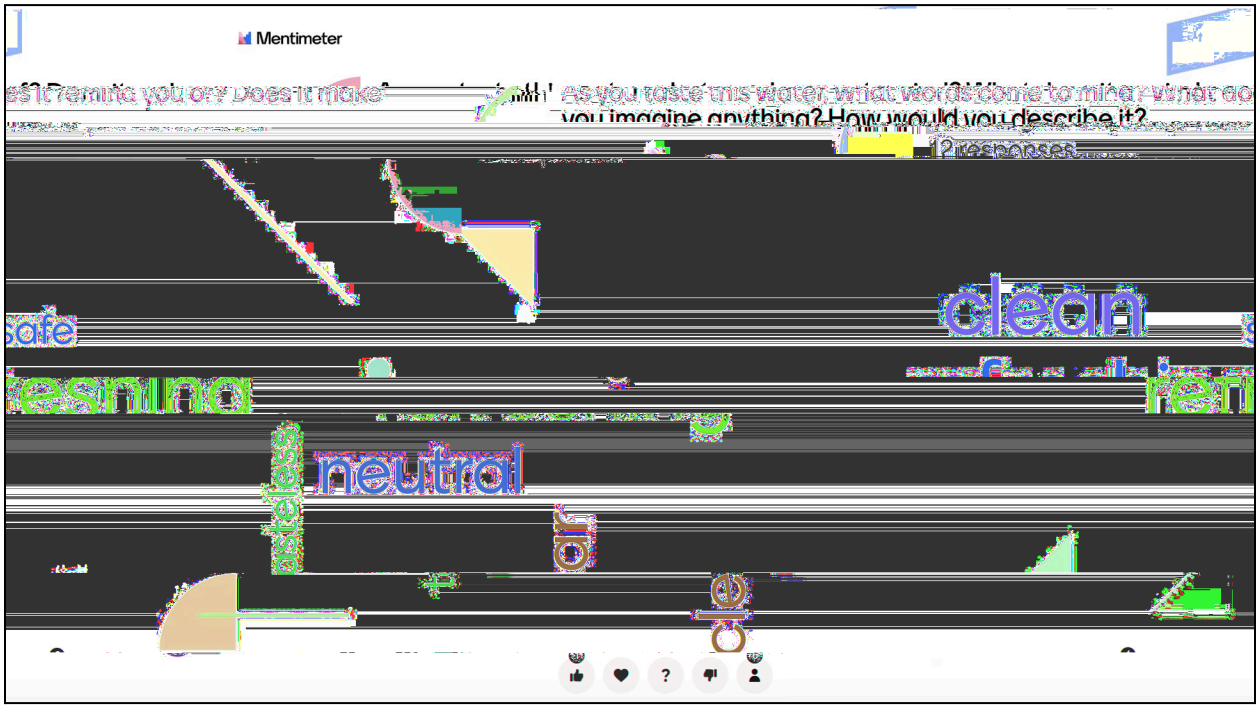


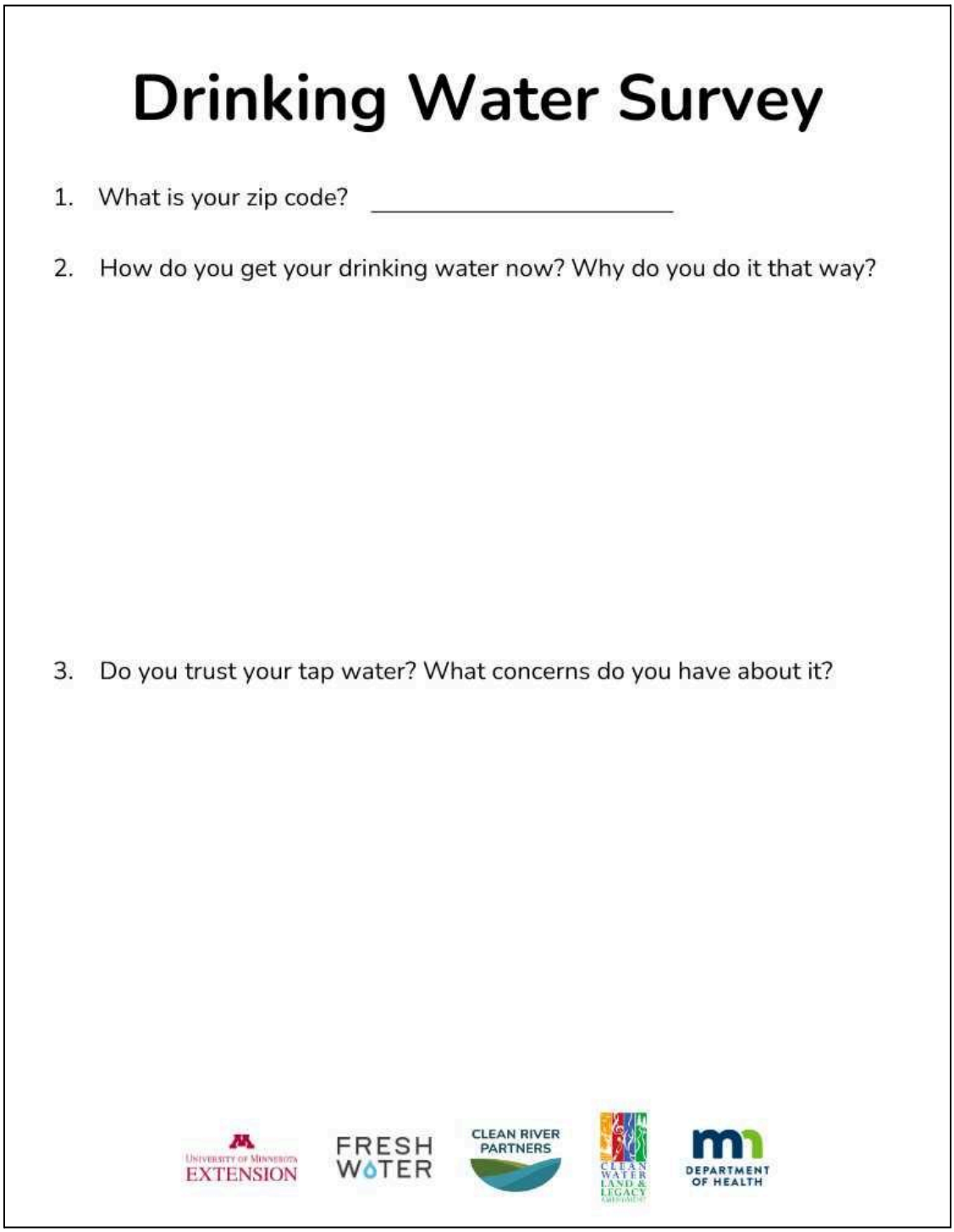
Figure B2: Word Cloud from Little Falls, MN



Appendix C

Drinking Water Survey

Figure C1: English Version of Drinking Water Survey



Drinking Water Survey

1. What is your zip code? _____

2. How do you get your drinking water now? Why do you do it that way?

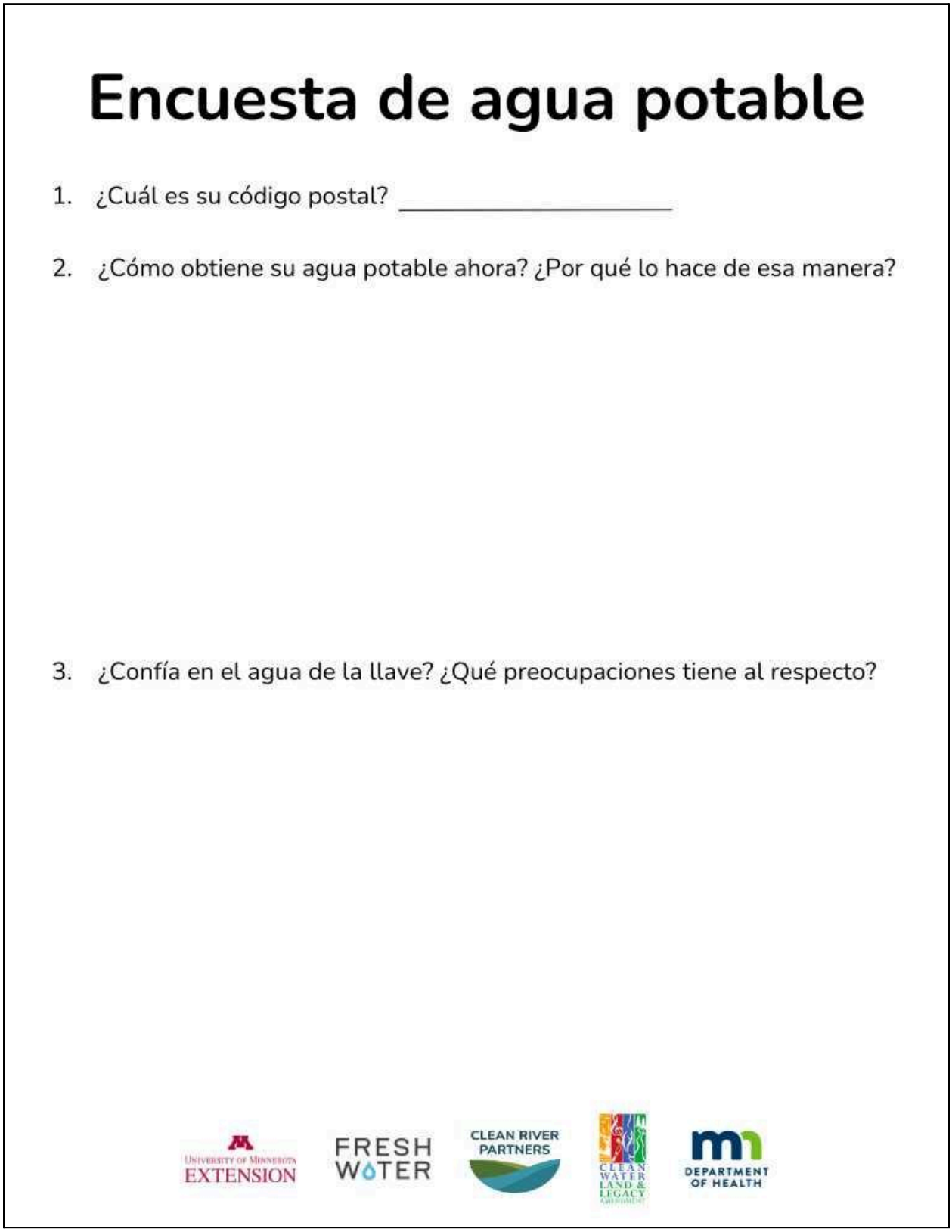
3. Do you trust your tap water? What concerns do you have about it?

University of Minnesota Extension · Fresh Water · Clean River Partners · Clean Water Land & Legacy Amendment · mn Department of Health

4. How do you want to receive communications about your tap water? Check all that apply.

- ◯ Phone call
- ◯ Text
- ◯ Email

Figure C2: Spanish Version of Drinking Water Survey



Encuesta de agua potable

1. ¿Cuál es su código postal? _____

2. ¿Cómo obtiene su agua potable ahora? ¿Por qué lo hace de esa manera?

3. ¿Confía en el agua de la llave? ¿Qué preocupaciones tiene al respecto?

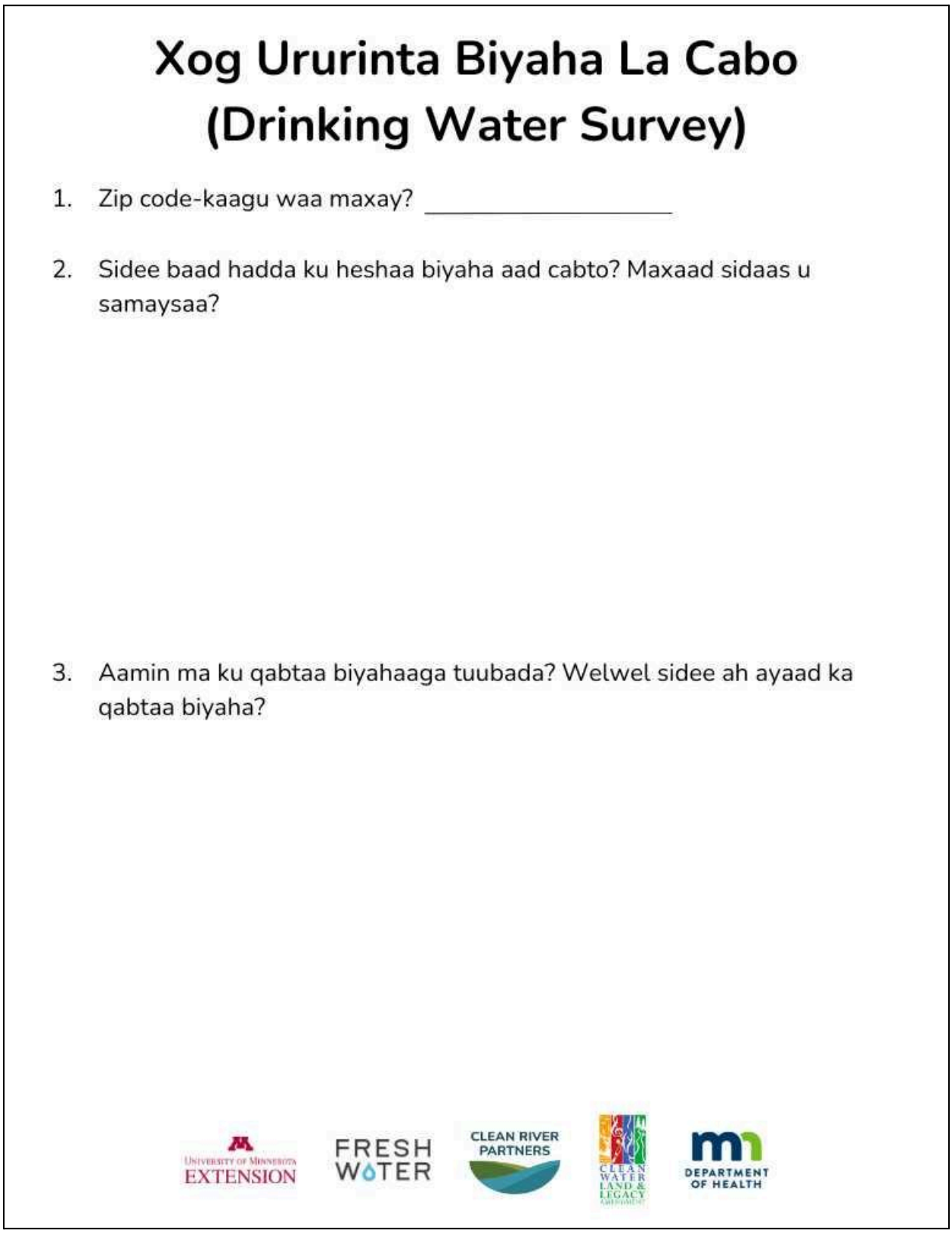
4. ¿Cómo desea recibir comunicaciones sobre su agua de la llave? Marque todo lo que corresponda.

- ◯ Llamada telefónica
- ◯ Texto
- ◯ Correo electrónico
- ◯ Sitio web
- ◯ Medios de comunicación social
- ◯ Medios locales (periódicos, radio, etc.)
- ◯ Boletín informativo
- ◯ Envíos por correo
- ◯ Notificación en la factura del agua
- ◯ Encuestas
- ◯ Reunión de la comunidad
- ◯ Otro:

5. ¿Cómo desea compartir comentarios sobre su agua de la llave? Marque todo lo que corresponda.

- ◯ Llamada telefónica
- ◯ Texto
- ◯ Correo electrónico
- ◯ Sitio web
- ◯ Medios de comunicación social
- ◯ Medios locales (periódicos, radio, etc.)
- ◯ Boletín informativo
- ◯ Envíos por correo
- ◯ Notificación en la factura del agua
- ◯ Encuestas
- ◯ Reunión de la comunidad
- ◯ Otro:

Figure C3: Somali Version of Drinking Water Survey



Xog Ururinta Biyaha La Cabo (Drinking Water Survey)

1. Zip code-kaagu waa maxay? _____

2. Sidee baad hadda ku heshaa biyaha aad cabto? Maxaad sidaas u samaysaa?

3. Aamin ma ku qabtaa biyahaaga tuubada? Welwel sidee ah ayaad ka qabtaa biyaha?

4. Sideed u rabtaa in aad ku hesho warbixinada ku saabsan biyahaaga tuubada? Calaamadee dhammaan inta khuseysa

- ◯ Wicitaan taleefoon
- ◯ Qoraalka baqshadda (text)
- ◯ Eemayl
- ◯ Boga Baraha bulshada
- ◯ Baraha Bulshada/Social Media
- ◯ Wargeysyada maxaliga ah (joornaalka, raadiyaha, iwm.)
- ◯ Warbaahinta gaarka ah
- ◯ Boostada
- ◯ Waraaqaha biilka Biyaha la soo raacsiiyo
- ◯ Xog ururun
- ◯ Shirarka Bulshada
- ◯ Si kale:

5. Sidee/Qaabkee baad rabtaa in aad ula wadaagto jawaab celintaada ku saabsan biyaha tuubada? Calaamadee dhammaan inta khuseysa

- ◯ Wicitaan taleefoon
- ◯ Qoraalka baqshadda (text)
- ◯ Eemayl
- ◯ Boga Baraha bulshada
- ◯ Baraha Bulshada/Social Media
- ◯ Wargeysyada maxaliga ah (joornaalka, raadiyaha, iwm.)
- ◯ Warbaahinta gaarka ah
- ◯ Boostada
- ◯ Waraaqaha biilka Biyaha la soo raacsiiyo
- ◯ Xog ururun
- ◯ Shirarka Bulshada
- ◯ Si kale:

Appendix D

Discussion Questions and Answers

Figure D1: English Version of Discussion Questions

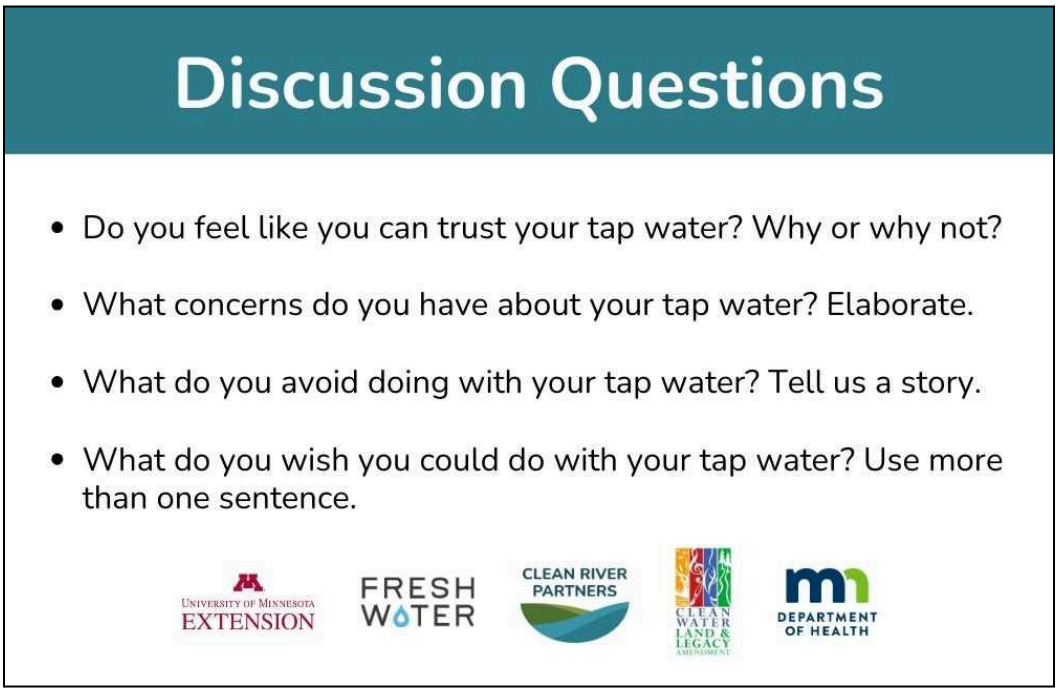


Figure D2: Spanish Version of Discussion Questions

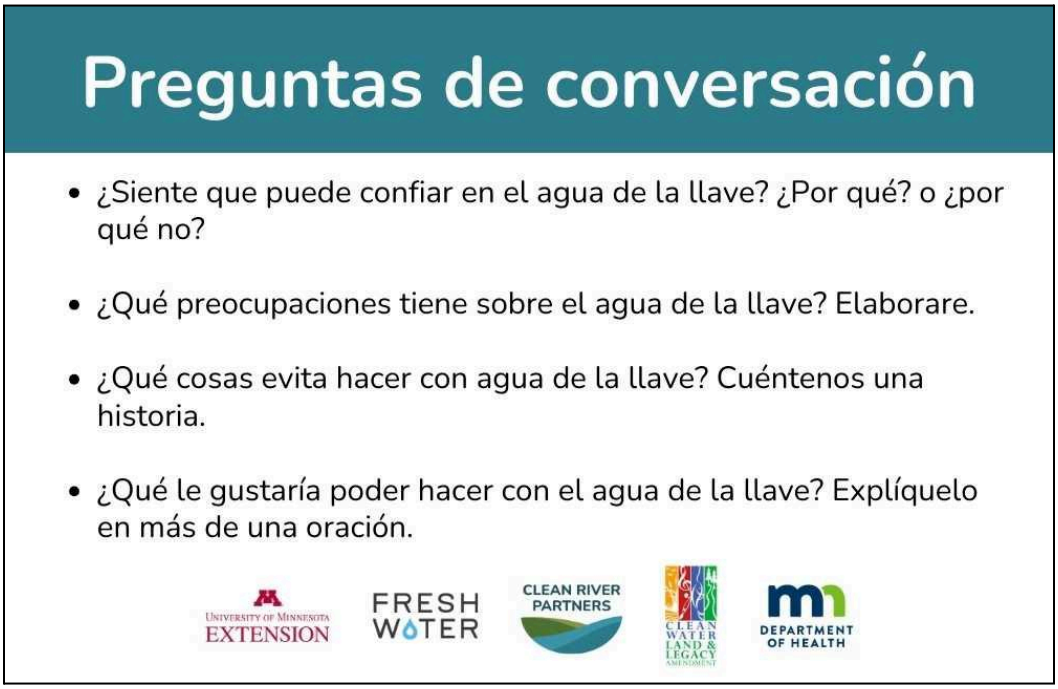


Figure D3: Somali Version of Discussion Questions

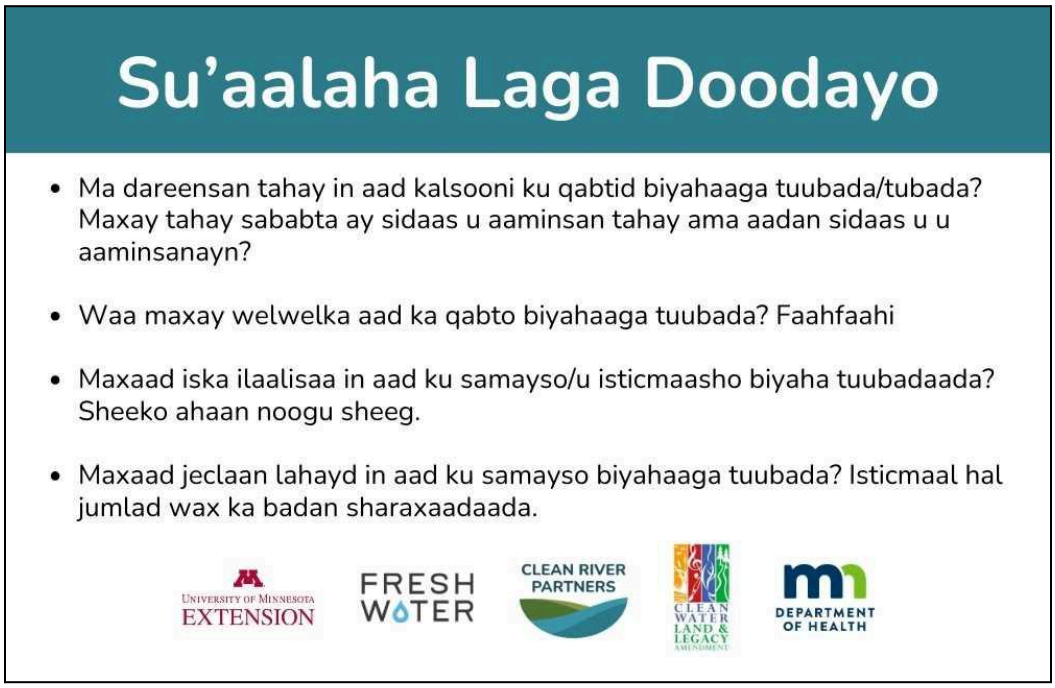


Table D1: Answers to Discussion Question One (Austin, MN)

Do you feel like you can trust your tap water? Why or why not?
some Yes & some No
No, not without a filter.
Older home - not sure of the pipes
peace of mind
I drank the tap water when I lived in Des Moines. I thought it was safe after someone from the government talked to me about how they make it safe.
Yes
Note: Sometimes your cultural background affects how you view the tap water you get.
No, do not trust our water

Table D2: Answers to Discussion Question Two (Austin, MN)

What concerns do you have about your tap water? Elaborate.
Questions? - Who to contact if it feels like the pipe is rusted? Free?/cost?
Rusted pipe
Smell unpleasant - clorine
limestone
Doesn't appear clean
Chemicles - taste

Taste
Old pipe may cause problems
The cycle of water unsure where they go
Treatment (unsure) due to background & Hx
Contamination
Shower? Cooking?
Want to know the mineral content as well.
"The taste of tap water."
More water testing frequently for safe to drink.
Yellow coloring
At times yellow coloring comes out when water is turned on
harsh chemicals
Construction - cutting corners on plumbing at HUD hosing.
gasses in water
The water in my appartment tastes different than the water in a house.
Old pipe
Cloudy water
Smell
Hardness/Calcium/Appiances
Open city communications
Not just hear us but take action to change what is said.
Polyphospate coating
Do we have live organisms in our water that feed on Iron?
Wash windows & let airdry **(Streaks)**
Acquifers
When we moved here wee had better water; since then our filter (whole house) lasts maybe 2-3 months prioor to having to renew!
Iron does affect us; Some more than others! In Washington County I lived Residence 22-1/2 yrs Twin City) We first had own well; then all wells were sealed & we had city water! No more clay mud, very minumal Iron! Plus I added another under sink filtering system!
George Heller 6514289527 I would embrace & enjoy helping in anyway regarding Topics of Surveys/etc
Many more Residents have issues; There are many that are happy our water is wet & that works! **Please** send out a survey to homes and encourage Homeowners to respond honestly**!!!**

Table D3: Answers to Discussion Question Three (Austin, MN)

What do you avoid doing with your tap water? Tell us a story.
Practice - boil water
Our children don't like the taste of city water. The strictly drink bottled water, sadly.
drinking without a filter
Ironing/steamer & aquariums

Table D4: Answers to Discussion Question Four (Austin, MN)

What do you wish you could do with your tap water? Use more than one sentence.
No smell
No bad taste
Appears clear & clean
No color
Continue regular testing
We would like a water filter for home use to make **taste.** Best.
Drink it.
I want the city to share water quality comparisons year to year of our drinking water.
I wish tap water tastes the same **everywhere** some have better taste than others.
turn into wine & drinks.
I wish I could drink the water!!! But I don't trust it when I see orangy color in it :(- is Iron levels ok in our water? How often pipes are flushed in Austin? Does cicy plant interfere with water wells? I avoid cooking or drinking it. Because even when I wash my car if it dries up gets a white build up. I'm very concerned About it :(I wish more people would come out and speak out about it. Also I wish that city would listen to our concerns and not go to Dead Ears - I feel that we pay a lot of money so we deserve Answers

Table D5: Answers to Discussion Question One (Lewiston, MN)

Do you feel like you can trust your tap water? Why or why not?
I don't think we can trust our tap water because of past history of not meeting state drinking water standards. I no longer see stats in the "official paper." In the past we have blended water from several wells to meet state standards for nitrates and naturally occuring radium.
I do not trust my well water neighbor continues to feed livestock above well. Feedlot officer was notified. Trout in stream died. Nitrates are higher then recommended.
Not without testing or treatments
Unless its tested daily, absolutely not -
Yes, I trust my tap water

Table D6: Answers to Discussion Question Two (Lewiston, MN)

What concerns do you have about your tap water? Elaborate.
What are current threats to drinking in SE MN?
Raw crop ag
Voluntary BMPs don't work
Agencies in bed w/ the polluters [public vs. private]
Land conversions are real
Organization using BMP's have no oversight
No limits on nitrogen fertilizer applications rates
No limits on manure applications

Ag cert., & other programs are not working
Manure application make neighbors sick
Myopic focus on soil health
I am a conservationist if you pay me
Anti-organic agriculture
10-15% of land in production could be retired
Need to take the long-term view
What number of water plan are we on?
Overlap of efforts from state-federal & local programs
Pesticides & nitrates go hand-in-hand
Landowners who have not applied pesticides & nitrates are still affected by this pollution - we have a contaminated aquifer problem (PDC & Jordan)
Programs are bridges to a land-use ethic
Troubled by 1960 standards of 10ppm when we know nitrates at 3 are probable carcinogens causing pollutants.
We tested 13.33 ppm in 2019, 19ppm in 2022, organic farm, no animals
1 mile from largest dairy in Winona, Co. seeking wariance. Was denied, in dist. Court.
I Blame the farmer who doesn't follow the rules.
Fish Kills have been caused by manure runoff! This is proven.
Feed lot officers are not doing their job, a new feedlot just was built 1 mile from Utica on 2 sink holes!
A hydration station was put in city hall for a few people to get cleaner water. The rest of the city can drink the unclean water. Is it expensive. well Lewiston has the highest taxes in Winona County.
Largest dairy farm feedlots are not in compliance! Why?
Work with FACTS vs Blame
Multiple efforts towards resolutions for clean water **need** to happen **simultaneously.**
Sink hole contaminations - seal sink holes - responsibility of landowner.
Nitrates continuing to rise regardless of farmer's change in practice - **WHY?**
Need financial assistance - **Incentives?**
$$$ to translate olmsted cty practices to other areas
Identify sources of persons not following practices -
Changes in WQ - will it get better or worse?
How old is my water?
Need to separate health aspect of private wells (immediate need) v. aspiration for public health (long-term improvement)
Public & Private Tiling
dumping H2O in ditches & streams, surface H2O
How much do you pay for water? $50 @month in Rochester, $90 every quarter in Winona
Peonies love pee -

Table D7: Answers to Discussion Question Three (Lewiston, MN)

What do you avoid doing with your tap water? Tell us a story.
We avoid do anything we ingest.
We don't drink our water or wash our food
I won't use tap water to cook with.
Cooking a drinking untreated or untested water
Only bathing, but now nitrates absorb thru skin
Install RO system
No, I'm good
No, I have city H2O, I rely on the city
No, don't use Winona City tap water for cooking, drinking
don't use tap water for anything in yard. Tested brother's well in Eyota the other day - no cholrine

Table D8: Answers to Discussion Question Four (Lewiston, MN)

What do you wish you could do with your tap water? Use more than one sentence.
Not spend so much personal money on mediation. Water filters, drinking water, and municipal water bill
With a polluted private well we have lost a great asset to our farm property
We wish our city council would drink tap water at their monthly meeting rather than bottled water.
Age date it. How old is it?
Afford a new well

Table D9: Answers to Discussion Question One (Little Falls, MN)

Do you feel like you can trust your tap water? Why or why not?
No - no affordable method to test tap water at home
Yes!!! Good Well. Good Treatment. New Pipes.
Live in building from 1980s so not worried about lead.
Uses filter (Brita) for cold & refreshing water.
No, it is high in nitrates and bacteria
Nitrates is a big concern, living in an agricultural area w/ feedlots nearby, irrigated potato ground can cause nitrate increases
Drinkinig it w/o a filter
Get drinking water from a drilled well. I also wish I didn't have to have a UV filter or reverse osmosis system.
I trust my tap water via city.
I trust the expertise of city employees.
Tap water in Little Falls is great.

Table D10: Answers to Discussion Question Two (Little Falls, MN)

What concerns do you have about your tap water? Elaborate.
Concerns - flouride, toxins
If in a house with old pipes, lead.
Making sure I hear about announcements from city about issues with water (like if a boil water announcement went out -missed previously)
Sometimes it smells like chlorine.
Sometimes it has lots of bubbles like its beeing aerated.

Table D11: Answers to Discussion Question Three (Little Falls, MN)

What do you avoid doing with your tap water? Tell us a story.
AVOID - drinking & cooking
In city always filtered water before drinking/cooking - not worried in Little Falls.
Concerned about chlorine for watering plants
Nothing

Table D12: Answers to Discussion Question Four (Little Falls, MN)

What do you wish you could do with your tap water? Use more than one sentence.
We wish we could trust it
Water plants
Never have to worry about lead
Visiting friends with wells and not having to worry about their water quality
I wish I could use it in my Netti pot instead of distilled bottled water.

Table D13: Answers to Discussion Question One (Northfield, MN)

Do you feel like you can trust your tap water? Why or why not?
lived here long time drink water no problems
told when flush water
tested often
vivi aqui mucho tiempo sin problemas
In Mexico some places can't drink
give to pets no problems
Feel better water Viking Terrace - water cloudy
informada sobre el lavado de aqua
Yes. We haven't had issues over 18 years
Everything unless it comes out a different color.
We agree the water is great drinking water and have no issues on making it better.
Yes, we trust our tap water filtered -chem. -reduction of manganese

Table D14: Answers to Discussion Question Two (Northfield, MN)

What concerns do you have about your tap water? Elaborate.
Manganese - what do?
Food down sink
Micropastics
Pesticides
PFAS = For even chemicals
Shortage. Contamination
The clean/dirty time of nasty looking water
taste of clorox

Table D15: Answers to Discussion Question Three (Northfield, MN)

What do you avoid doing with your tap water? Tell us a story.
water some plants
not avoid anything
let run 1st
There's nothing we don't do with the water Since we've received multiple confirmation on the safety and quality of the water
Drink it, **waste** it, non-renewal, skin & health care

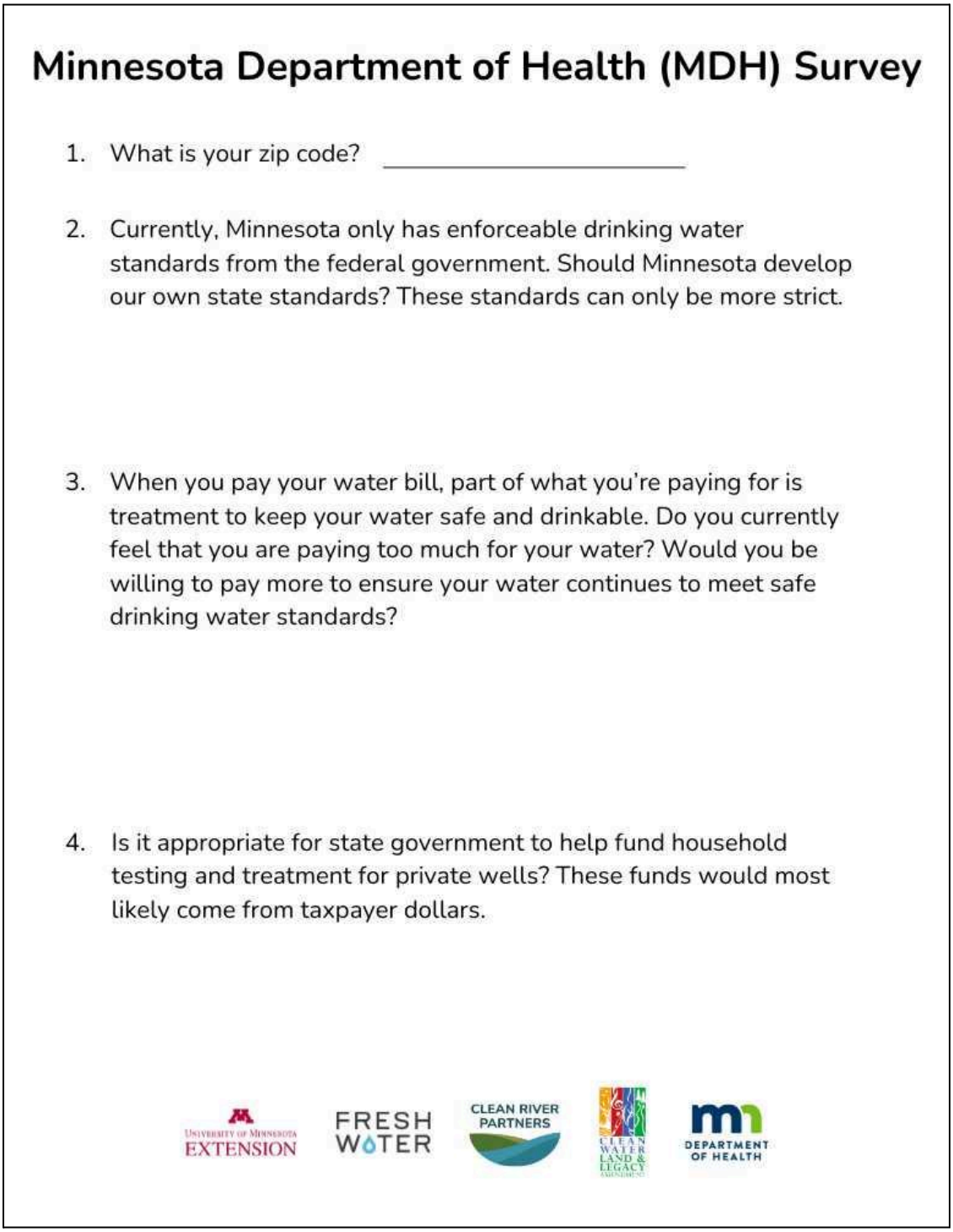
Table D16: Answers to Discussion Question Four (Northfield, MN)

What do you wish you could do with your tap water? Use more than one sentence.
nothing can think of

Appendix E

MDH Feedback Survey

Figure E1: English Version of MDH Feedback Survey



Minnesota Department of Health (MDH) Survey

1. What is your zip code? _____

2. Currently, Minnesota only has enforceable drinking water standards from the federal government. Should Minnesota develop our own state standards? These standards can only be more strict.

3. When you pay your water bill, part of what you're paying for is treatment to keep your water safe and drinkable. Do you currently feel that you are paying too much for your water? Would you be willing to pay more to ensure your water continues to meet safe drinking water standards?

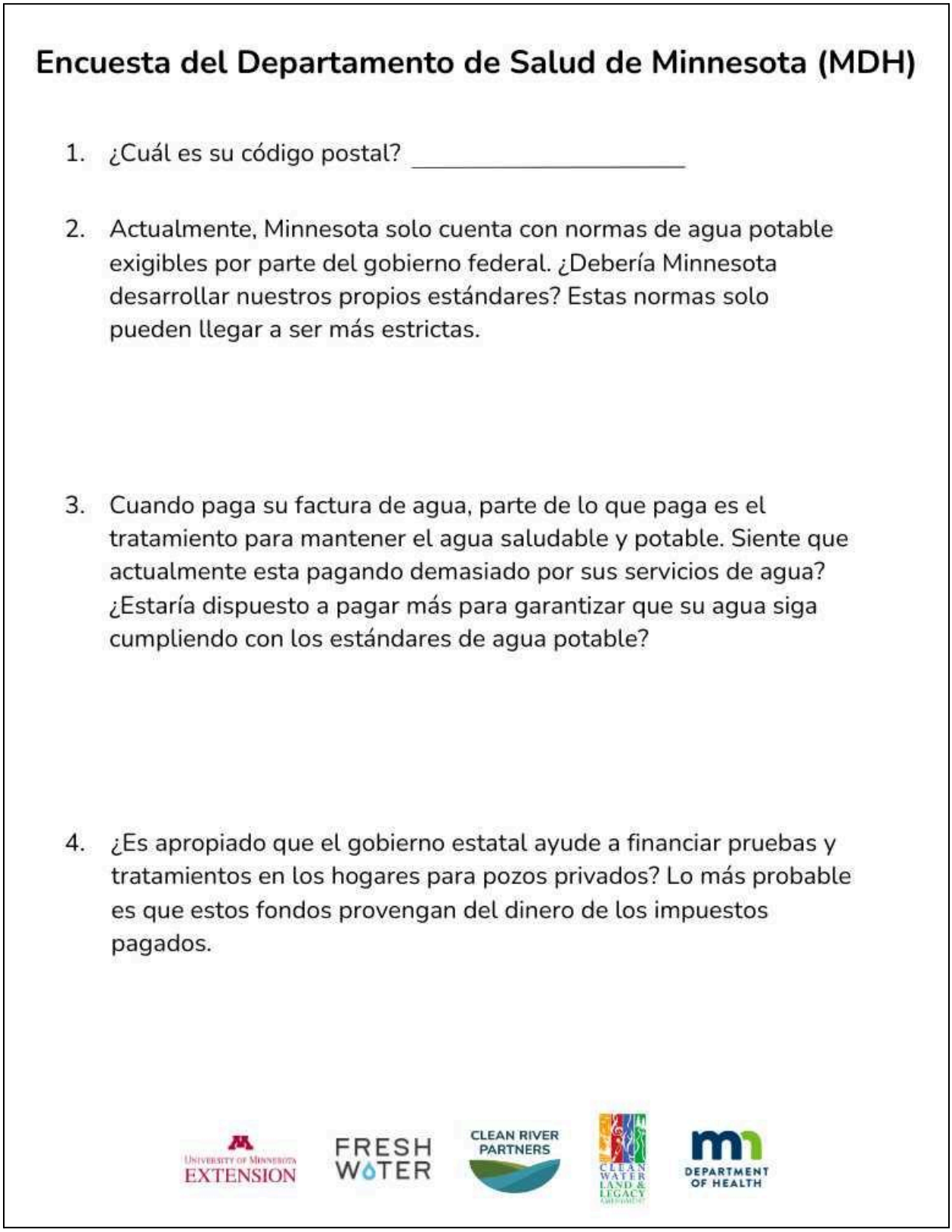
4. Is it appropriate for state government to help fund household testing and treatment for private wells? These funds would most likely come from taxpayer dollars.

5. Looking at the list of Goals and Strategies from MDH, is there anything that you believe is missing from this list? Anything that jumps out to you?

6. What do you want the State of Minnesota to do for drinking water in the next 10 years?

7. What's the most important thing that you want MDH to know as they create this plan?

Figure E2: Spanish Version of MDH Feedback Survey



Encuesta del Departamento de Salud de Minnesota (MDH)

1. ¿Cuál es su código postal? _____

2. Actualmente, Minnesota solo cuenta con normas de agua potable exigibles por parte del gobierno federal. ¿Debería Minnesota desarrollar nuestros propios estándares? Estas normas solo pueden llegar a ser más estrictas.

3. Cuando paga su factura de agua, parte de lo que paga es el tratamiento para mantener el agua saludable y potable. Siente que actualmente esta pagando demasiado por sus servicios de agua? ¿Estaría dispuesto a pagar más para garantizar que su agua siga cumpliendo con los estándares de agua potable?

4. ¿Es apropiado que el gobierno estatal ayude a financiar pruebas y tratamientos en los hogares para pozos privados? Lo más probable es que estos fondos provengan del dinero de los impuestos pagados.

5. ¿Mirando la lista de objetivos y estrategias de MDH, hay algo que cree que falta en esta lista? ¿Hay algo que le llame la atención?

6. ¿Qué quiere que haga el estado de Minnesota con respecto al agua potable en los próximos 10 años?

7. ¿Qué es la cosa más importante que usted quiere que MDH sepa mientras crean este plan?

Figure E3: Somali Version of MDH Feedback Survey

Xog Ururinta Waaxda Caafimaadka ee Minnesota (MDH Feedback Survey)

1. Zip code-kaagu waa maxay? _____

2. Waqtigan xaadirka ah, Minnesota kaliya ayaa ka leh gobalada federaalka dhamaantood shuruucda heerarka biyaha la cabbo oo la fulin karo. Miyay Minnesota u baahan tahay in ay sameysato shuruucda heerarka biyaha oo u gaar ah gobolkeena? Heerarkaan waxay noqon karaan oo kalliya kuwo aad u adag.

3. Marka aad bixiso biilkaaga biyaha, qayb ka mid ah lacagta aad bixiso waxaa loo isticmaalaa daawaynta biyaha si ay biyahaada u ilaaliso ugana dhigto kuwo ammaan ah oo la cabbi karo. Miyaad hadda dareemeysaa in aad lacag badan ku bixiso biyahaaga? Ma doonaysaa in aad lacag badan ku bixiso si aad u hubiso in biyahaagu ay sii ahaadaan kuwo buuxinaya heerarka loo dejiyay biyaha la cabbo ee badbaadada leh?

4. Miyey habboon tahay in dawlad goboleedku ka caawiso qoysaska maalgelinta baarista iyo daawaynta ceelasha gaarka loo leeyahay? Lacagahani waxay u badan tahay in ay ka timaado lacag laga soo jaray cashuur bixiyayaasha.

5. Adiga oo eegaya liiska Yoolalka iyo Istiraatiijiyaha MDH, miyey jiraan waxyaalo aad aaminsan tahay in ay liiskaan ka maqan yihiin? Ma jiraan wax isla markiiba kugu soo dhacay?

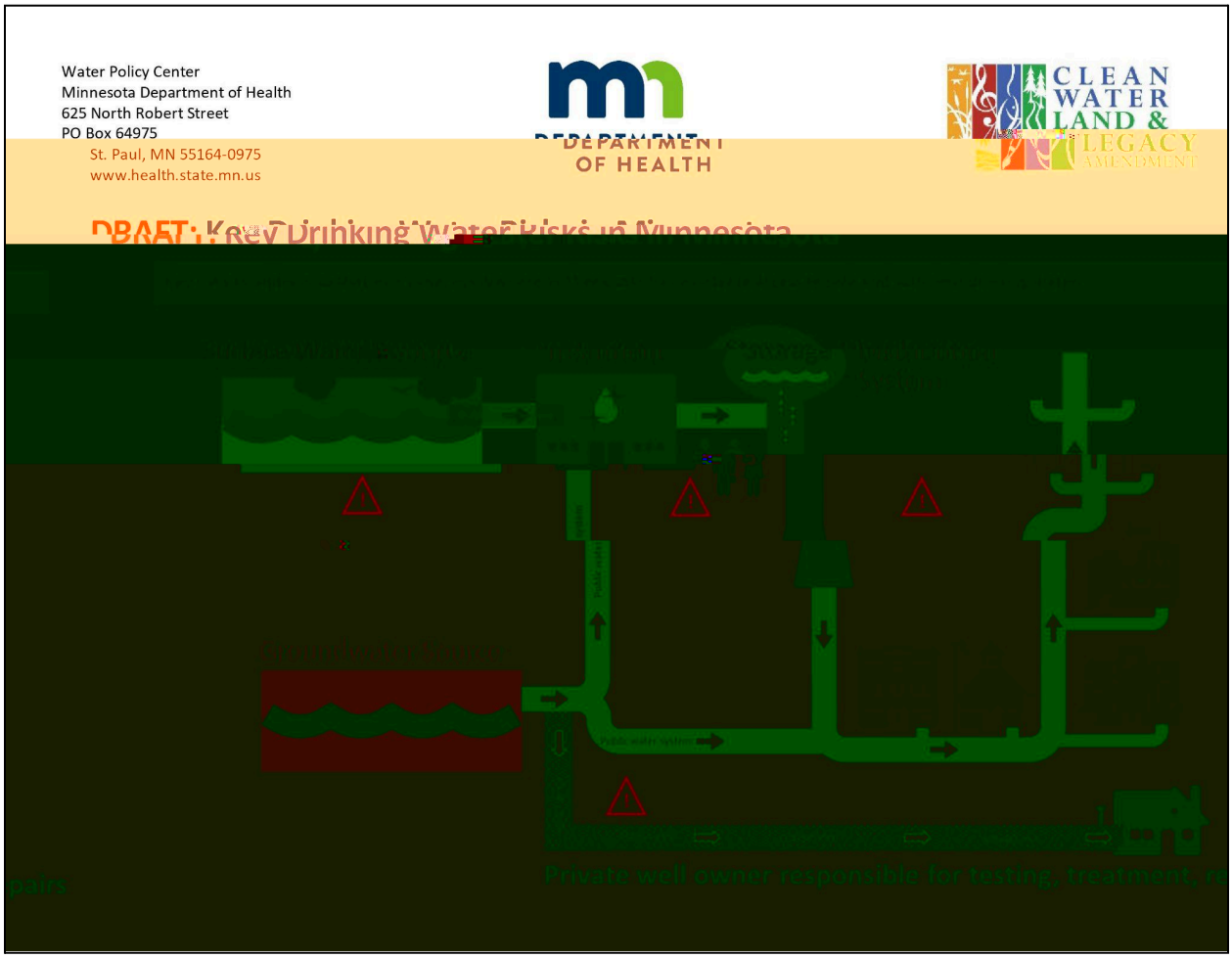
6. Maxaad ka rabtaa Gobolka Minnesota in uu ka sameeyo biyaha la cabbo 10 ka sano ee soo socota?

7. Maxay tahay waxa ugu muhiimsan ee aad rabto in MDH ay ogaato marka ay qorshahan samaynayaan?

Appendix F

MDH Goals and Strategies Handout

Figure F1: MDH Goals and Strategies Handout (English Only)



Draft: Proposed Goals and Strategies to Address Risks

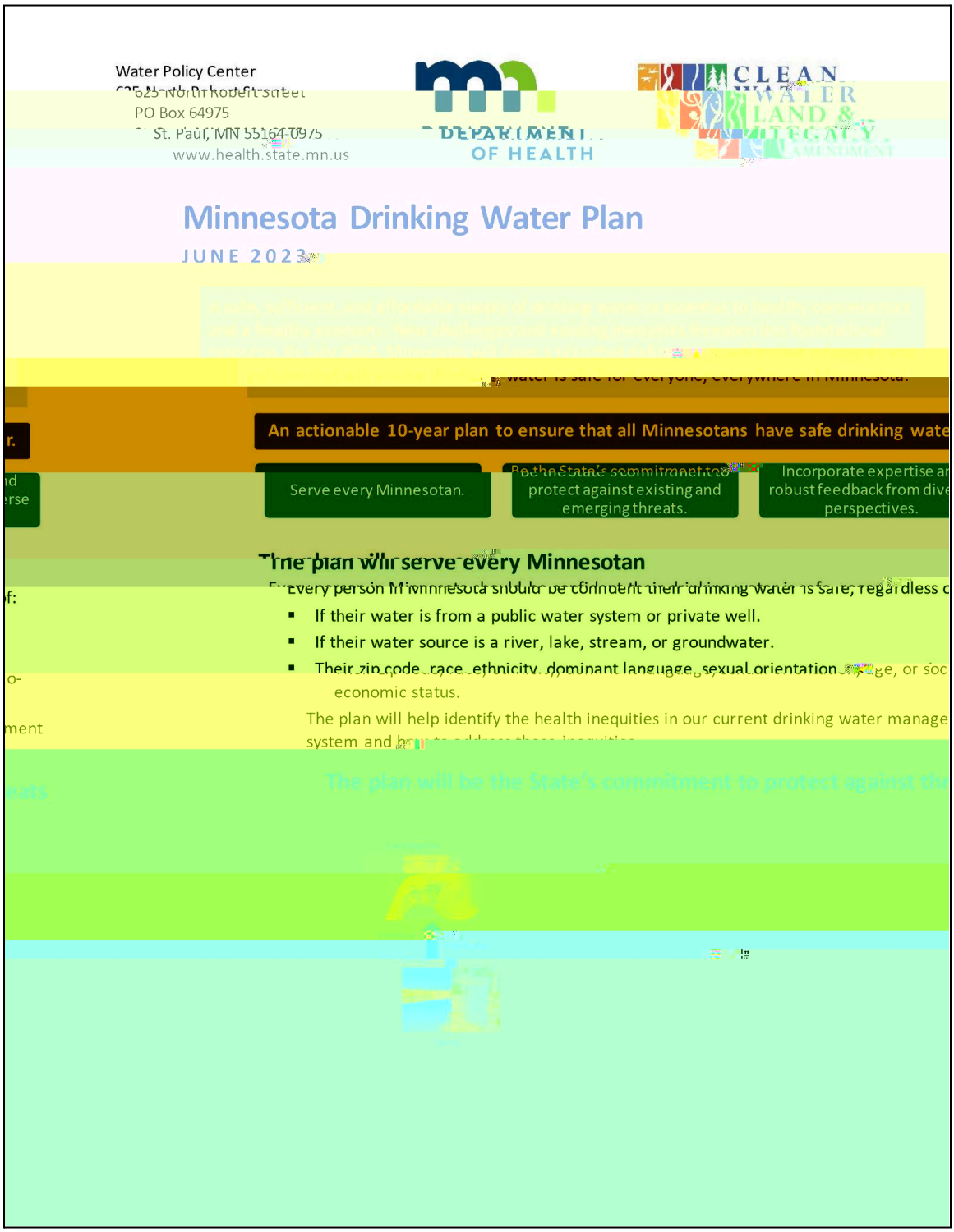
Everyone, everywhere in Minnesota has equitable access to safe and sufficient drinking water.

Protect sources of drinking water	Identify and manage potential threats around drinking water sources for public water systems and private wells.
	Emphasize source water protection in watershed management.
	Educate about and enforce rules and ordinances that help protect sources of drinking water.
Establish resilient drinking water infrastructure	Support communities with asset management and resiliency planning for drinking water infrastructure.
	Support and grow the public water system and well contractor workforce.
	Update and build resilient data systems.
Ensure safe tap water	Strengthen implementation of the Safe Drinking Water Act for public water systems.
	Support smaller public systems.
	Establish equitable access to private well testing and remediation.
Anticipate and manage emerging risks	Monitor drinking water sources for emerging contaminants and diseases.
	Understand how humans may be affected by unregulated contaminants and eme
	Prioritize emerging risks that present the largest public health burden.
	Advance laboratory capacity and methods to deal with emerging risks.
	Coordinate efforts to manage emerging risks to drinking water.
	Advance policies to deal with emerging risks.
Engage partners	Communicate with and support the regulated community.
	Provide partners and residents with data on risks and challenges to safe
	Facilitate outreach and education to communities affected by human
	Leverage advisory councils to understand and prioritize challenges to

Appendix G

MDH Drinking Water Plan Handout

Figure G1: English Version of MDH Drinking Water Plan Handout



The plan will incorporate diverse expertise and feedback

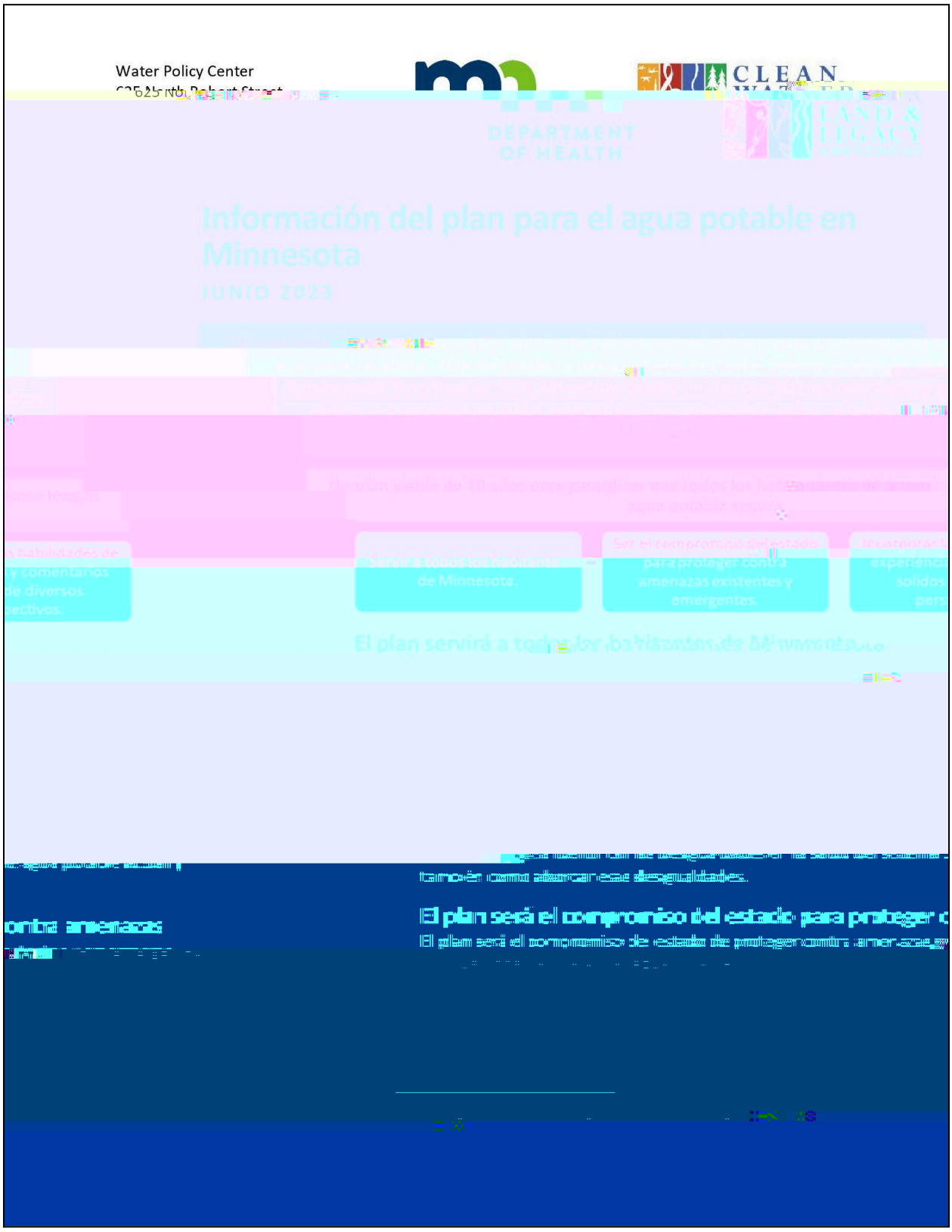
Through partnership with the University of Minnesota Water Resources Center (UMN), the plan will incorporate expertise and feedback from multiple perspectives. The UMN will gather this feedback through three stages and platforms:

N will work with partners to conduct an independent
n water resource professionals; state, local and tribal
vater academic experts. The assessment will examine the
tes governance and management, **efficiency** of im
ng water, and **trust** in the drinking water system and inclusiveness of

e UMN and partners will invite public water system customers and
to provide feedback on the general plan content, priorities, and

- **Assess governance**: The UM
  Governance Assessment wit
  governments; and drinking w
  effectiveness of drinking wa
  and delivery of drink
  diverse interests.[2]
- **Public meetings**: The
  private well users
  academic experts
  recommendations
- **Comment**

Figure G2: Spanish Version of MDH Drinking Water Plan Handout

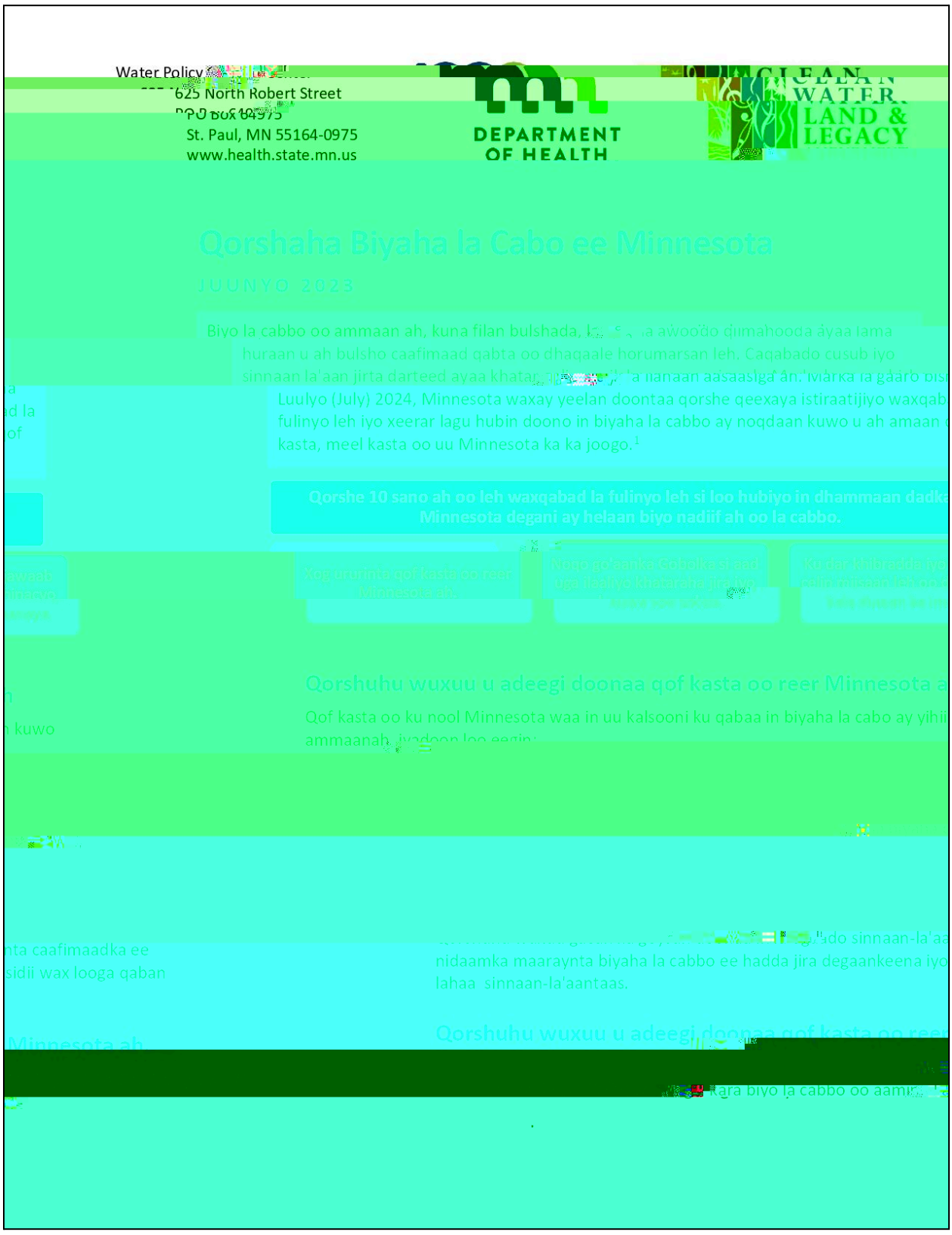


El plan:

- Abordar las amenazas y oportunidades empezando desde la fuente de agua hasta el consumo humano.
- Orientar y dialogar sobre el trabajo de todos los organismos estatales relacionados con el agua potable desde el origen hasta el

El plan incorporara diversas habilidades de experiencia y opiniones

Figure G3: Somali Version of MDH Drinking Water Plan Handout



Koox	Qiimee maamulka (Guga [Spring] 2023)	Soo bandhigga jawaab celinta shaqsi ahaaneed ee qorshaha qabyada ah (Dayrta [Fall]/Jiilaalka [Winter] 2023)	Faalada onlayn ee qorshaha dib loo eegay (Guga [Spring] 2023)
Khubarada Tacliinta Sar	✓	✓	✓
Dadka isticmaala ceelasha gaarka loo leeyahay		✓	✓
Macaamiisha nidaamka biyaha dadweynaha		✓	✓

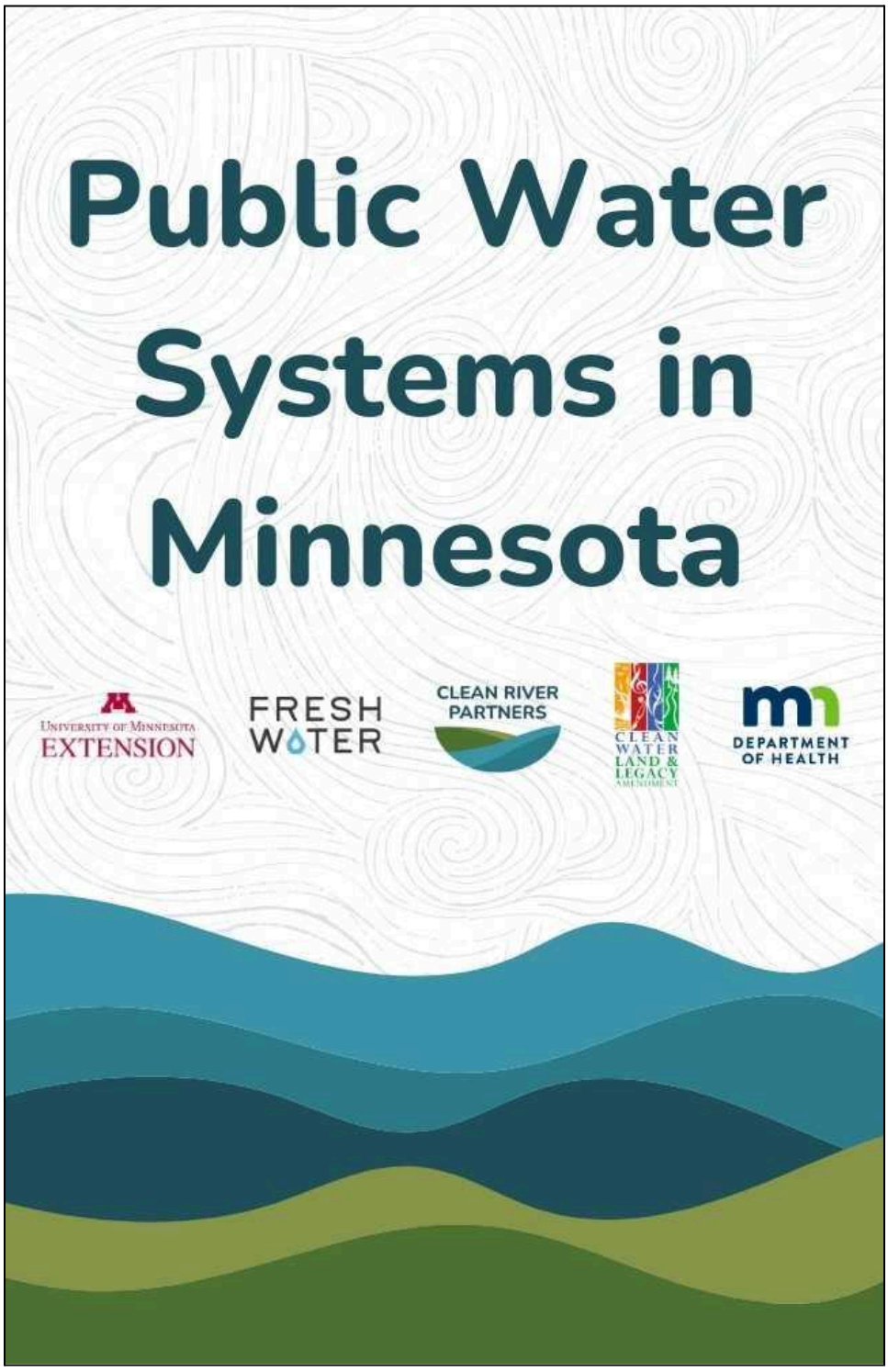
06/21/2023

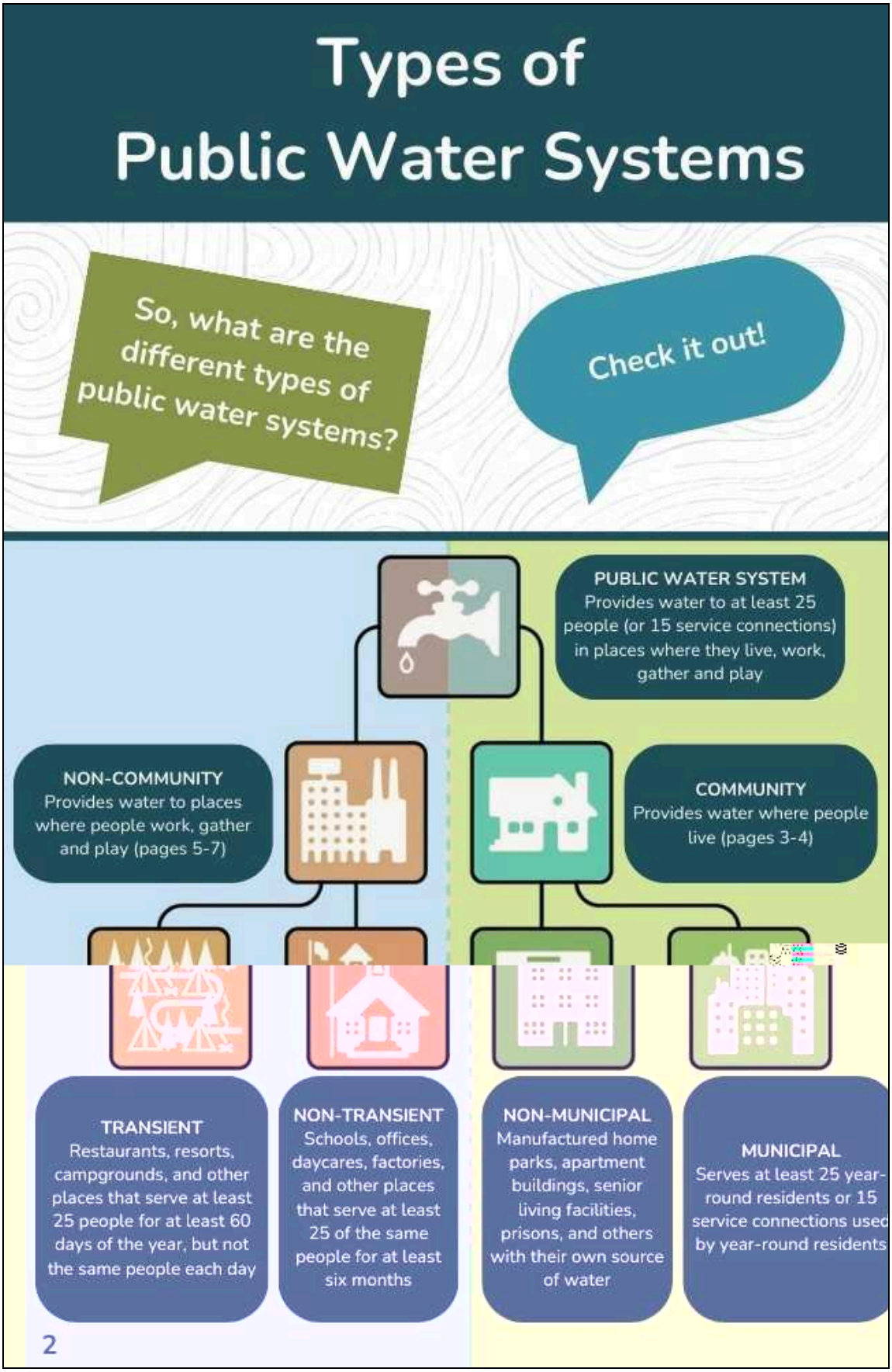
Si aad xogtan u hesho qaab sidaan ka duwan, wac: 651-201-4547

Appendix H

Public Water Systems Handout

Figure H1: English Version of Public Water Systems Handout




Types of Public Water Systems
So, what are the different types of public water systems?
Check it out!
PUBLIC WATER SYSTEM
Provides water to at least 25 people (or 15 service connections) in places where they live, work, gather and play
NON-COMMUNITY
Provides water to places where people work, gather and play (pages 5-7)
COMMUNITY
Provides water where people live (pages 3-4)
TRANSIENT
Restaurants, resorts, campgrounds, and other places that serve at least 25 people for at least 60 days of the year, but not the same people each day
NON-TRANSIENT
Schools, offices, daycares, factories, and other places that serve at least 25 of the same people for at least six months
NON-MUNICIPAL
Manufactured home parks, apartment buildings, senior living facilities, prisons, and others with their own source of water
MUNICIPAL
Serves at least 25 year-round residents or 15 service connections used by year-round residents
2

Community Systems

Community Systems provide water *where people live.*

A Municipal Community System serves at least 25 year-round residents or 15 service connections used by year-round residents.

Some examples of **Non-Municipal Community Systems** include manufactured home parks, apartment buildings, senior living facilities, prisons, and other systems with their own sources of water.

3

Community Requirements

Minnesota's public water supply systems are **tested on a regular basis** for bacteria, nitrates and other inorganic chemicals, radiological elements, and up to 118 different industrial chemicals and pesticides. The exact list of contaminants—and the testing schedule—can vary from one system to another.

Minnesotans enjoy one of the best drinking water protection systems in the nation. Minnesota's public water systems overall have high compliance with the Safe Drinking Water Act and do much better than the national average. Our public water systems work hard to provide consumers with **safe and reliable drinking water** that meets state and federal water quality requirements.

4

Non-Community Systems

Non-Community Systems provide water *where people work, gather, and play.*

Transient Non-Community Systems are restaurants, resorts, campgrounds, and other places that serve at least 25 people for at least 60 days of the year, but not the same people every day.

Non-Transient Non-Community Systems are schools, offices, daycares, factories, and other places that serve at least 25 of the same people for at least six months.

5

Non-Community Requirements

Transient Non-Community Systems

Transient Non-Community Systems **must test for bacteria, nitrates, and nitrites**, which can have acute health effects and make you sick within 24 hours.

If any of the samples **contain a contaminant above the Maximum Contaminant Level (MCL)**, MDH will work with the system in resolving the issue. Additional samples may be required to confirm the presence of the contaminant. If contamination is confirmed, **the system is required to notify its users and corrective actions must be taken**. Corrective actions may include repairs, disinfection, treatment, or drilling a new well.

6

Where to Find Info on Public Water Systems

If your home is served by a public water system, you will receive a water bill on a regular basis!

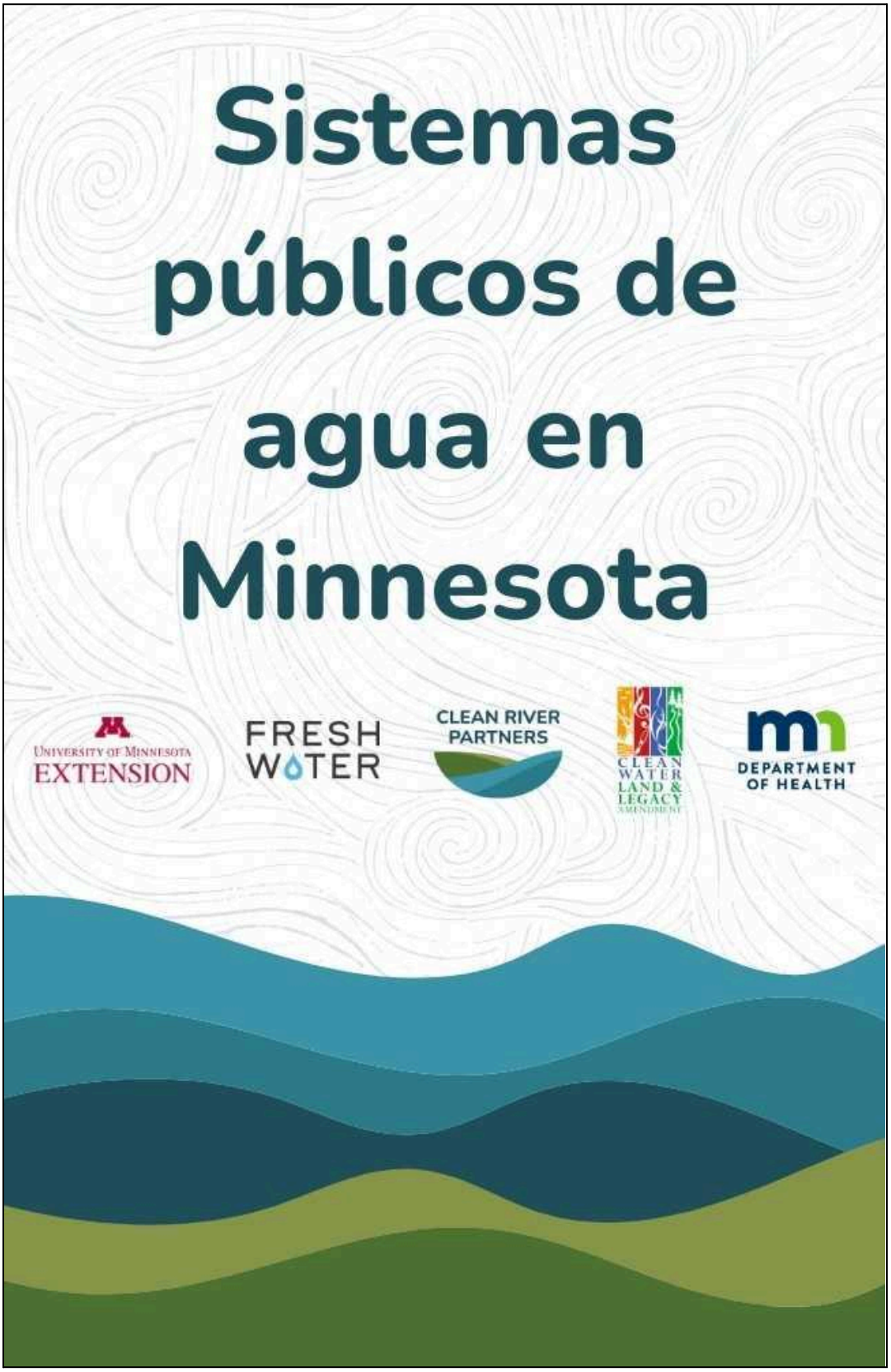
Your water provider is required to test their water sent to users and provide a consumer report of their findings. Check out consumer confidence reports by scanning this QR code or visiting this link: https://tinyurl.com/consumerreportsMN

Public Water Systems are regulated through the **Safe Drinking Water Act**. You can find more information by scanning this QR code or visiting this link: https://tinyurl.com/MNsafedrinkingwateract

To learn more about the different types of water contaminants in Minnesota, scan this QR code or visit this link: https://tinyurl.com/contaminantsMN

8

Figure H2: Spanish Version of Public Water Systems Handout




Tipos de Sistemas de Agua Públicos
¿Entonces, cuáles son los diferentes tipos de sistemas de agua públicos?
¡Echale un vistazo!

Sistemas Comunitarios

Sistemas Comunitarios proporcionar agua a donde viven las personas.

Un sistema comunitario Municipal Sirve a residentes de 25 años o a 15 conexiones de servicio usadas por el residente el año entero.

Algunos ejemplos de **sistemas comunitarios no municipal** incluyen parques de casas fabricadas, edificios de apartamentos, instalaciones para personas mayores, prisiones y otros lugares con su propia fuente de agua.

3

Requisitos de la Comunidad

Los sistemas públicos de suministro de agua de Minnesota se **analizan periódicamente** para detectar bacterias, nitratos y otras sustancias químicas inorgánicas, elementos radiológicos y hasta 118 diferentes sustancias químicas y pesticidas industriales. La lista exacta de contaminantes y el horario de análisis. Puede variar de un sistema a otro.

Los habitantes de Minnesota disfrutan de uno de los mejores sistemas de protección de agua potable del país. Los sistemas públicos de agua de Minnesota en general tienen alto cumplimiento de la Ley de Agua Potable Segura y lo hacen mucho mejor que el promedio nacional.

Nuestros sistemas públicos de agua trabajan arduamente para brindarles a los consumidores agua potable segura y confiable que cumpla con los requisitos estatales y federales de calidad del agua.

Sistemas No Comunitarios

Los sistemas no comunitarios proporcionan agua dende la gente trabaja, se reúne y juega.

Los sistemas no comunitarios transitorios son restaurantes, complejos turísticos, campamentos y otros lugares que atienden al menos a 25 personas por lo menos 60 días del año, pero no a las mismas personas todos los días.

Los sistemas no comunitarios no transitorios son escuelas, oficinas, guarderías, fábricas y otros lugares que atienden al menos a 25 de las mismas personas durante al menos.

5

Requisitos No Comunitarios

Sistemas Transitorios No Comunitarios

Los sistemas transitorios no comunitarios **deben realizar pruebas de bacterias, nitratos y nitritos**, que pueden tener efectos graves en la salud y causar enfermedad dentro de 24 horas.

Si alguna de las muestras **contiene un contaminante por encima del nivel máximo de contaminante (MCL)**, el MDH trabajará con el sistema para resolver el problema. Es posible que se requieran muestras adicionales para confirmar la presencia del contaminante. Si se confirma la contaminación, se requiere que el sistema notifique a sus usuarios y se deben tomar acciones correctivas. Las acciones correctivas pueden incluir reparaciones, desinfección, tratamiento o perforación de un pozo nuevo.

6

Requisitos No Comunitarios

Sistemas No Comunitarios No Transitorios

Instalaciones como escuelas, oficinas, fábricas y guarderías se analizan para detectar los siguientes contaminantes: arsénico, bacterias, cobre, plomo, nitratos, nitritos, sustancias químicas orgánicas volátiles, sustancias químicas orgánicas solubles y sustancias químicas inorgánicas.

Estas instalaciones se **analizan al menos una vez al año** para detectar bacterias y nitratos. También se analizan para detectar contaminantes como pesticidas, solventes y metales. Los contaminantes se prueban a diferentes frecuencias. La frecuencia dependerá del tipo de contaminantes y de los resultados previos.

Si alguna de las muestras **contiene un contaminante por encima del MCL**, el proceso correctivo es el mismo que el de los sistemas transitorios no comunitarios (consulte la página 6).

Dónde encontrar información sobre los sistemas públicos de agua

Si su casa cuenta con un sistema público de agua, ¡Recibirá una factura de agua periódicamente!

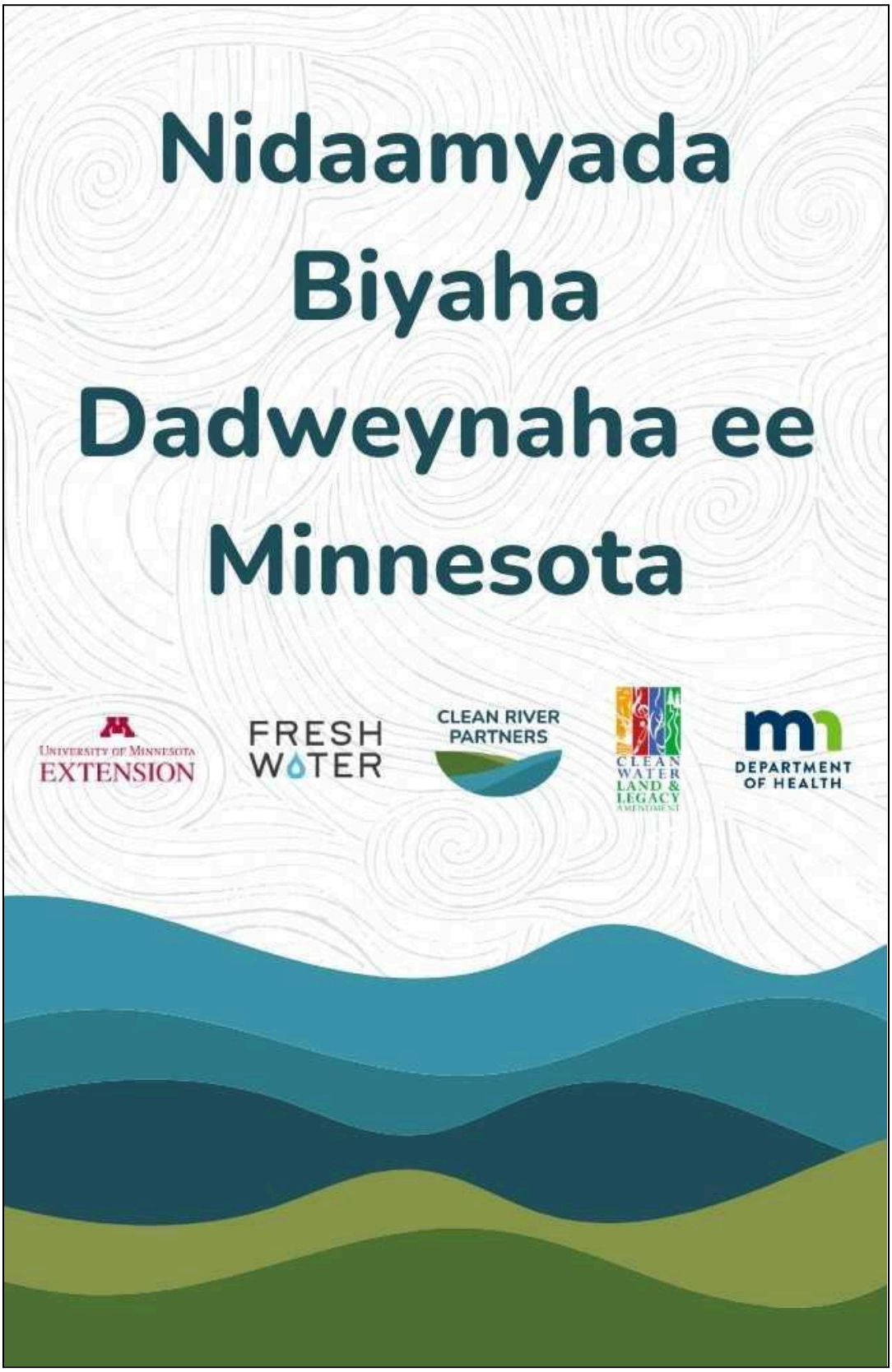
Su proveedor de agua debe analizar el agua enviada a los usuarios y proporcionar un informe al consumidor sobre sus hallazgos. Consulte los informes de confianza del consumidor escaneando este código QR o visitando este enlace: https://tinyurl.com/consumerreportsMN

Los sistemas públicos de agua están regulados a través de la **ley de agua potable segura.** Puede encontrar más información escaneando este código QR o visitando este enlace: https://tinyurl.com/MNsafedrinkingwateract

Para obtener mas información sobre los diferentes tipos de contaminantes del agua en Minnesota, escanee este código QR o visite este enlace: https://tinyurl.com/contaminantsMN

8

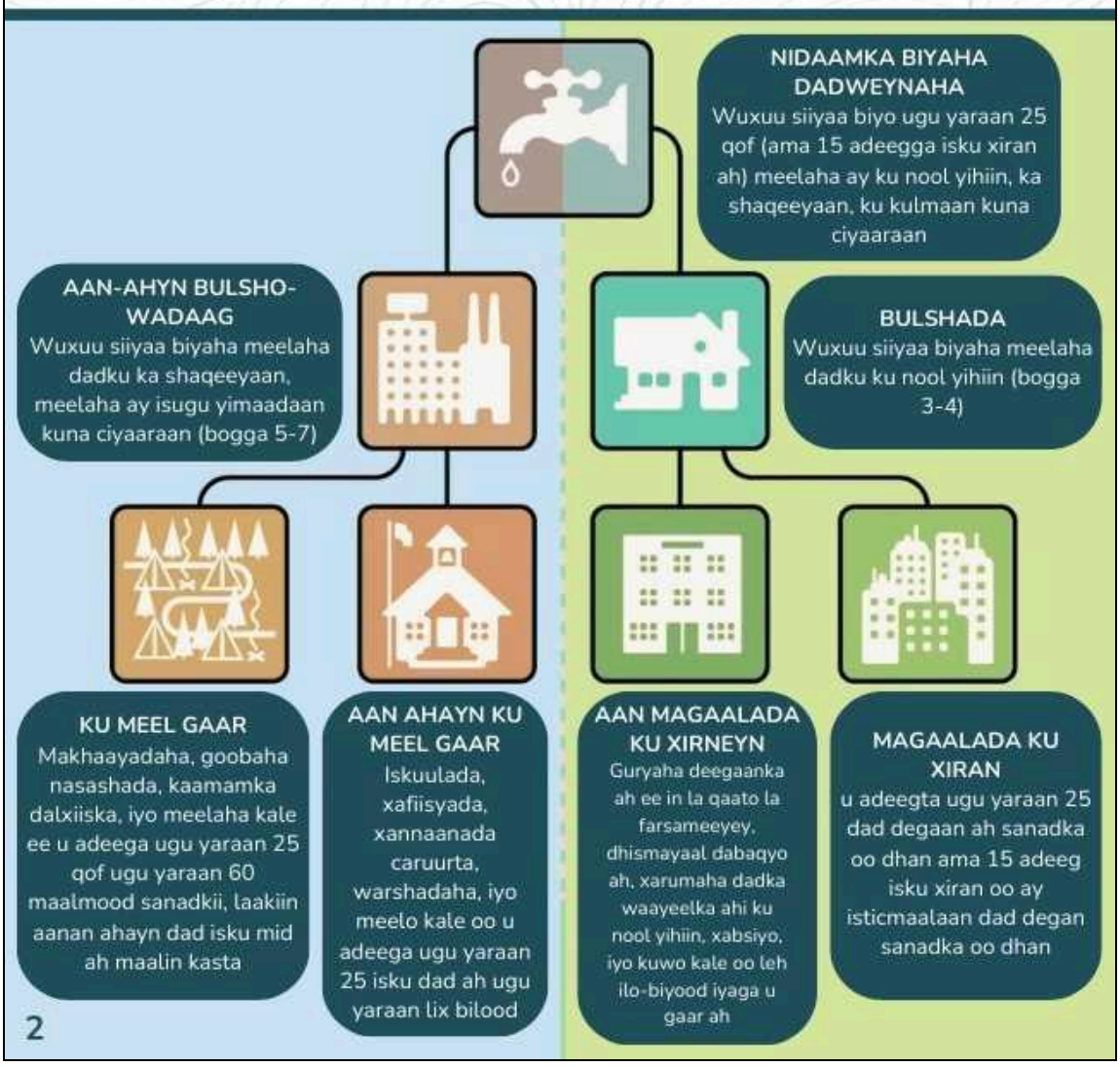
Figure H3: Somali Version of Public Water Systems Handout



Noocyada Nidaamyada Biyaha Dadweynaha

Haddaba, maxay yihiin noocyada kala duwan ee hababka biyaha dadweynaha?

Iska hubi!



Nidaamyada Bulshada

Nidaamyada bulshadu waxay siiyaan biyaha meelaha dadku ku nool yihiin.

Nidaamka Bulshada Degmada wuxuu u adeegaa ugu yaraan 25 qof oo sanadka oo dhan degan meel ama 15 adeeg isku xiran ah oo ay isticmaalaan dad degan sanadka oo dhan.

Tusaaleyaasha **Nidaamyada Bulshada Aan ahay Dawladda Hoose** ahayn waxaa ka mid ah guryaha deegaanka ah ee in la qaato la farsameeyey, dhismayaal dabaq ah, xarumaha dadka waayeelka ahi ku nool yihiin, xabsiyo, iyo nidaamyo kale oo leh ilo-biyoodyo iyaga u gaar ah.

3

Shuruudaha Bulshada

Nidaamyada biyaha dadweynaha ee Minnesota laga cabo **waxaa si joogto ah looga baaraa** bakteeriyada, Nitrates iyo kiimikooyinka kale ee aan noolaha ahayn, walxaha shucaaca, iyo ilaa 118 kiimikooyin warshadeed oo kala duwan iyo sunta cayayaanka. Liiska saxda ah ee fadareeyeyaasha—iyo jadwalka baaritaanka —wey ku kala duwanaan karaan marka loo eego hal nidaam midka kale.

Reer Minnesota waxay ku raaxaystaan mid ka mid ah hababka ilaalinta biyaha la cabbo ee qaranka ugu wanaagsan. Nidaamyada biyaha dadweynaha ee Minnesota guud ahaan waxay heleen in yihiin kuwo si sare aad ugu hoggaansan Xeerka Biyaha la Cabo ee Badbaadada ah waxayna aad uga fiican yihiin marka la semeeyo celceliska qaranka. Nidaamyadeena biyaha dadweynaha waxay si adag u shaqeeyaan sidii ay macaamiisha u siin lahaayeen biyo ammaan ah oo la isku halleyn karo oo buuxiya shuruudaha tayada biyaha ee gobolka iyo federaalkaba.

Nidaamyada aan Bulshada ahayn

Nidaamyada aan bulshada ahayn ayaa siiyaan biyaha meelaha dadku ku shaqeeyaan, ku kulmaan, kuna ciyaaraan.

Nidaamyada aan ku meel gaarka ahayn aan bulshada ahayn waa maqaayadaha, goobo nasasho, kaamamka dalxiiska, iyo meelo kale oo u adeega ugu yaraan 25 qofood ugu yaaraan 60 maalmood sanadka gudihiisa, laakiin maaha dad isku mid ah maalin kasta.

Aan Ahayn Ku Meel gaar Aan Ahayn Bulsho-wadaag waa iskuulada, xafiisyada, xannaanada caruurta, warshado, iyo meelo kale oo u adeega ugu yaraan 25 isku dad ah ugu yaraan lix bilood.

Aan Ahayn Bulsho-wadaag Shuruudahooda

Nidaamyadá Ku Meelgaar Aan Ahayn Bulsho-wadaag

Nidaamyada Ku Meel gaarka Aan Ahayn Bulsho-wadaag **waa in laga baaro bakteeriyada, nitrates, iyo nitrites**, kuwaas oo keeni kara xaalad caafimaad oo aad u daran oo kaana dhigi kara qof jiran 24 saacadood gudahood.

Aan Ahayn Bulsho-wadaag Shuruudahooda

Aan Ahayn Ku Meel gaar Aan Ahayn Bulsho-wadaag

Xarumaha sida duiskuulada, xafiisyada, warshadaha, iyo xannaanada caruurta waxaa laga tijaabiyaa fadareeyayaasha soo socda: arsenic, bakteeriyada, copper, lead, nitrates, nitrites, kiimikooyinka dabiiciga ah ee isbedbedela, kiimikooyinka dabiiciga ah ee milma, kiimikooyinka aan organic ahayn.

Xarumahan waxaa la baaraa ugu yaraan sanadkiiba mar iyadoo laga baarayo bakteeriyada iyo Nitrate-ka. Waxa kale oo laga baaraa sunta fadareeyaha ah sida sunta cayayaanka, dareerayaasha, iyo biraha. Fadareeyayaasha waxaa lagu baaraa mudooyin kala duwan. **Soo noqnoqodka waxay ku xirnaan doontaa nooca fadareeyaha ah iyo jawaabihii baaritaanadii hore.**

Haddii mid ka mid ah saamiyada la qaaday **laga helo fadareeye heerkiisu ka sarreysa MCL**, habka sixiddu wuxuu la mid yahay sida Nidaamyada Aan ahayn ku meel gaarka ee aan Magaalada Ku Xirneyn (eeg bogga 6).

Halka laga Helo Macluumaad ku saabsan Nidaamyada Biyaha Dadweynaha

Haddii gurigaaga uu ku shaqeeyo nidaamka biyaha dadweynaha, si joogto ah ayaad uheli doontaa biilka biyaha!

Shirkad biyaha ku siisa waxaa looga baahan yahay in ay baaritaan ku sameeyaan biyahooda ay siiyaan dadka isticmaalaya oo uuna siiyo warbixinta macaamilka natiijooyinka baaritaanada. Hubi/Fiiri warbixinnada kalsoonida macaamiisha adiga oo kaamirada ku beegaya koodka QR-ga ama ama booqo boga internetka ee: https://tinyurl.com/consumerreportsMN

Nidaamyada Biyaha Dadweynaha waxaa lagu nidaamiyaa iyadoo loo marayo Xeerka Badbaadada Biyaha la cabbo. Waxaad ka heli kartaa macluumaad dheeraad ah kaamirada ku beeg koodka QR-ga ama ama booqo boga internetka ee: https://tinyurl.com/MNsafedrinkingwateract

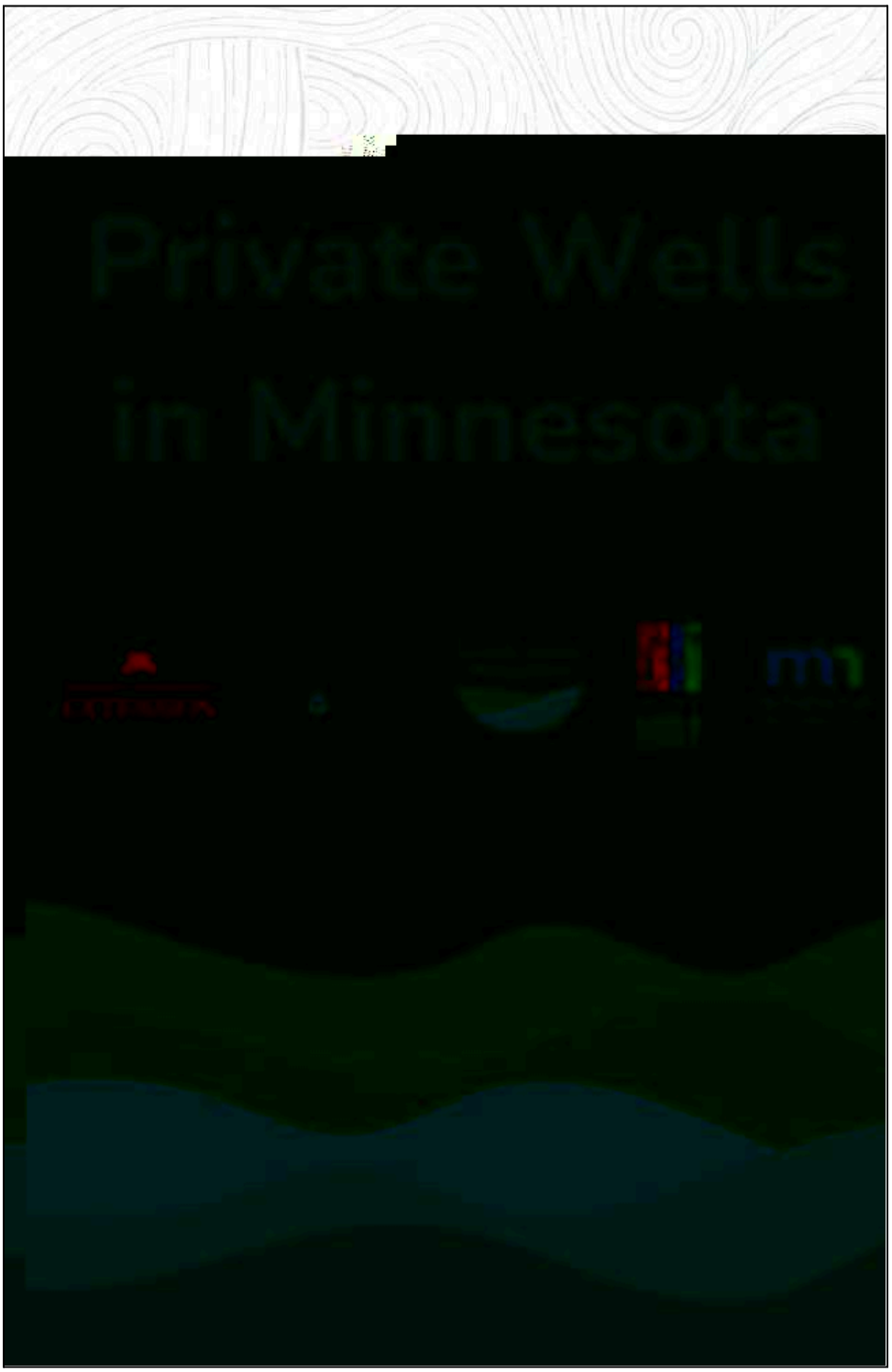
Si aad wax badan uga barato noocyada kala duwan ee fadareeyayaasha biyaha ee Minnesota, kaamirada ku beeg koodka QR-ka ama booqo boga internetka ee: https://tinyurl.com/contaminantsMN

8

Appendix I

Private Wells Handout

Figure I1: English Version of Private Wells Handout



What To Look For

Newer wells should have...

- a sanitary well cap
- a well ID tag
- a height of at least 12 inches above the ground (to prevent flood waters/snow/rodents/etc. from getting in, and to prevent people from falling into the hole)

NOTE: if your well was constructed before 1974, some of these items may not be present.

Inspect your well on a regular basis. Look for signs of damage such as holes, cracks, lose wires, soil settling, and verify that the weatherproof cover is connected. It is easy for contaminants, rodents, and pests to enter your well through even the smallest crack.

2

What To Look For

If your well doesn't look like the well pictured on the previous page, **it may be an older well that was constructed before the well code went into effect**. Some older wells may still be functioning and installed in people's homes.

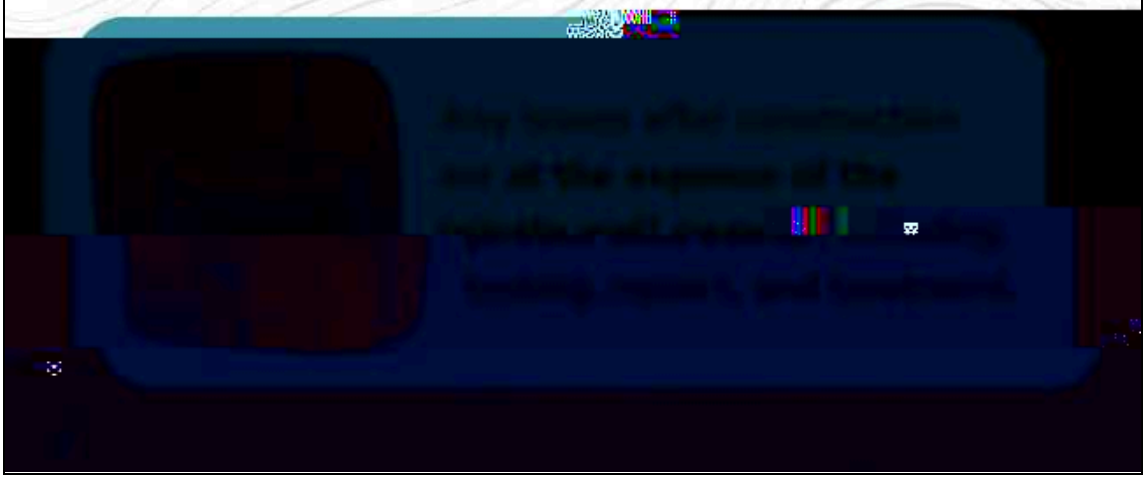
Indicators of older wells

- glass brick in back steps
- hand dug pit
- pump in the basement

Regulations

The **Well Code** was started in 1974. It regulates where and how a well is constructed and how it is sealed.

During construction, **private wells are tested for coliform bacteria, nitrate, and arsenic**. If the water sample comes back positive for coliform bacteria, the well contractor must either disinfect the well or continue drilling until the sample has no detection of bacteria. If there is detection of nitrate and/or arsenic, the well can be used for drinking water. However, the owner is given a notice that there has been a detection and is sent educational materials from MDH about their options for mitigation.



Testing

The Minnesota Department of Health recommends testing for five common contaminants. Testing your well water is **the only way to detect most of the common contaminants in Minnesota groundwater.** You cannot taste, see, or smell most contaminants.

Contaminant	Testing Interval	Action Level
Coliform Bacteria	Annually	Any detection
Nitrate	Annually	10 ppm
Arsenic	At least once	Any detection
Lead	At least once	Any detection
Manganese	At least once	300 ppb for adults, 100 ppb for children under the age of 1

Contact an accredited laboratory to purchase a well water test, or ask your county environmental or public health services if they provide well water testing. To view a list of accredited labs, scan this QR code or visit this link: https://tinyurl.com/MNwaterlabs

Health Impacts

Drinking water with levels of contaminants over the health risk limit can increase your risk of health impacts.

Contaminant	Health Impacts
Coliform Bacteria	May cause diarrhea, vomiting, cramps, nausea, headaches, fever, and fatigue.
Nitrate	Consuming too much nitrate can affect how blood carries oxygen through the body, and can cause blue baby syndrome. Blue baby syndrome can result in serious illness or death.
Arsenic	Consuming low levels of arsenic over a long period of time is associated with diabetes and increased risk of cancers of the bladder, lungs, liver, and other organs. Ingesting arsenic can also contribute to cardiovascular and respiratory disease; reduced intelligence in children; and skin problems such as lesions, discoloration, and the development of corns. Health impacts of arsenic may take many years to develop.
Lead	Lead can damage the brain, kidneys, and nervous system. Lead can also slow development or cause learning, behavior, and hearing problems. While lead can affect everyone, babies, children under six years old, and pregnant women are at the highest level of risk.
Manganese	Manganese can cause problems with memory, attention, and motor skills. It can also cause learning and behavior problems in infants and children.

Treatment

Contaminant	Mitigation	Source
Coliform Bacteria	• Remove the source of contamination and disinfect your well • Ultraviolet light	Damaged well or plumbing, leaky septic, dead animal in or near the well
Nitrate	• Reverse osmosis • Anion exchange	Chemical fertilizers and human and animal waste (feedlots/septic systems)
Arsenic	• Adsorptive media • Reverse osmosis • Anion exchange	Naturally occurring from soil and rocks
Lead	• Reverse osmosis • Some carbon pitcher filters • Less corrosive alternative water source	Older plumbing (not naturally found in groundwater)
Manganese	• Oxidation and filtration • Reverse osmosis • Cation exchange	Naturally occurring from soil and rocks

To read more about home water treatment systems, scan this QR code or visit this link: https://tinyurl.com/homewatertreatment

Getting Help With Your Well

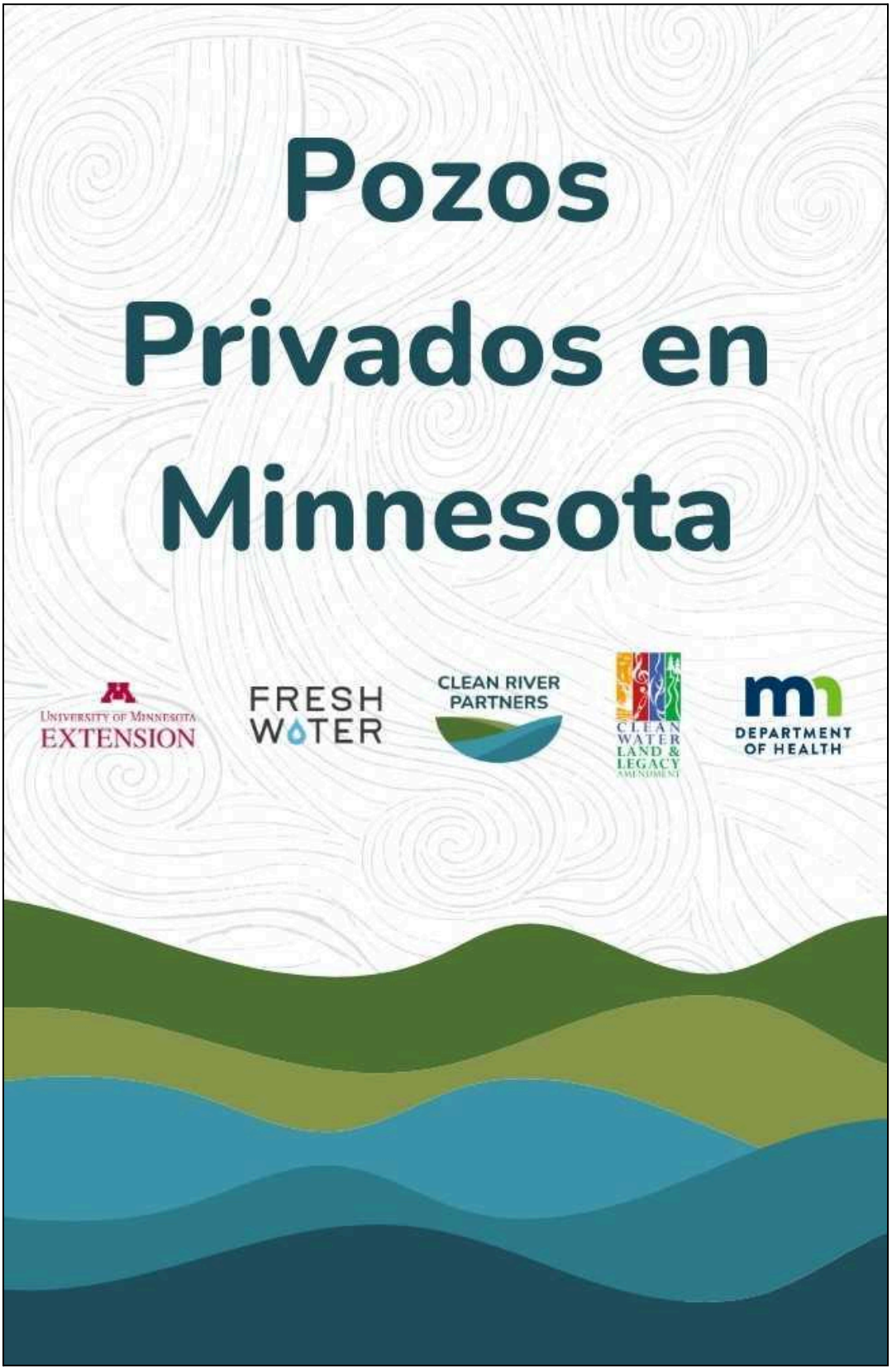
The **Minnesota Department of Health** (MDH) provides information about testing and contaminant mitigation at www.health.state.mn.us/wellwater.

MDH licenses well and boring contractors who can provide information on well services and groundwater in a local area. For a list of these professionals, scan this QR code or visit this link: https://tinyurl.com/MNcontractorlist

Your household may be eligible for financial support. There are grants and loans available to help with well construction, treatment, repair, and sealing. **Contact your local Soil and Water Conservation District** (SWCD) for more information. To learn more about grants and loans, scan this QR code or visit this link: https://tinyurl.com/MNwellgrantsloans

8

Figure I2: Spanish Version of Private Wells Handout



¿Que buscar?

Los pozos más nuevos deberían tener...

- una tapa de pozo sanitario
- una etiqueta de identificación de pozo
- una altura de al menos 12 pulgadas sobre el suelo (para evitar que entren aguas de inundación/nieve/roedores/etc. y para evitar que las personas caigan en el hueco)

NOTA: si su pozo fue construido antes de 1974, es posible que algunos de estos elementos no estén presentes.

Inspeccione su pozo con regularidad. Busque señales de danos como huecos, grietas, cables sueltos, sedimentación de tierra y verifique que la cubierta resistente de agua este conectada. Es fácil que contaminantes, roedores y plagas se metan a su pozo aun a través del hueco más pequeño.

2

¿Que buscar?

Si su pozo no se parece al pozo que se muestra en la página anterior, **puede ser que sea un pozo más antiguo que se construyó antes de que el código de pozo entrara en vigor**. Es posible que algunos pozos más antiguos todavía estén funcionando y están siendo instalados en algunos hogares.

Indicaciones de pozos más antiguos

- Ladrillos de vidrio en los escalones traseros
- Pozo excavado a mano
- Bomba en el sótano

3

Regulaciones

El Código de Pozos se inició en 1974. Este regula donde y como se construye un pozo y como se llena.

Durante la construcción, **los pozos privados se analizan en busca de bacterias coliformes, nitrato y arsenico**. Si la muestra de agua resulta positiva para bacterias coliformes, el contratista del pozo debe desinfectar el pozo o continuar perforando hasta que la muestra no detecte bacterias. Si se detecta nitrato y/o arsénico, el pozo se puede utilizar para agua potable. Sin embargo, el dueño recibe un aviso de que se ha producido una detección y el MDH le envía materiales educativos sobre sus opciones de mitigación.

Cualquier problema después de la construcción **corre a cargo del dueño del pozo privado**, incluidas la pruebas, reparaciones y tratamiento.

4

Pruebas

El departamento de Salud de Minnesota recomienda hacer pruebas para detectar cinco contaminantes comunes. Analizar el agua de su pozo **es la única forma de detectar la mayoría de los contaminantes comunes en el agua subterránea de Minnesota**. No se puede saborear, ver ni oler la mayoría de los contaminantes.

Contaminante	Intervalo de prueba	Nivel del accion
Bacteria coliformes	Annual	Cualquier deteccion
Nitrato	Annual	10 ppm
Arsenico	Por lo menos una vez	Cualquier deteccion
Plomo	Por lo menos una vez	Cualquier deteccion
Manganeso	Por lo menos una vez	300 ppb para adultos, 100 ppb para menores de edad 1

Comuníquese con un laboratorio acreditado para comprar una prueba de agua de pozo o pregunte a los servicios ambientales o de salud pública de su condado si ofrecen pruebas de agua de pozo. Para ver una lista de laboratorios acreditados, escanee este Código QR o visite este enlace: https://tinyurl.com/MNwaterlabs

5

Impactos en la salud

Beber agua con niveles de contaminantes superiores al límite de riesgo para la salud puede aumentar el riesgo de sufrir impactos en la salud.

Contaminante	Impactos en la salud
Bacteria coliformes	Puede causar diarrea, vómitos, calambres, náuseas, dolores de cabeza, fiebre y fatiga.
Nitrato	Consumir demasiado nitrato puede afectar la forma en que la sangre transporta oxígeno por el cuerpo y puede causar el síndrome del bebe azul. El síndrome del bebe azul puede provocar una enfermedad grave o la muerte.
Arsenico	El consumo de niveles bajos de arsénico durante un periodo prolongado se asocia con diabetes y un mayor riesgo de cáncer de vejiga, pulmones, hígado y otros órganos. La ingestión de arsénico también puede contribuir a enfermedades cardiovasculares y respiratorias; inteligencia reducida en los niños; y problemas de la piel como lesiones, descoloración y desarrollo de callos. Los impactos del arsénico en la salud pueden tardar muchos años en desarrollarse.
Plomo	El plomo puede dañar el cerebro, los riñones y el Sistema nervioso. El plomo también puede retardar el desarrollo o causar problemas de aprendizaje, comportamiento y audición. Mientras que el plomo puede afectar a todos, Los bebes, niños menores de seis años, y las mujeres embarazadas tienen el mayor riesgo.
Manganeso	El magneso puede causar problemas de memoria, atención y habilidades motoras. También puede causar problemas de aprendizaje y conducta en bebes y niños.

Tratamiento

Contaminante	Mitigación	Origen
Bacteria coliformes	• Elimine la Fuente de contaminación y desinfecte su pozo con luz ultravioleta	Pozo o plomería dañados, pozo séptico con fugas, un animal muerto dentro o cerca del pozo
Nitrato	• Inverse la osmosis • Intercambio aniónico	Fertilizantes químicos y desechos humanos y de animales (corrales de animales/sistemas sépticos)
Arsenico	• Medios adsorbents • Osmosis inversa • Intercambio anionico	Ocurre naturalmente en el suelo y las rocas
Plomo	• Osmosis inversa • Algunos filtros de jarra de carbón • Fuente de agua alternativa menos corrosiva	Tuberías antiguas (no se encuentran naturalmente en el agua subterránea)
Manganeso	• Oxidacion y filtacion • Osmosis inversa • Intercambio cationico	Ocurre naturalmente en la tierra y entre las rocas

Para leer mas sobre los sistemas de tratamiento de agua en el hogar, escanee este código QR o visite este enlace: https://tinyurl.com/homewatertreatment

Obteniendo ayuda con su pozo

Figure I3: Somali Version of Private Wells Handout

Waxa in La Raadiyo at Tahay

Ceelasha cusub waa inay lahaadaan...

- Daboolka afka ceelka oo nadaafad leh
- Lambarka sumadda ceelka
- Dhererka afka ceelka oo ah ugu yaraan 12 inji oo ka sareeyo dhulka (si looga hortago daadadka/barafka/jiirka/iwm in ay galaan ceelka, iyo si looga hortago in dadku ku dhacaan godka)

FIIRO GAAR AH: haddii ceelkaaga la dhisay 1974-tii ka hor, waxaa laga yaabaa in qaar ka mid ah alaabtan aysan ku sameysneyn ceelka.

Ceelkaaga si joogto ah u kormeer. U fiirso calaamadaha burbur ceelka soo gaaray ah sida daloolal, dildilaaca, fiilooyin go'an, ciida oo hoos u degta, oo xaqiiji in daboolka cimiladu aysan karin uu ceelka ku dhegan/xiran yahay. Way u fududahay wasakhaha, jiirka/ddoliga, iyo cayayaanka yaryar in ay ceelkaaga ka galaan xataa dildilaacyada ugu yar.

2

Waxa in La Raadiyo at Tahay

Haddii ceelkaagu uusan u ekeyn ceelka ku sawiran boggii hore, **waxa laga yaabaa inuu yahay ceel qadiim ah oo la dhisay ka hor intii aan xeerarka ceelashu aysan dhaqan gelin**. Qaar ka mid ah ceelasha qadiimka ah ee ku sameysan/lagu rakibay guryaha dadka qaarkood ayaa laga yaabaa in ay weli shaqeynayaan.

Tilmaamayaasha ceelasha hore

- bulakeeti/leben dhalo ah oo jaranjarada danbe ku dhisan
- god gacan lagu qoday
- bamka biya soo nuuga oo dabaqa dhulka hoostiisa ah ku xiran

Nidaamka maamula

Xeerka maamula Ceelasha waxa la bilaabay sanadkii 1974. Wuxuu nidaamiyaa meesha iyo sida ceelka loo dhisayo iyo sida loo xiro/aanburo.

Inta lagu jiro dhisida/qodidda ceelka, **ceelasha gaarka loo leeyahay waxaa laga baaraa bakteeriyada coliform, nitrate, iyo arsenic**. Haddii saamiga biyaha ee baaritaanka lagu sameynayo muujiso/lagahelo jiritaanka bakteeriyada coliform, qandaraaslaha ceelku waa in uu jeermiska ka dilaa ceelka ama sii wadaa hoos u sii qodista ceelka ilaa saamiga laga waayo bakteeriya. Haddii la ogaado jiritaanka Nitrate iyo/ama arsenic, ceelka waxaa loo isticmaali karaa biyaha la cabbo. Hase yeeshee, mulkiilaha waxa la siinayaa ogaysiis ah waxyaalaha ceelka laga helay isla markaana ay MDH u soo dirtay waxyaalo waxbarasho ah oo ku saabsan doorkooda yaraynta ciladaha laga helay ceelka.

Cilad kasta oo timaada dhismaha ceelka kadib waxaa kharashkeedu saaran yahay milkiilaha ceelka gaarka ah, waxyaalahaas oo ay ku jiraan baaritaanka, dayactirka, iyo daaweynta ceelka.

Baaritaanka

Waaxda caafimaadka ee Minnesota waxay ku talinaysaa in ceelasha laga baaro shan ka mid ah jeermisyada wax fadareeya ee inta badan la arko ah. Baaridda biyaha ceelkaaga **waa habka kaliya ee lagu ogaan karo inta badan fadareeyayaasha caanka ah ee ku jira biyaha dhulka hoostiisa ku jira ee Minnesota**. Ma dhadhamin kartid, mana arki kartid, mana urin kartid inta fadareeyayaasha caanka ah.

Faddareeye	Baaritaanka Inta ay Isu Jirayaan	Heerka Talaabada
Bakteeriyada Coliform	Sanad walba	Markasta oo la ogaansho
Nitrate	Sanad walba	10 ppm
Arsenic	Ugu yaraan hal mar	Markasta oo la ogaansho
Liidh (Lead)	Ugu yaraan hal mar	Markasta oo la ogaansho
Manganese	Ugu yaraan hal mar	300 ppb dadka qaangaarka ah, 100 ppb caruurta ka yar 1 sano jir

La xiriir shaybaar la aqoonsan yahay si aad uga iibsato qalabka baarista biyaha ceelasha, ama waydiiso degmadaada adeegyada deegaanka ama adeegyada caafimaadka haddii ay sameeyaan baarista biyaha ceelka. Si aad u aragto liiska shaybaarada la aqoonsan yahay, kaamarada ku aadi koodka QR-kan ama booqo bogaan internetka ah ee: https://tinyurl.com/MNwaterlabs

Saamaynta Caafimaadka

Cabitaanka biyo leh heerar fadareysan oo ka sareeya xadka khatarta caafimaadka leh waxay kordhin karaan halista ay kusaameyn karaan caafimaadkaaga.

Faddareeye	Saamaynta Caafimaadka
Bakteeriyada Coliform	Waxay keeni kartaa shuban, matag, calool majiir, lallabbo, madax-xanuun, qandho, iyo daal.
Nitrate	Qaadashada nitrate farabadan badan waxay saameyn kartaa sida dhiiggu ogsijiinta ugu qaado jirka, waxayna keeni karaa cilladda dhallaanka buluugga ka dhiga. Cilladda dhallaanka buluugga waxay keeni karaan jirro halis ah ama dhimasho.
Arsenic	Cunidda/Cabidda waxyaalo ay arsenic ku jirto muddo dheer waxaa la xiriiriyaa in ay keenaan cudurka macaanka iyo khatar sare oo keeni karta kansarka kaadiheysta, sambabada, beerka, iyo xubnaha kale. Cunidda/Cabidda arsenic waxaa kale oo ay gacan ka geysan kartaa cudurrada wadnaha iyo xididdada; hoos u dhaca garaadka carruurta; iyo dhibaatooyinka maqaarka sida nabarada, midab gadoon, waxayna keeni kartaa cudurka boogaha honqoraha ah ee lugaha ka soo baxa (corns). Saamaynta caafimaad ee ay arsenic-ga waxay qaadan kartaa sanado badan in ay muuqato.
Liidh (Lead)	Maadada Liidhka (lead) waxay dhaawici kartaa maskaxda, kelyaha, iyo habdhiska neerfayaasha. Liidhku waxaa kale oo uu hoos u dhigi kartaa koboca ilmaha ama waxuu sababi karaa dhibaatooyin dhanka waxbarashada, dhaqanka, iyo maqalkaba ah. In kastoo liidhku saameyn karto dadka oo dhan, dhallaanka, carruurta da'doodu ay ka yar tahay lix sano, iyo haweenka uurka leh ayaa ah dadka khatarta ugu sarreysa ugu jira saameynta liidhka.
Manganese	Maadada manganese waxay sababi kartaa dhibaatooyin la xiriira dhanka xusuusta, dareenka, iyo xirfadaha dhaqdhaqaaqa lixaadka. Waxaa kale oo uu u keeni karaa dhallaanka iyo carruurta dhibaatooyin dhanka waxbarashada iyo dhaqankaba ah.

Daawaynta

Faddareeye	Yaraynta Saameynta	Ilaha
Bakteeriyada Coliform	• Saar/Goo isha ay fadaradu ka timaado ceelkaagana jeermiska ka dil • Iftiinka ultraviolet	Ceelka ama tubooyinka dhaawac uu gaaray, septic-ka dareeraya/diiqaya, xoolo dhintay oo ceelka ku jira ama agtiisa yaala
Nitrate	• Habka Reverse osmosis • Habka Anion exchange	Kiimikada bacriminta iyo qashinka/saxarada/digada dadka iyo xoolaha (moorada quudinta xoolaha/nidaamka septic)
Arsenic	• Habka Adsorptive media • Habka Reverse osmosis • Habka Anion exchange	Ka yimaada dhagxaanta iyo ciidda sida dabiici ah u sameysma
Liidh (Lead)	• Habka Reverse osmosis • Qaar ka mid ah weelka biyaha filtareeya • U bedelashada biyo kale kuwii hore ka wanaagsan	Tuubooyinka duugga ah (oo aan si dabiici ah looga helin biyaha dhulka hoose)
Manganese	• Habka Oxidation-ka iyo sifaynta • Habka Reverse osmosis • Habka Cation exchange	Ka yimaada dhagxaanta iyo ciidda sida dabiici ah u sameysma

Si aad wax badan uga akhriso hababka daaweynta biyaha guriga, kaamirada ku beeg koodka QR-ka ama booqo bogan internetka ee: https://tinyurl.com/homewatertreatment

Helitaanka Caawinta Ceelkaaga

Waaxda Caafimaadka ee Minnesota (MDH) waxay bixisaa macluumaadka ku saabsan baaritaanka iyo yaraynta fadarada adigoo tegaya boag www.health.state.mn.us/wellwater.

MDH waxay shati siisay qandaraaslayaal ceelasha gunta d[illegible]a gunta gaaban oo ku siin kara macluumaadka adeegyada ceelasha iyo biyaha dhulka hoostiisa ah ee aagga deegaankaaga. Si aad u hesho liiska xirfadlayaashan, kaamirada ku beeg koodka QR-ka ama booqo boga internetka ee: https://tinyurl.com/MNcontractorlist

Waxaa laga yaabaa in qoyskaagu u qalmo taageero dhaqaale. Waxaa jira deeqo iyo deymo la heli karo si dadka looga caawiyo dhismaha ceelka, daawaynta, dayactirka, iyo xiritaanka ceelka. La xiriir waaxda Ciidda iyo Beekhaaminta Biyaha Degmadaada (SWCD) Wixii macluumaad dheeraad ah. Si aad wax badan uga barato deeqaha iyo deymaha, kaamirada ku beeg koodka QR-ka ama booqo boga internetka ee: https://tinyurl.com/MNwellgrantsloans