

Drinking Water Issues in the New England Region

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Abstract

Drinking water issues are very important to residents of the USA because water is necessary for life and has the potential to impact human health. A 53-question public opinion survey was developed and conducted in May of 2005 to assess water quality attitudes in New England. Over 99% of respondents indicated that clean drinking water was very or extremely important, and 85% felt that their home drinking water was safe. People receiving their drinking water from a private system had a higher literacy about drinking water issues than people receiving their drinking water from a public supply system.

Introduction

Water is the most important natural resource in the USA and water-related issues are moving to the forefront of the policy arena (Brace et. al. 2002). The need for good social science data is becoming increasingly important when developing water resources outreach and programming. Water Quality Coordinators can use this data to develop effective water resources programming and education in their region (Mahler et. al. 2004). This data can also be used as a baseline to measure the success and progress of these programs in future years.

Materials and Methods

- 2,300 residents set as target sample size population
- Dillman method
- Return rate set at 50% with \pm 4% sampling error
- Data analyzed with SAS, $p = .05$
- For each question, interactions of state of residence, age, and gender analyzed if significant

Sample questions:

Q-01 How important is the issue of clean drinking water to you?

(Circle one answer)

- Not important
- Somewhat important
- No opinion
- Very important
- Extremely important

Q-02 Where do you get your drinking water? (Circle one answer)

- Private supply (private well, river, pond, lake)
- Public supply (surface water reservoir, river, stream, lake, underground/aquifer)
- Purchase bottled water
- Other
- I don't know



Results

Table 1: Calculated sample size, number of surveys completed, and return rate by state for 2005 New England Water Issues Survey.

State	Survey sample size	Surveys completed	Return rate (%)
CT	498	226	45.4
ME	282	142	50.4
MA	794	294	37.0
NH	280	119	42.5
RI	258	128	49.6
VT	212	109	51.4
Total	2324	1018	43.8

- Over 99% of residents reported that clean drinking water was very or extremely important
- Water sources:
 - 56% public supply system
 - 28% private system
 - 13% purchase bottled water
 - 3% other
- Over 50% of respondents in CT, MA, RI, and VT received their drinking water from a public supply system (Table 2)

Table 2: Sources of drinking water by state based on 2005 Water Issues Survey.

Source of water	-----State of residence-----					
	CT	ME	MA	NH	RI	VT
	-----%-----					
Public supply	52.2	45.5	66.8	46.1	58.7	55.4
Private supply	31.8	39.4	14.6	40.9	21.1	40.0
Purchase bottled water	12.9	13.6	14.6	8.7	19.3	4.0
Other	2.0	0.0	3.3	3.5	0.9	1.0
I don't know	1.0	1.5	0.7	0.9	0.0	1.0

- Over 85% of respondents felt that their home drinking water was safe
- 30% of survey respondents have tested their home drinking water
- Residents of NH and ME were most likely to test their water, MA residents were least likely (Table 3)
- Less than 24% of residents claimed to be very aware of factors impacting drinking water and human health

Table 3: The percent of residents in each New England state that have tested their drinking water based on responses to the 2005 Water Issues Survey.

State of residence	Drinking water tested, %
New Hampshire	45.8
Maine	34.1
Vermont	33.3
Connecticut	31.6
Rhode Island	26.7
Massachusetts	21.3

Conclusion

- Outreach programs developed to address specific drinking water issues in New England should be well received.
- Information needs to be extended in a user-friendly fashion to increase literacy about factors affecting drinking water and human health. This might be accomplished through: (1) regional and local workshops, (2) conferences, (3) development of websites, (4) radio announcements, and (5) informational brochures.
- Due to similarities between urban (MA, CT, RI) and rural (ME, NH, VT) states, drinking water programming may be more effective if New England is treated as two regions. This would allow for better allocation of time and money and would better serve state needs.
- Once drinking water programming in New England becomes formalized, the existing extension faculty and infrastructure should be utilized as a nucleus to develop and expand programming.



References

- Brace, P. and K. Sims-Butler, K. Arceneaux, and M. Johnson. 2002. Public opinion in the American states: New perspectives using national survey data. *American Journal of Political Science* 46 (1): 173-189.
- Mahler, R., R. Simmons, and F. Sorensen. 2005. Drinking water issues in the Pacific Northwest. *Journal of Extension* 42 (5).