

**Memo:** Summary analysis of first round of polling (of two rounds) related to water conservation.

**To:** Madison Water Utility

**From:** WaterNow Alliance

**Date:** October 2019

**Project Background:** As part of the spring 2019 Project Accelerator, WaterNow and Polco are supporting Madison Water Utility's updates to their Water Conservation and Sustainability Plan by engaging with the public to gain insights into the knowledge, actions, and priorities of utility customers regarding water conservation.

The survey was launched on August 27, 2019 and remained open for six weeks. Survey respondents live in Madison, WI. The survey was disseminated via Madison Water Utility's website, email list, social media, and community partners. It was also pushed out to previously-registered Polco users. The number of respondents varied per question, with Q. 4 garnering the most responses (243), and Q. 3 receiving the least (218).

Respondents were required to create an account with Polco to complete the survey. This deterred several would-be respondents. When asked why an account was required, Madison Water Utility staff explained that the accounts would allow them to provide respondents with survey results and reach out with additional, follow up questions.

Questions are all multiple choice and structured in three ways. The first question type allows respondents to choose as many options as they want. The second question type allows respondents to allocate a total of 100 points to multiple options based on their priorities (they may choose to allocate all points to one option and zero to other options or a number of points to multiple options). A third question type allows respondents to choose only one response from multiple choices. For two questions (Q. 3 & 4), the choice, "none of the above," prompted respondents to leave comments, providing an opportunity to leave additional responses. Additionally, all respondents were allowed to leave open-ended comments corresponding with each question.

Respondents could read each other's comments. Comments could be anonymous or have the respondent's name appear (all but one respondent chose to be anonymous). Respondents were able to leave one comment per poll question.

### Summary Analysis:

- Multiple respondents thought the water billing rate structure could be fairer to those that do conserve. Comments reflected frustration that the current rate structure either didn't reward conservation or didn't disincentivize high water use.
- Multiple respondents were concerned with surface water pollution and aquifer pollution.
- A few respondents found the polling app difficult to use, particularly for the allocation question (Q. 2).
- Comments were used to voice frustration over ancillary topics.
- Commenters built off of and responded to previous comments.
- Commenters may also be addressing their fellow residents in their comments.

"I...second another commenter about providing incentives for homes and businesses to stop planting grass and encourage deep-rooted varieties to improve our water quality, lake health and flood control...Hire a full-time position to encourage residents, landlords, and businesses to convert and give public presentations on how to do it..."

**Survey Questions:**

**Question 1. Do you know where Madison’s tap water comes from?**

A.	From an underground aquifer system (164)	<i>Correct Answer - 72% of respondents chose this</i>
B.	From Lakes Mendota and Monona (23)	<i>10% of respondents chose B</i>
C.	From Lake Michigan (4)	<i>2% of respondents chose C</i>
D.	From the Yahara River (8)	<i>4% of respondents chose D</i>
E.	I don't know (57)	<i>25% of respondents chose E</i>

Question Type: Participants were able to choose multiple options and leave open-ended comments.

Takeaways:

- Madisonians mostly know where their water comes from (72%).
  - *This may highlight the success of existing education campaigns.*
  - This response selection is distributed pretty evenly across all respondents.
- 4 respondents left comments.
- Open-ended comments show that some respondents are very knowledgeable and/or concerned about other water issues
  - Comments included the following issues:
    - Aquifer overdraft
    - Surface water and aquifer pollution
    - Toxin bioaccumulation
    - Progressive water billing system
    - Rain barrels
    - Hexavalent Chromium

“How about a more progressive billing system? My neighbor uses more than 4 times as much water than me, but only pays twice (a little less) as much as me...”

“Now that Madison is measuring Hexavalent Chromium in the water drawn from some wells, the question is ... was that recent or not...”

**Question 2: What aspects of sustainability should Madison Water Utility prioritize?**

A.	Helping our customers conserve water (3374)	<i>15% of points allocated to A</i>
B.	Replacing aging water mains and other deteriorating water infrastructure (5545)	<i>24% of points allocated to B</i>
C.	Constructing enough water storage and capacity to protect all areas of Madison from fires (2017)	<i>9% of points allocated to C</i>
D.	Supplying enough water to meet demand without shortages or restrictions (2454)	<i>11% of points allocated to D</i>
E.	Providing high-quality, safe water through source water protection and investment in large-scale treatment facilities (6263)	<i>27% of points allocated to E</i>
F.	Achieving net zero carbon emissions (3147)	<i>14% of points allocated to F</i>

Question Type: Participants were given 100 points to allocate based on their priorities and could leave open-ended comments.

- Participants could give all 100 points to one option, or none (0 points) to multiple options.

Takeaways:

- Options received zero points from the following number of respondents:
  - A-Water conservation - 6
  - B- Replacing aging infrastructure - 1
  - C Fire protection- 8
  - D Expanding water supply- 9
  - E Water quality/ source water protection- 2
  - F Net zero carbon emissions- 10
- One respondent allocated 100 points to option A
- Options B and E received the highest allocation of points
- Survey questions can illuminate issues for respondents that they may have been previously unaware of, or hadn't thought of
- Two comments were made regarding the difficulty and frustration of using the App for the poll
  - App medium may be particularly hard for allocation questions
- One commenter felt that the format of this question forced responses that the City wanted

“I wasn’t aware the water system was not always capable of delivering enough water to fight fires.”

“This website/app is difficult to use. I find the point allocation frustrating and unusable on my phone. For the questions, It is almost like they have decided what they will do, and are asking the SAME questions, just in different ways to get the answers they want. It is just like when they forced all City residents from their wells to City well use, with a drop in water safety within a year of that being instituted.”

**Question 3: Have you taken any of the following actions to save water inside your home?**

A.	Purchased a high-efficiency WaterSense washing machine or dishwasher (92)	<i>42% of respondents chose A</i>
B.	Taken advantage of Madison Water Utility’s Toilet Rebate Program to install a high-efficiency WaterSense toilet (67)	<i>31% of respondents chose B</i>
C.	Installed a low-flow showerhead (113)	<i>52% of respondents chose C</i>
D.	Used Madison Water Utility’s online conservation tool to track my detailed hourly/daily water use (61)	<i>28% of respondents chose D</i>
E.	Installed low-flow faucet aerators (79)	<i>36% of respondents chose E</i>
F.	Wash only full loads of clothes or dishes (169)	<i>78% of respondents chose F</i>
G.	None of the above (Please comment with other ways you save water in your home! You'll be able to leave a comment after submitting your answer.) (12)	<i>6% of respondents chose G</i>

Question Type: Participants could choose as many options as applied and leave open-ended comments.

Takeaways:

- 10 respondents left comments.
- One respondent highlighted that the survey doesn’t adequately consider multi-family units
- Survey captured at least one respondent that flouts water conservation
- The majority of respondents selected multiple actions

“My landlord did install a low-flow showerhead. I don’t know whether they have taken other steps in the building. I wish you had kept in mind that some respondents live in apartments.”

- Additional actions included in comments:
  - Rain barrel
  - Water from dehumidifier
  - Insulated pipes
  - Monitor leaks
  - Do nothing to conserve
  - Greywater system
  - Don't water outdoors

"I absolutely do nothing to conserve water. Whenever I want to use water for whatever reason I use as much as I want."

"I save water by not using water outside... if my lawn turns brown so be it."

"If you really want to have consumers save water, you should change the rate structure to make conservation pay off for the consumer. It's ridiculous to pay the low usage rate"

**Question 4: Have you taken any of the following actions to save water in your lawn or garden?**

A.	Reduced the size of my lawn (70)	<i>29% of respondents chose A</i>
B.	Added at least an inch of mulch, such as wood chips, leaves, or compost to my garden beds (116)	<i>48% of respondents chose B</i>
C.	Water during the coolest times of the day (early morning/ late evening) to limit evaporation (130)	<i>53% of respondents chose C</i>
D.	Used Madison Water Utility's online conservation tool to track my detailed hourly/daily water use (45)	<i>19% of respondents chose D</i>
E.	Added soaker hoses or drip irrigation system (21)	<i>9% of respondents chose E</i>
F.	Captured rainwater in a rain barrel (73)	<i>30% of respondents chose F</i>
G.	N/A or none of the above (Please comment to share other ways you save water outdoors! You'll be able to leave a comment after submitting your answer.) (68)	<i>28% of respondents chose G</i>

Question Type: Participants could choose as many options as desired and leave open-ended comments.

Takeaways:

- 22 respondents left comments.
  - 18 comments state that respondents either do not water their lawns, do not have a lawn, or have incorporated natives that don't require water after getting established.
- Question skews towards single-family residences.
- Additional water saving actions listed in the comments include:
  - Rain barrel
  - Don't water lawn, rely on precipitation
  - Replace lawn with natives
  - Rain garden
  - Mulching
  - Incorporate plants that provide shade

"I've planted native plants that once established don't need watering and shade the soil to prevent evaporation."

"...And most grasses are not indigenous, which means more water/herbicide/pesticide to keep it going. Think generations ahead, not just this season."

"I don't water the lawn unless we have extreme heat."

**Question 5: What's your biggest motivation to conserve water?**

A.	Preserve Madison’s water supply for future generations (87)	40% of respondents chose A
B.	Lower my carbon footprint (32)	15% of respondents chose B
C.	Save money on my Municipal Services Bill (32)	15% of respondents chose C
D.	Feels like the right thing to do (68)	31% of respondents chose D
E.	I don’t try to conserve (1)	0% of respondents chose E

Question Type: Participants could choose one option and leave open-ended comments.

Takeaways:

- 3 respondents left comments.
- Comments show respondents are concerned that the rate structure doesn’t do enough to reward water conservation.
- Only one person responded that they did not try to conserve; may be interpreted that mainly those interested in conservation responded to survey or that the majority of people are taking water saving actions.
- Respondents seemed more inclined to choose options that had a ‘moral’ component to them, i.e. preserving the water supply for future generations and feeling like conserving was the right thing to do.
- 44.4% of females conserve water to preserve it for future generations, compared to 30.4% of males.
- Females are less motivated to conserve because of saving money on utility bills (7.4% vs. 29% for males)
- Females (29.6%) and males (29%) found it almost equally important to conserve water because it feels like the right thing to do.

“The way rates are currently structured, it is nearly impossible to save money on water bills through conservation, because administrative fees are so high...Water bills have skyrocketed the past two years and this seems extremely unreasonable.”

“Providing a ‘cash reward’ once a year to those [households] that consumed ‘below’ certain threshold.”