Plymouth Carver Aquifer Citizen Survey

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Survey Overview

In order to determine the level of knowledge of the general public related to water quality, potential causes of pollution and water conservation issues in the Plymouth Carver Aquifer (PCA) communities, Bridgewater State College's (BSC) Institute for Regional Development designed, administered and analyzed a citizen telephone survey of the towns over the Plymouth Carver Aquifer. The survey measured wide-ranging public opinion, perception, and knowledge. The purpose of the telephone survey was to generate quantitative and qualitative information, which the PCA subcommittee and BSC project team can use as an decision making tool and a tool by which to design focus groups and public water conservation campaign materials. These results also provide a "pulse" of the community's perception of the water conservation issues in the aquifer. By means of a random sampling process, the survey gathered data from a diverse group of citizens in each of the aquifer communities that were identified by the Massachusetts Executive Office of Energy and Environmental Affairs (Bourne, Carver, Kingston, Middleborough, Plymouth, Plympton and Wareham, Massachusetts). A team of trained interviewers administered the survey during daytime and evening hours. A total of 630 interviews were conducted with aquifer residents over the age of 18. The margin of error is approximately +/- 3.9 percent at the 95 percent confidence level.

The team conducted interviewing from the Institute for Regional Development's telephone research center at Bridgewater State College. A project director was present at all times to supervise the administration of the survey, monitor for quality control, and handle any other problems. Shifts of interviewers were used during the evenings (6 to 9pm) from March 3, 2008 to March 13, 2008. Telephone numbers were selected at random and purged of non-working and business numbers. Interviewers called each telephone number up to three times, using a rotating schedule of callbacks to increase potential of contacting individual citizens. Additionally, some callbacks were conducted during daytime hours.

Prior to survey distribution, the Institute for Regional Development applied for and received approval from the Bridgewater State College Institutional Review Board. This board serves to protect human subjects who participate in research done by members of the college community.

Upon completion of calls, the survey responses were entered into a computer database. The team analyzed data using the statistical software (SPSS for Windows Version 15.0).

Executive Summary

In order to determine the level of knowledge of the general public related to water quality, potential causes of pollution and water conservation issues in the communities that access the Plymouth Carver Aquifer the Institute designed, administered and analyzed a citizen telephone survey.

Some of the important highlights of the survey are as follows:

- One out of four respondents report the single most important reason to take steps to use less water is to avoid depletion of local water supplies. This not only demonstrates that communities tend to focus on water resources as a local issue, it implies a strong stewardship of the PCA communities and it speaks to how issues in Southeastern Massachusetts often organize via grass roots efforts.

- 16.1 percent of respondents report that the single most important reason they would take steps to use less water is to save money on water bill which is indicative of the difficult state of our current economy.

- When asked "what are your most important concerns about water quality and quantity in your area? 18.7 percent of respondents reported that they have "no concerns, this ranking should be an area of concern to PCA. This is the "hard-to-educate crowd". Perhaps the PCA should look at what the available water resources are, the growth rate of the area, the increase in consumption, then forecast a few scenarios (say, usual rainfall, less-than-usual rainfall, extended dry periods) that would give citizens a sense of "were going to run out of water in ____".

- A few interesting trends are that 40.2 percent of two person households and 90 percent of respondents own their homes. This gives the Aquifer the opportunity to target information to smaller households (the issue of use is not large households, but high consumption by small households) additionally it is clear that a large percentage of respondents also have control over changes to their homes and life style.

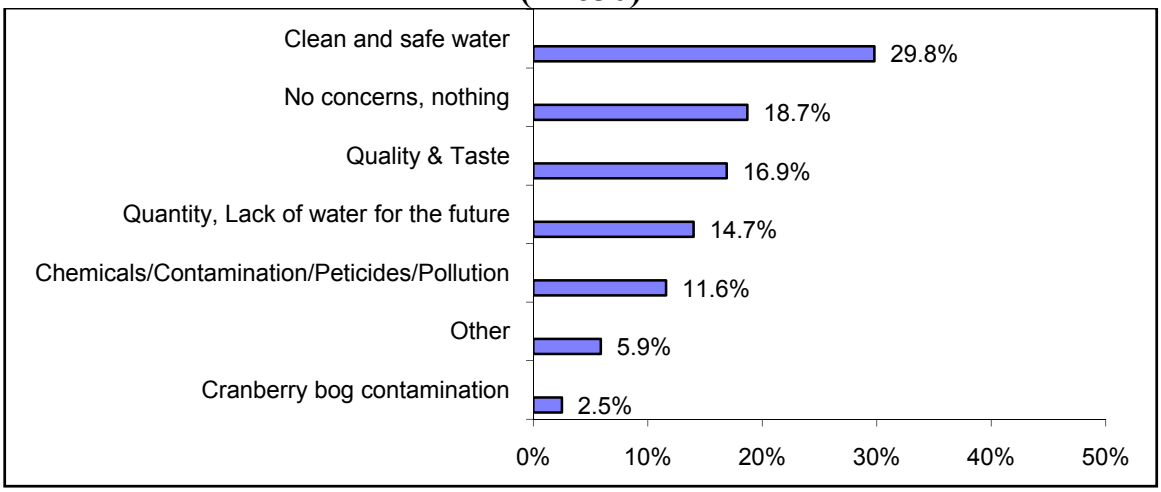
- The educational materials need to target both well and town water users due to the distribution.

- There are a high percentage of respondents that use rain gutters (90.6%). The survey asked about their receptivity to using rain barrels. Perhaps it would it be worth pursuing citizen receptivity to using landscape modification to encourage direct groundwater recharge from their rain gutters.

- It is clear that the there is inflated respondent reporting on conservation of water resources, education should not be undervalued on these issues even thought "good behavior is high" (Figure 4). Also the public awareness campaign should focus on the 36-60 age group(s), because this is the largest audience, and because it allows them to push the information down to the younger groups as well as up to the older groups.

Most Pressing Water Concerns

Figure 1
What are your most important concerns about water quality and quantity in your area?
(n=630)



Highlights:

- In figure nearly 30 (29.8%) percent of respondents are concerned that they have clean and safe water, however, nearly 20 (18.7%) percent of respondents don't have any concern about water quality or quantity in their area.

Table 1
What is the single most important reason you would take steps to use less water?

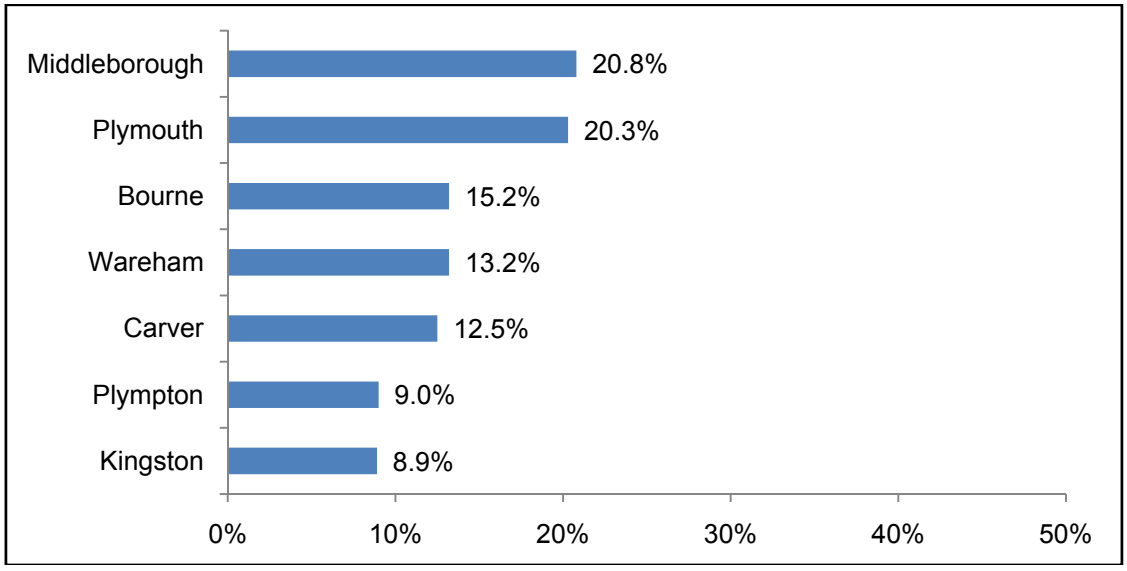
Reason to use less water	Percent (%)
Avoid depletion of local water supplies	26.5
Cost savings on water bill	16.1
Preserve wetland habitats for wildlife	13.2
Conservation	10.6
Environment	4.3
Drought/water shortage	4.3
Preserve for the future &/or "children/grandchildren"	1.9
Don't know/no response	18.8
Other	4.3

Highlights:

- One out of 4 respondents report the single most important reason to take steps to use less water is to avoid depletion of local water supplies.
- 16.1 percent of respondents report that the single most important reason they would take steps to use less water is to save money on their water bill.

Respondent Demographics

Figure 2
Respondent by Town



Highlights:

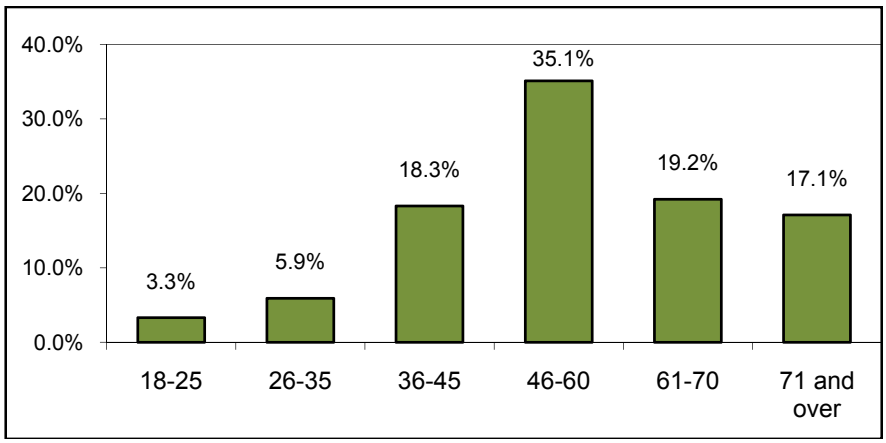
- Respondents are disbursed amongst the aquifer communities in proportion to each town's population

Figure 3
Sampling Summary for Population Results

	Town Population	Percentage of Total Respondents by Town	Anticipated* Percentage of Respondents from each Town Adjusted for Town Population	Percent Difference Respondents Expected versus Actual
Middleborough	19,941	20.8	17.1	-3.7
Plymouth	51,701	20.3	44.4	-24.1
Bourne	18,721	15.2	16.1	0.9
Plympton	2,637	9.0	2.2	6.8
Carver	11,163	12.5	9.6	2.9
Kingston	11,780	8.9	10.1	-1.2
Wareham	20,335	13.2	17.4	-4.2
Total Sample Population	116,337			

*The anticipated percentage of respondents is equal to each of the seven aquifer community's population.

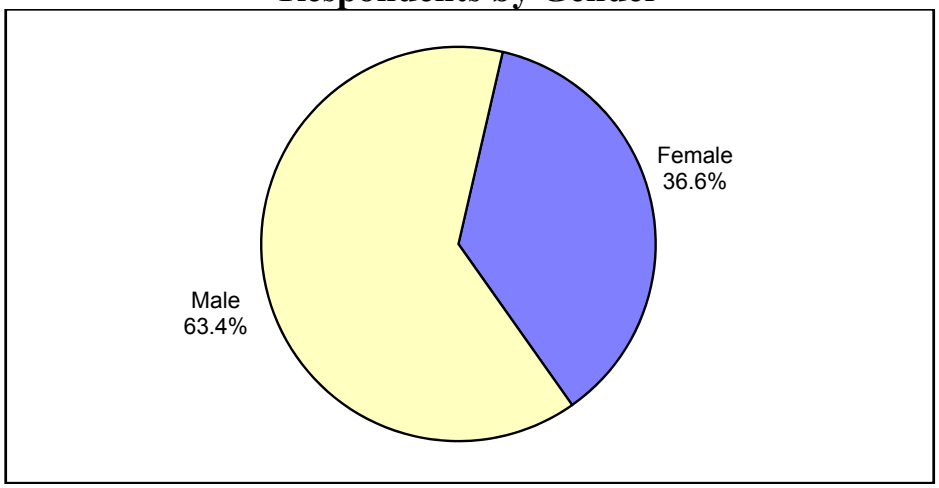
Figure 4
Respondents by Age



Highlights:

- The majority of respondents (35.1%) are between the ages of 46-60, followed by nearly 20 percent (19.2%) between the ages of 61-70.
- For Plymouth County the 2006 statistics give 22% of population from ages 45-59 and 12% from ages 60-74 (U.S. Census Bureau, 2006 American Community Survey). In addition, the county average is 6% for ages 74 and over, 16% from ages 35-44, 11% from ages 24-34, and 6% from ages 20-24.

Figure 5
Respondents by Gender



Highlights:

- A clear majority are of respondents are male (63.4%). Plymouth County statistics for 2006 suggest 51% female and 49% male (U.S. Census Bureau, 2006 American Community Survey).

Figure 5A

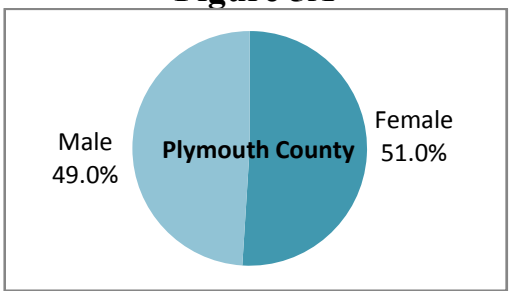
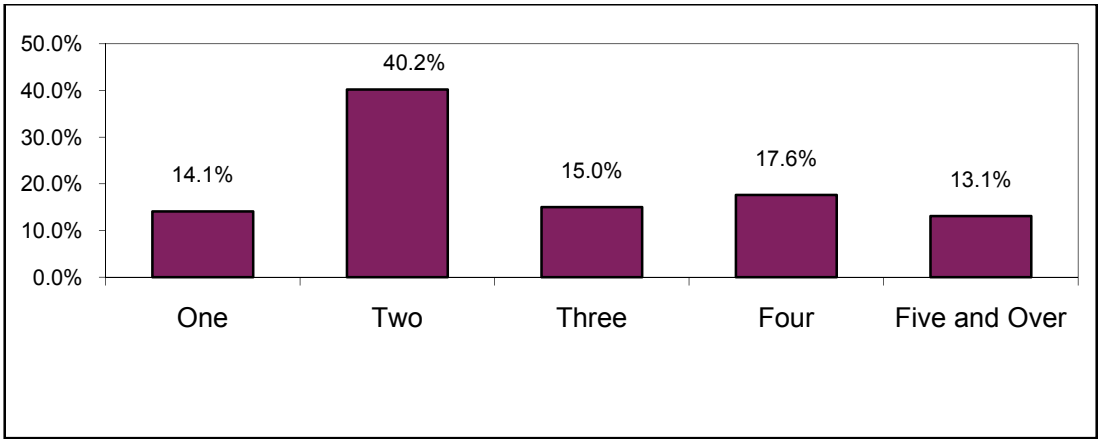


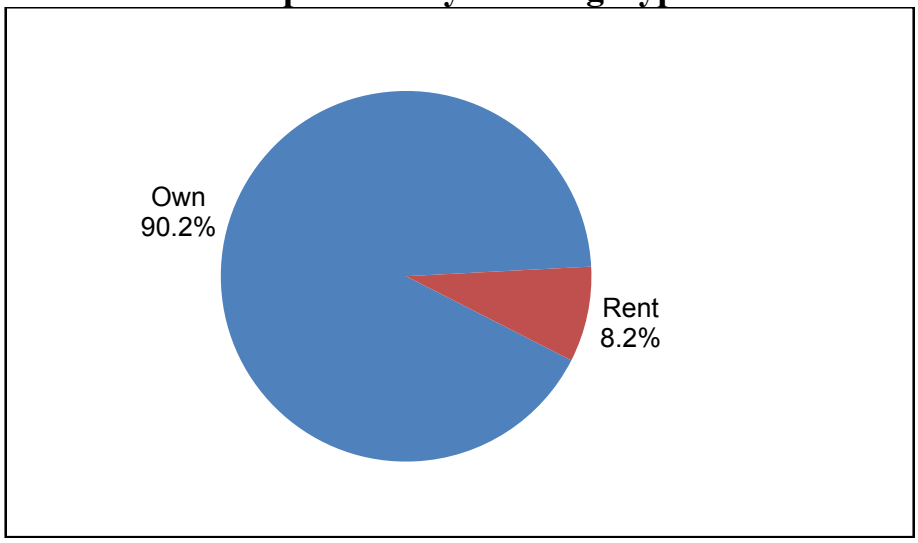
Figure 6
Number of Persons in Household



Highlights:

- Just over 40 percent (40.2%) of respondents live in a two person household.

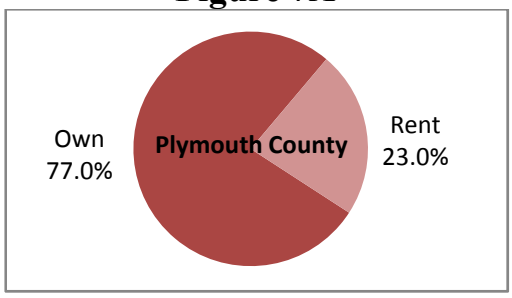
Figure 7
Respondent by Housing Type



Highlights:

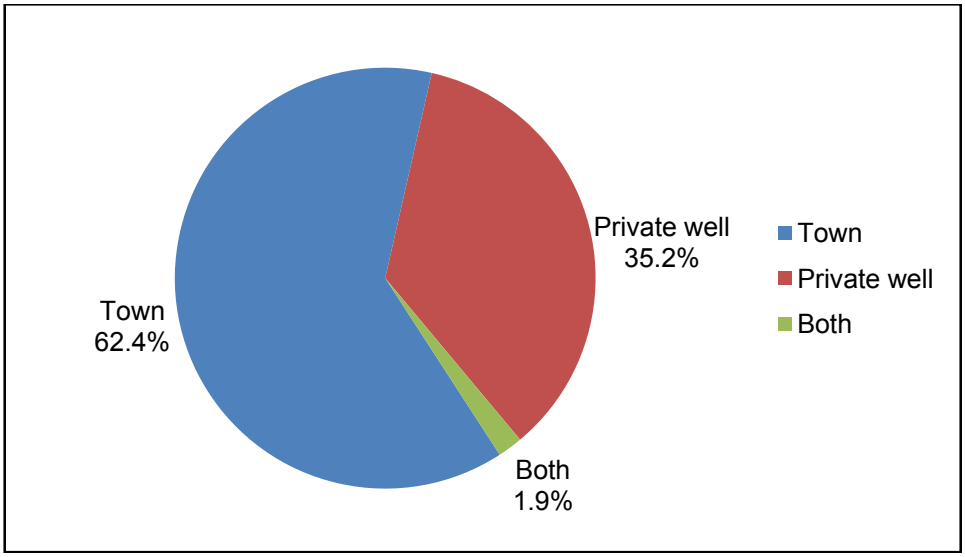
- An overwhelming majority of respondents (90.2%) report that they own their own home. This is well above the 2006 statistics for Plymouth County of 77% home owners (U.S. Census Bureau, 2006 American Community Survey).

Figure 7A



Home Water Supply

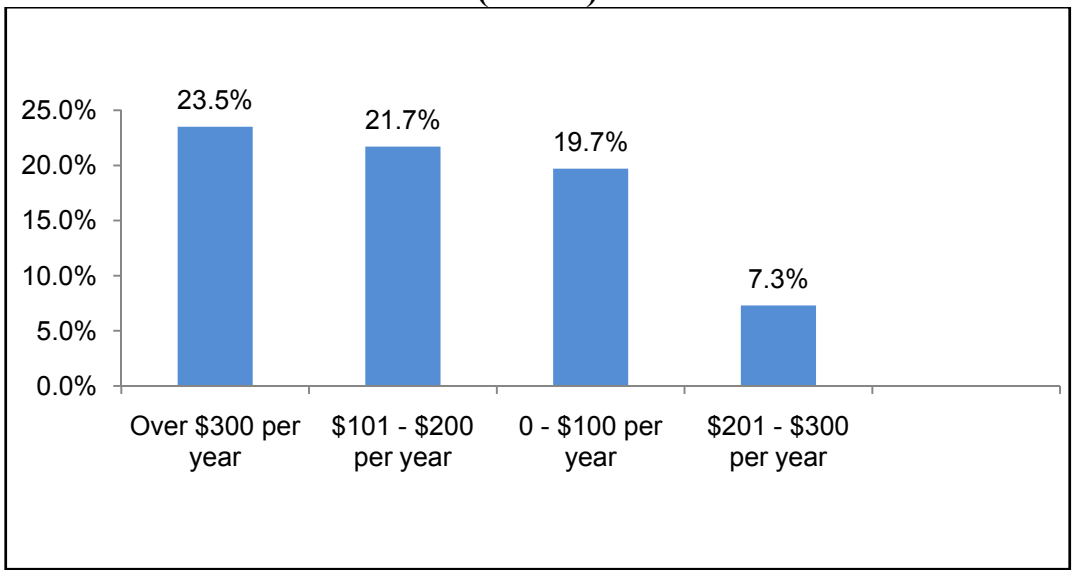
Figure 8
Respondents type of water supply at home



Highlights:

- A strong majority of respondents at (62.4%) receive their home water supply via town water *and* only 1.9 percent of respondents has both a private well and receives water from their town.

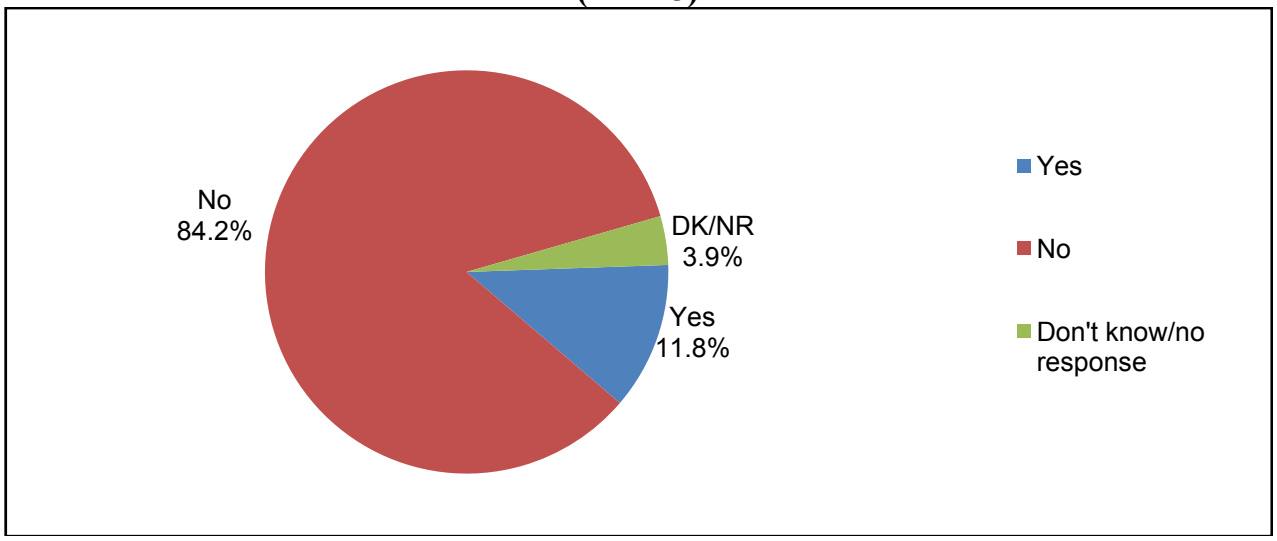
Figure 9
Respondents with Town Water Approximate Water Bill
(n=314)



Highlights:

- 23.5 percent of respondents report their water bill exceeds $300 per year.
- Not depicted in the figure above— (19.7%) of respondents indicated that they didn't know or were not sure of how much their household water bill is, additionally (8.0%) of respondents indicated that they live in either an apartment or condo.

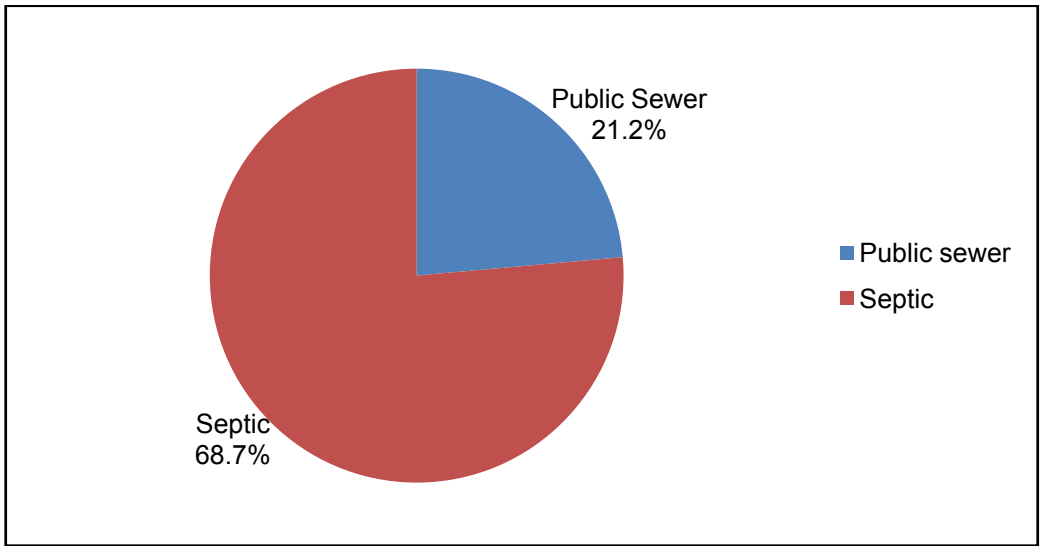
Figure 10
Respondents with Private Well—knowledge of any wells run dry in their neighborhood in the last five years
(n=228)



Highlights:

- A great majority of respondents (84.2%) are not aware of any of their neighbors' wells running dry in the past five years.

Figure 11
Respondents home public sewer or septic



Highlights:

- Nearly 70 percent (68.7%) of respondents report that their home has a private septic system.

Table 2
Respondents with septic tank— pump frequency
(n=433)

Frequency	Percent (%)
Every 2-5 years	46.9
Annually	23.8
Every 6 months	3.7
More than 5 years	6.7
Never (apartment or condo)	2.3
DK/NR	16.3

Highlights:

- Almost half (46.9%) of respondents pump their home septic tank every 2 – 5 years.

Table 3
Information sources for respondents on local water issues

Information Source	Percent (%)
Newspapers	38.3
Public Meetings/Municipal Departments	21.0
Other	12.2
My water bill	6.8
Internet/Blogs	3.8
TV/Radio	2.4
Don't know/no response	15.4

Highlights:

- 2 out of 5 respondent s (38.3%) report that they get information on local water issues from local newspapers which may be at least partially due the sample bias toward and older population.

Indoor Water Use

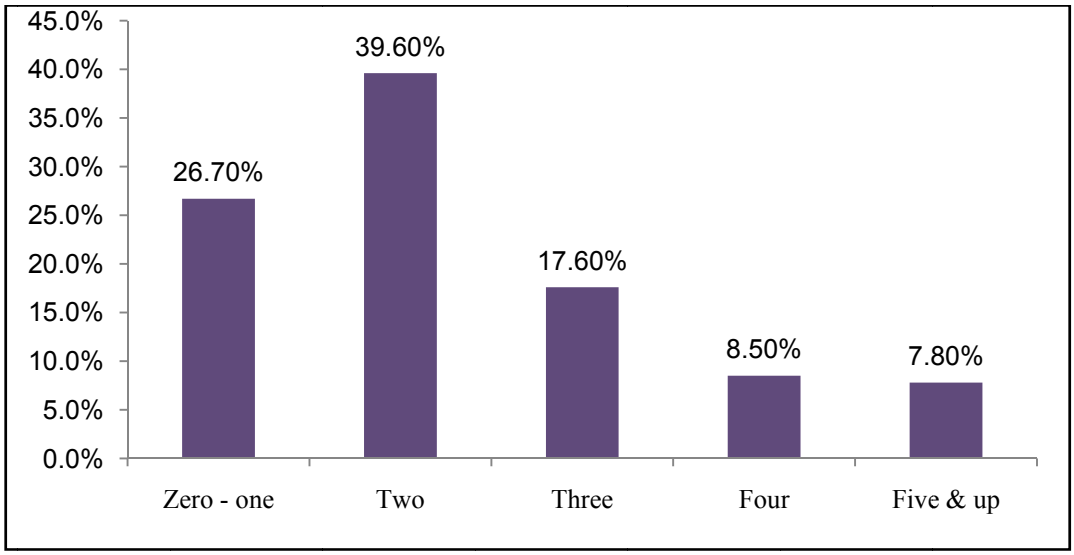
Table 4
Inside Water Conservation Measures

Water Use Inside Home	Percent (%) Reporting "Yes"
Quickly repair leaks in faucets/toilets	89.1
Use energy star or other high efficiency dishwasher and/or washing machine	74.2
Turn water off while brushing teeth	71.5
Use low flow shower heads	70.3
Use of low flow toilets	65.8

Highlights:

- An overwhelming majority of respondents (89.1%) report that they quickly repair leaks in their faucets and toilets.
- Respondents are also very likely to report that they use energy star appliances (74.2%), turn off water while brushing their teeth (71.5%) and use low flow shower heads (70.3%) and toilets (65.8%).

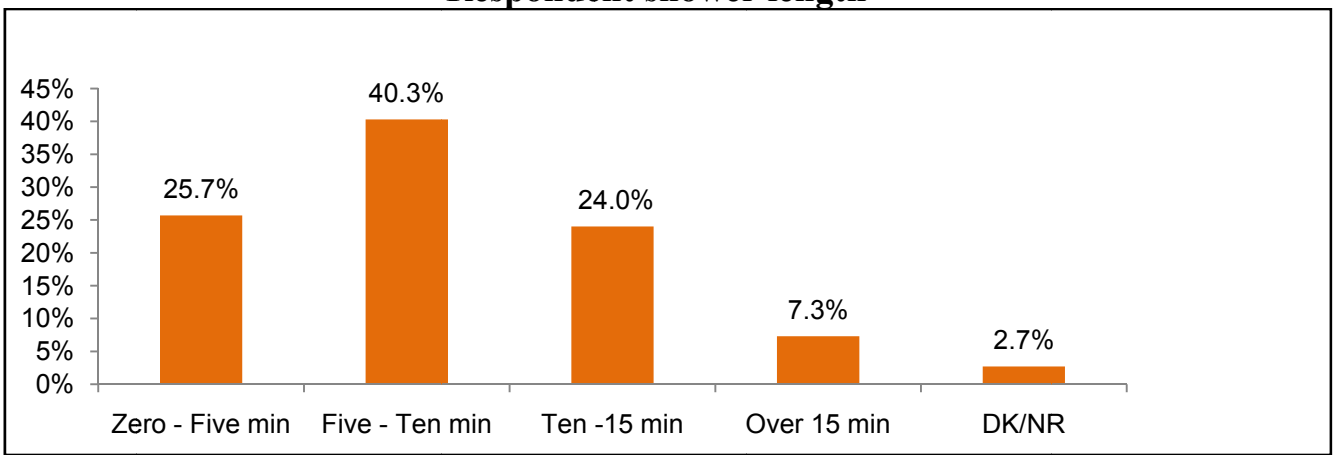
Figure 12
Average showers taken in home per day



Highlights:

- 66.3 percent of respondents indicate that there are 0 to 2 showers per day in their household.

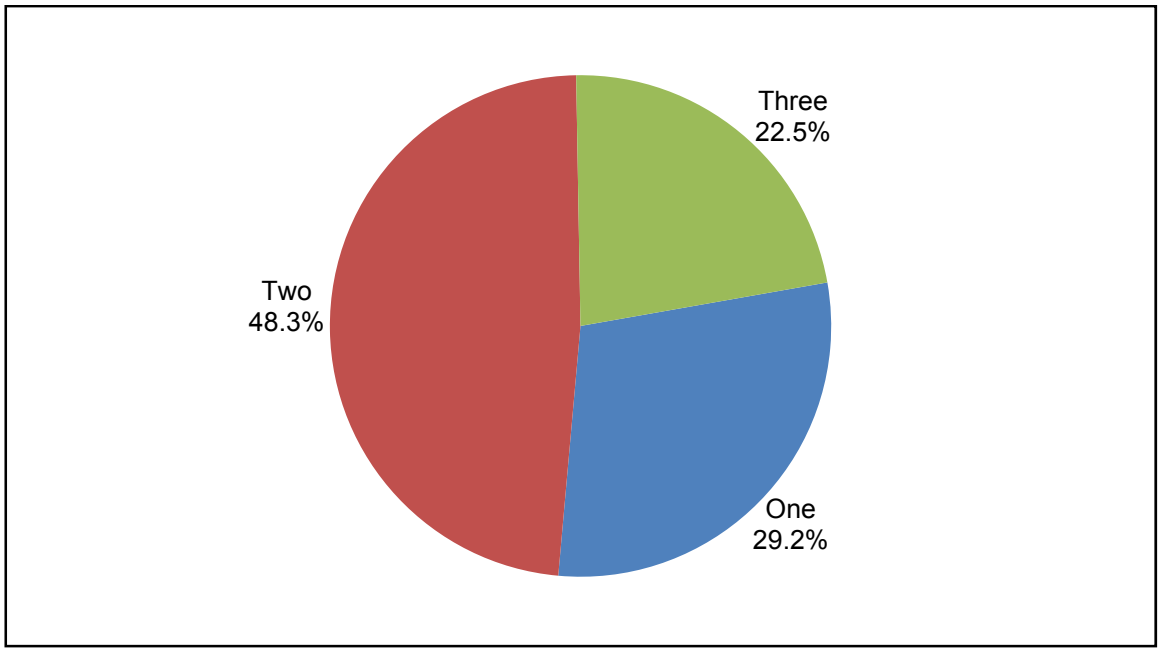
Figure 13
Respondent shower length



Highlights:

- The majority of respondents (40.3%) report that the showers taken in their household last between 5 and 10 minutes.

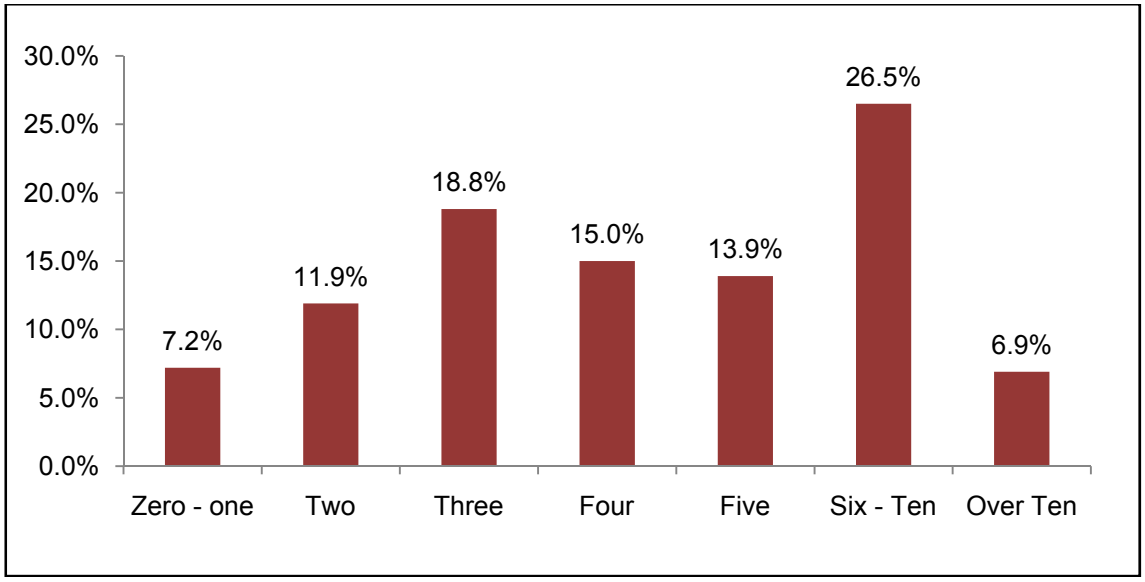
Figure 14
Number of toilets in home



Highlights:

- Almost half of respondents (48.3%) have two toilets in their home.
- 12.2 percent of respondents reported that they are planning on replacing toilets in their home in the near future.

Figure 15
Loads of household laundry per week



Highlights:

- One out of four (26.5%) respondents indicates that they do between 6 and 10 loads of laundry per week in their household.

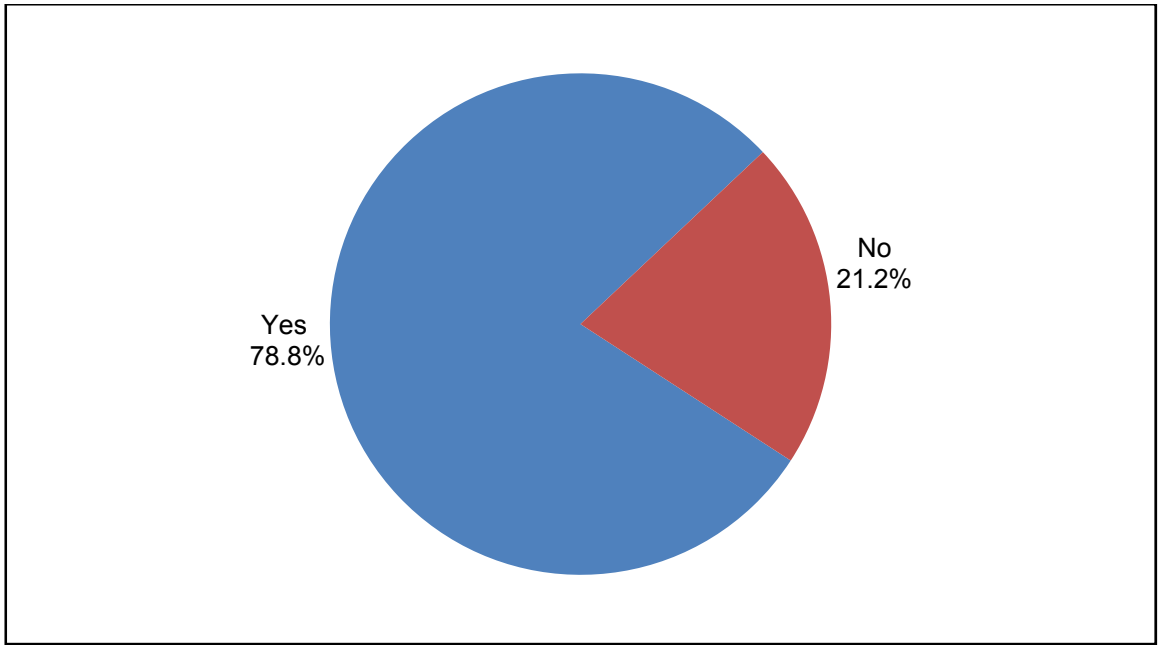
Table 5
Clothes washing machine age

	Percent (%)
Less than 5 years	56.8
5 – 10 years	26.3
15 – 20 years	6.7
10 – 15 years	2.9
More than 20 years	1.6

Highlights:

- Over half of respondents (56.8%) home washer machine is less than 5 years old.

Figure 16
Respondents use of dishwasher in home



Highlights:

- A very strong majority of respondents (78.8%) use a dishwasher in their home.

Table 6
Age of dishwasher

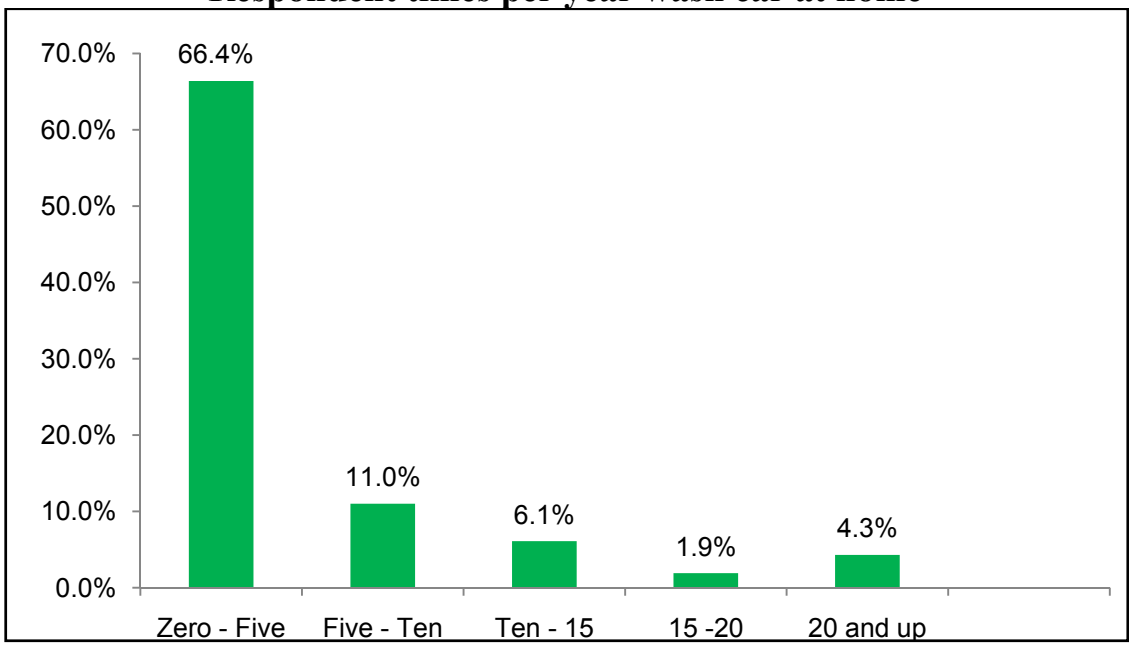
	Percent (%)
Less than 5 years	55.1
5 – 10 years	24.3
15 – 20 years	10.1
10 – 15 years	5.0
More than 20 years	1.6

Highlights:

- The majority of respondents (55.1%) dishwasher is less than 5 years old.

Outdoor Water Use

Figure 17
Respondent times per year wash car at home



Highlights:

- A strong majority (66.4%) of aquifer respondents wash their cars 5 times or less annually at their home.

Figure 18
Percentage of Respondents with a Pool

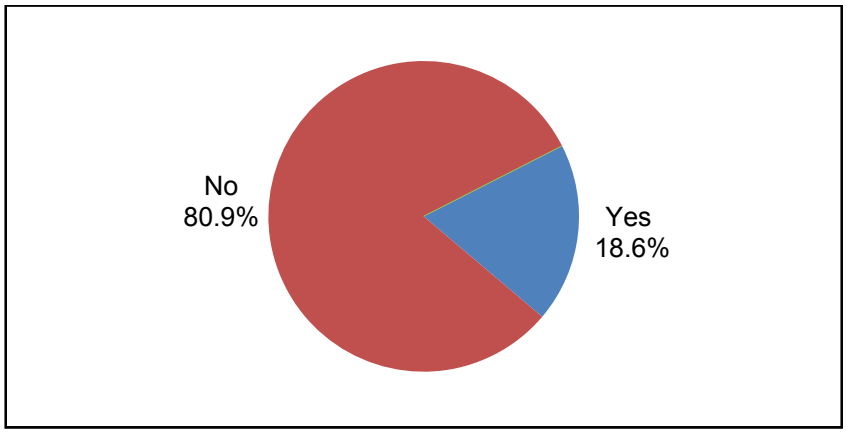


Table 7
How did you fill your pool initially?
(n=113)

	Percent (%)
Tank/Water company/purchased water	42.5%
House/Hose	34.5%
Well water	11.5%
Previously filled when we moved in	3.5%
Other	3.5%
Don't know/no response	4.4%

Table 8
Do you need to "top it off" in the summer?
(n=123)

	Percent (%)
Yes	70.7%
No	26.0%

Highlights:

- Almost 20 percent of respondents report that they have a pool in their home, of those respondents 42.5% report that they initially had their pool filled by a water company.

Table 9
Respondent outdoor water conservation measures

	Percent (%)
Home have gutters	90.6
Mulch planting beds	64.3
Mow lawn with a mulching mower	61.5
Leave grass clippings on your lawn	61.2
Collect rain water in a rain gutter/cistern or barrel	10.7

Highlights:

- A very strong majority of respondents (90.6%) report that they have gutters on their home.
- Only 10.7 percent of respondents report that they collect rain water in a rain gutter/cistern or barrel.

Table 9a
If no, what would encourage you to use a rain barrel in the future?

	Percent (%)
Nothing, not much	20.8
I don't know, never thought about it	18.8
Good idea for conservation or water shortage	17.5
N/A (condo or apartment)	12.0
Would need more information	12.0
Issue with it because of bugs, squirrels etc.	7.8
If town provided it to me at no cost	5.8
Price, if it were cheaper or would save me money	3.3

Highlights:

- 1 out of 5 respondents report that there is nothing or not much that could be done to encourage them to use a rain barrel in the future. However nearly 20 percent (18.8%) report that they never thought about it before, and nearly 18 percent (17.5%) said they thought it was a good idea for water conservation.

Table 10
Respondent outdoor water use/outdoor home practices

	Percent (%)
Water vegetable garden	66.1
Water flower garden	58.6
Water your grass	56.5
Use herbicides, pesticides and/or fertilizers on your lawn	52.1
Knowledge of which plants in your yard are native to this area	45.5
Use an outside company to fertilize and/or maintain your lawn	22.3

Highlights:

- More than half of all respondents report for each report that they water their vegetable (66.1%) and flower gardens (58.6%) and their grass (56.5%).

Appendix I
Plymouth Carver Aquifer Citizen Survey
Frequency Results without the Respondents from Middleborough*

Included in this appendix are the basic frequencies *without* respondents from the town of Middleborough. Since the Plymouth Carver Aquifer is only accessed by a small percentage of Middleborough residents this information demonstrates that the Middleborough respondents can serve as a control group since all of their responses except for three responses (see below) fall within the margin of error (+/-3.9%).

Respondents with septic tank: pump frequency

1. "Every 2 years" with Middleborough included was 46.9% and without Middleborough was 51.1%, which is .03 outside of the margin of error.
2. "Annually" with Middleborough included was 23.8% and without Middleborough was 19.3%, which is .06 outside of the margin of error.

Respondents with a pool: Do you need to "top it off" in the summer?

3. The "no" response with Middleborough included was 26.0% and without Middleborough was 30.9% which is 1.0 outside of the margin of error.

When reviewing the tables below refer to the "valid" percent column in comparison to the final report.

Town

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Plymouth	128	25.7	25.7	25.7
	Carver	79	15.8	15.8	41.5
	Wareham	83	16.6	16.6	58.1
	Bourne	96	19.2	19.2	77.4
	Plympton	57	11.4	11.4	88.8
	Kingston	56	11.2	11.2	100.0
	Total	499	100.0	100.0	

What is the single most important reason you would take steps to use less water?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cost savings on water bill	74	14.8	15.0	15.0
	Avoid depletion of local water supplies	118	23.6	24.0	39.0
	Preserve wetland habitats for wildlife	66	13.2	13.4	52.4
	Conservation	56	11.2	11.4	63.8
	Environment	25	5.0	5.1	68.9
	Drought/water shortage/dry well	22	4.4	4.5	73.4
	Preserve for future/"my children" "grandchildren"	12	2.4	2.4	75.8
	DK/NR	96	19.2	19.5	95.3
	Other	23	4.6	4.7	100.0
	Total	492	98.6	100.0	
Missing	System	7	1.4		
Total		499	100.0		

Own or Rent home

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Own	447	89.6	90.3	90.3
	Rent	39	7.8	7.9	98.2
	DK/NR	9	1.8	1.8	100.0
	Total	495	99.2	100.0	
Missing	System	4	.8		
Total		499	100.0		

AGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	17	3.4	3.4	3.4
	26-35	30	6.0	6.0	9.4
	36-45	84	16.8	16.8	26.3
	46-60	180	36.1	36.1	62.3
	61-70	98	19.6	19.6	82.0
	71 and over	86	17.2	17.2	99.2
	DK/NR	4	.8	.8	100.0
	Total	499	100.0	100.0	

How many people in household?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	73	14.6	14.7	14.7
	2	194	38.9	39.1	53.8
	3	80	16.0	16.1	70.0
	4	84	16.8	16.9	86.9
	5	39	7.8	7.9	94.8
	6	20	4.0	4.0	98.8
	7	4	.8	.8	99.6
	9	1	.2	.2	99.8
	11	1	.2	.2	100.0
	Total	496	99.4	100.0	
Missing	System	3	.6		
Total		499	100.0		

Is your home supplied by town water, from a private well or both?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.2	.2	.2
	Town	307	61.5	62.7	62.9
	Private well	171	34.3	34.9	97.8
	Both	9	1.8	1.8	99.6
	DK/NR	2	.4	.4	100.0
	Total	490	98.2	100.0	
Missing	System	9	1.8		
Total		499	100.0		

IF TOWN: What is your approx water bill?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-$100 per year	31	6.2	12.0	12.0
	101-$200 per year	54	10.8	20.8	32.8
	201-$300 per year	23	4.6	8.9	41.7
	Over $300 per year	39	7.8	15.1	56.8
	0-$50 per quarter	4	.8	1.5	58.3
	51-$100 per quarter	11	2.2	4.2	62.5
	101and over per quarter	4	.8	1.5	64.1
	51-$100 plus per half year	14	2.8	5.4	69.5
	DK/NOT SURE	50	10.0	19.3	88.8
	N/A (Condo/Included in rent etc.)	25	5.0	9.7	98.5
	Other	4	.8	1.5	100.0
	Total	259	51.9	100.0	
Missing	System	240	48.1		
Total		499	100.0		

The above data was collapsed; refer to this table for comparison of results.

	% With Middleborough Respondents	**% Without Middleborough Respondents**
Over $300 per year	23.5	20.8
$101-$200 per year	21.7	20.8
0-$100 per year	19.7	18.9
$201-$300 per year	7.9	8.9
DK/NR	19.7	19.3
N/A (Condo or apartment)	8.0	9.7

F PRIVATE WELL: To your knowledge, have any wells in your neighborhoo run dry within the last 5 yrs?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	18	3.6	10.1	10.1
	No	153	30.7	86.0	96.1
	DK/NR	7	1.4	3.9	100.0
	Total	178	35.7	100.0	
Missing	System	321	64.3		
Total		499	100.0		

Does your home have a public swer or septic system?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Public Sewer	96	19.2	19.4	19.4
	Septic	347	69.5	70.1	89.5
	DK/NR	52	10.4	10.5	100.0
	Total	495	99.2	100.0	
Missing	System	4	.8		
Total		499	100.0		

IF SEPTIC: How often do you have your tank pumped?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Every 6 months	12	2.4	3.4	3.4
	Annually	68	13.6	19.3	22.7
	Every 2 - 5 years	180	36.1	51.1	73.9
	More than 5 years	23	4.6	6.5	80.4
	Never/apt or condo	9	1.8	2.6	83.0
	Every year and a half	1	.2	.3	83.2
	When needed/water treatment system	3	.6	.9	84.1
	DK/NR	55	11.0	15.6	99.7
	Other	1	.2	.3	100.0
	Total	352	70.5	100.0	
Missing	System	147	29.5		
Total		499	100.0		

Where do you get information on local water issues?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	My water bill	25	5.0	5.0	5.0
	Newspaper	187	37.5	37.6	42.6
	Internet/Blogs	16	3.2	3.2	45.8
	Public Meetings/Municipal Departments	107	21.4	21.5	67.3
	TV/Radio News	13	2.6	2.6	69.9
	Word of mouth	8	1.6	1.6	71.5
	DK/NR	79	15.8	15.9	87.3
	"Town Report"	33	6.6	6.6	94.0
	Water Department/District	7	1.4	1.4	95.4
	Mail/Bulletin/Newsletter	7	1.4	1.4	96.8
	Other	16	3.2	3.2	100.0
	Total	498	99.8	100.0	
Missing	System	1	.2		
Total		499	100.0		

Use energy star or other high efficiency dishwasher and/or washing machine?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	366	73.3	73.9	73.9
	No	101	20.2	20.4	94.3
	DK/NR	28	5.6	5.7	100.0
	Total	495	99.2	100.0	
Missing	System	4	.8		
Total		499	100.0		

Use low flow shower heads?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	350	70.1	70.3	70.3
	No	114	22.8	22.9	93.2
	DK/NR	34	6.8	6.8	100.0
	Total	498	99.8	100.0	
Missing	System	1	.2		
Total		499	100.0		

Use low flow toilets?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	326	65.3	65.5	65.5
	No	141	28.3	28.3	93.8
	DK/NR	31	6.2	6.2	100.0
	Total	498	99.8	100.0	
Missing	System	1	.2		
Total		499	100.0		

Quickly repart leaks in faucets/toilets?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	441	88.4	89.6	89.6
	No	35	7.0	7.1	96.7
	DK/NR	16	3.2	3.3	100.0
	Total	492	98.6	100.0	
Missing	System	7	1.4		
Total		499	100.0		

Turn off water while brushing teeth?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	356	71.3	71.5	71.5
	No	135	27.1	27.1	98.6
	DK/NR	7	1.4	1.4	100.0
	Total	498	99.8	100.0	
Missing	System	1	.2		
Total		499	100.0		

On the average how many showers are taken in your home per day?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2	.4	.4	.4
	1	131	26.3	27.1	27.5
	2	189	37.9	39.0	66.5
	3	85	17.0	17.6	84.1
	4	41	8.2	8.5	92.6
	5	22	4.4	4.5	97.1
	6	9	1.8	1.9	99.0
	7	1	.2	.2	99.2
	8	3	.6	.6	99.8
	13	1	.2	.2	100.0
	Total	484	97.0	100.0	
Missing	System	15	3.0		
Total		499	100.0		

How long does the average shower last?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5 minutes	132	26.5	26.5	26.5
	5-10 minutes	206	41.3	41.3	67.7
	10-15 minutes	111	22.2	22.2	90.0
	Over 15 minutes	37	7.4	7.4	97.4
	DK/NR	13	2.6	2.6	100.0
	Total	499	100.0	100.0	

How many toilets do you have in your home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	142	28.5	28.5	28.5
	2	235	47.1	47.1	75.6
	3 or more	122	24.4	24.4	100.0
	Total	499	100.0	100.0	

Are you planning to replace any toilets in your home in the near future?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	67	13.4	13.4	13.4
	No	428	85.8	85.8	99.2
	DK/NR	4	.8	.8	100.0
	Total	499	100.0	100.0	

How many loads of laundry to you do per week?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	.8	.8	.8
	1	35	7.0	7.2	8.0
	2	61	12.2	12.6	20.6
	3	90	18.0	18.5	39.1
	4	75	15.0	15.4	54.5
	5	61	12.2	12.6	67.1
	6	41	8.2	8.4	75.5
	7	34	6.8	7.0	82.5
	8	14	2.8	2.9	85.4
	9	3	.6	.6	86.0
	10	37	7.4	7.6	93.6
	11	1	.2	.2	93.8
	12	9	1.8	1.9	95.7
	13	2	.4	.4	96.1
	14	7	1.4	1.4	97.5
	15	6	1.2	1.2	98.8
	20	4	.8	.8	99.6
	21	1	.2	.2	99.8
	30	1	.2	.2	100.0
	Total	486	97.4	100.0	
Missing	System	13	2.6		
Total		499	100.0		

How old is your clothes washing machine?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 years	278	55.7	55.9	55.9
	5-10 years	133	26.7	26.8	82.7
	10-15 years	13	2.6	2.6	85.3
	15-20 years	34	6.8	6.8	92.2
	More than 20 years	10	2.0	2.0	94.2
	DK/NR	29	5.8	5.8	100.0
	Total	497	99.6	100.0	
Missing	System	2	.4		
Total		499	100.0		

Do you use a dishwasher?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	391	78.4	79.0	79.0
	No	102	20.4	20.6	99.6
	DK/NR	2	.4	.4	100.0
	Total	495	99.2	100.0	
Missing	System	4	.8		
Total		499	100.0		

How old is your dishwasher?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 years	216	43.3	54.8	54.8
	5-10 years	97	19.4	24.6	79.4
	10-15 years	41	8.2	10.4	89.8
	15-20 years	20	4.0	5.1	94.9
	More than 20 years	5	1.0	1.3	96.2
	DK/NR	15	3.0	3.8	100.0
	Total	394	79.0	100.0	
Missing	System	105	21.0		
Total		499	100.0		

How many times per year do you wash your car(s) at home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5	332	66.5	66.8	66.8
	5-10	58	11.6	11.7	78.5
	10-15	23	4.6	4.6	83.1
	15-20	12	2.4	2.4	85.5
	20 and up	21	4.2	4.2	89.7
	DK/NR	51	10.2	10.3	100.0
	Total	497	99.6	100.0	
Missing	System	2	.4		
Total		499	100.0		

Do you have a pool at your home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	91	18.2	18.3	18.3
	No	404	81.0	81.1	99.4
	DK/NR	3	.6	.6	100.0
	Total	498	99.8	100.0	
Missing	System	1	.2		
Total		499	100.0		

How did you fill your pool initially?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	House/Hose Tap Water	32	6.4	36.0	36.0
	Water tank/company/purchased water	36	7.2	40.4	76.4
	Well water	12	2.4	13.5	89.9
	Previously filled when we moved in	4	.8	4.5	94.4
	DL/NR	3	.6	3.4	97.8
	Other	2	.4	2.2	100.0
	Total	89	17.8	100.0	
Missing	System	410	82.2		
Total		499	100.0		

Do you need to "top it off" in the summer?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	65	13.0	67.0	67.0
	No	30	6.0	30.9	97.9
	DK/NR	2	.4	2.1	100.0
	Total	97	19.4	100.0	
Missing	System	402	80.6		
Total		499	100.0		

Do you water your grass?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	289	57.9	58.3	58.3
	No	206	41.3	41.5	99.8
	DK/NR	1	.2	.2	100.0
	Total	496	99.4	100.0	
Missing	System	3	.6		
Total		499	100.0		

Do you water a vegetable garden?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	174	34.9	35.0	35.0
	No	322	64.5	64.8	99.8
	DK/NR	1	.2	.2	100.0
	Total	497	99.6	100.0	
Missing	System	2	.4		
Total		499	100.0		

Do you water a flower garden?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	295	59.1	59.4	59.4
	No	201	40.3	40.4	99.8
	DK/NR	1	.2	.2	100.0
	Total	497	99.6	100.0	
Missing	System	2	.4		
Total		499	100.0		

Do you use an outside company to fertilize and/or maintain your lawn?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	108	21.6	21.7	21.7
	No	383	76.8	77.1	98.8
	DK/NR	6	1.2	1.2	100.0
	Total	497	99.6	100.0	
Missing	System	2	.4		
Total		499	100.0		

Do you use herbicides, pesticides, and/or fertilizers on your lawn?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	214	42.9	55.7	55.7
	No	158	31.7	41.1	96.9
	DK/NR	12	2.4	3.1	100.0
	Total	384	77.0	100.0	
Missing	System	115	23.0		
Total		499	100.0		

Do you mow your lawn with a mulching mower?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	236	47.3	60.8	60.8
	No	126	25.3	32.5	93.3
	DK/NR	26	5.2	6.7	100.0
	Total	388	77.8	100.0	
Missing	System	111	22.2		
Total		499	100.0		

Do you leave your grass clippings on your lawn?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	239	47.9	61.4	61.4
	No	134	26.9	34.4	95.9
	DK/NR	16	3.2	4.1	100.0
	Total	389	78.0	100.0	
Missing	System	110	22.0		
Total		499	100.0		

Do you know which plants in your yard are native to this area?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	223	44.7	45.0	45.0
	No	255	51.1	51.4	96.4
	DK/NR	18	3.6	3.6	100.0
	Total	496	99.4	100.0	
Missing	System	3	.6		
Total		499	100.0		

Do you usually mulch your planting beds?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	315	63.1	64.2	64.2
	No	157	31.5	32.0	96.1
	DK/NR	19	3.8	3.9	100.0
	Total	491	98.4	100.0	
Missing	System	8	1.6		
Total		499	100.0		

Does your home have gutters?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	451	90.4	90.7	90.7
	No	42	8.4	8.5	99.2
	DK/NR	4	.8	.8	100.0
	Total	497	99.6	100.0	
Missing	System	2	.4		
Total		499	100.0		

Do you collect rain water in a rain gutter/cistern or barrel?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	52	10.4	10.5	10.5
	No	429	86.0	86.7	97.2
	DK/NR	14	2.8	2.8	100.0
	Total	495	99.2	100.0	
Missing	System	4	.8		
Total		499	100.0		

IF NO: What would encourage you to use a rain barrel in the future?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DK/NR Never thought about it	80	16.0	19.0	19.0
	N/A condo/apartment	60	12.0	14.3	33.3
	Nothing, not much etc.	80	16.0	19.0	52.4
	Issue with it b/c of bugs, squirrels, mosquitos	28	5.6	6.7	59.0
	Would need more information	53	10.6	12.6	71.7
	If town gave it to me for free I would do it	27	5.4	6.4	78.1
	Good idea, conservation, water shortage	70	14.0	16.7	94.8
	Price, if it was cheaper/if it would save money	15	3.0	3.6	98.3
	Other	7	1.4	1.7	100.0
	Total	420	84.2	100.0	
Missing	System	79	15.8		
Total		499	100.0		

What are your most important concerns about water quality or quantity in your area?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chemicals/ Contimination/ Pesticides/Pollution	54	10.8	11.1	11.1
	Clean, safe to drink, less minerals (iron, lead, chlorine etc.)	131	26.3	27.0	38.1
	Quality (taste etc)	82	16.4	16.9	55.1
	Cranberry bog contamination	11	2.2	2.3	57.3
	Quantity-enough water, lack of water for the future	69	13.8	14.2	71.5
	Disease (cancer, ecoli etc)	8	1.6	1.6	73.2
	None, nothing, not sure, no concerns	105	21.0	21.6	94.8
	Other	25	5.0	5.2	100.0
	Total	485	97.2	100.0	
Missing	System	14	2.8		
Total		499	100.0		

GENGER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	306	61.3	63.0	63.0
	Female	180	36.1	37.0	100.0
	Total	486	97.4	100.0	
Missing	System	13	2.6		
Total		499	100.0		

Division of External Affairs
Institute for Regional Development

One of the missions of Bridgewater State College is to serve the Southeastern Massachusetts region by working to enhance its intellectual, economic, cultural and civic well being. To this end, the College established the Institute for Regional Development on September 1, 1996. The Institute serves as the viable focal point for College initiatives related to enhancing the quality of life in Southeastern Massachusetts. The mission of the Institute is to serve as a resource center for the public, private, and non-profit sectors of Southeastern Massachusetts through applied research, training, and technical assistance programs.

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