

Overview of NECAP Public Polls on Climate Change Adaptation in Barnstable

Background

Prior to running New England Climate Adaptation Project (NECAP) role-play simulation workshops, project staff commissioned an independent firm to randomly poll 100 Barnstable residents via landline. This poll (Poll 1), conducted in May 2013, established baseline opinions about climate change risk and adaptation in the town. Following the NECAP workshops, a second public poll (Poll 2) was conducted in May 2014 to see what, if anything, had shifted in residents' opinions about their town's climate risks, level of preparedness, and capacity to address potential impacts.¹ This report summarizes key findings from the two polls for local officials and other interested stakeholders in Barnstable. These key findings are discussed individually in the sections that follow and a brief summary of all findings is provided in the conclusion.

Demographics

The populations of Poll 1 and Poll 2 were largely similar. However, Poll 2 respondents tended to have more formal education than Poll 1 respondents. Additionally, Poll 2 also had a larger share of both long-term residents (20+ years) and seasonal residents than did Poll 1. Political affiliation and environmental group membership, were similar between the two polls. Since the distribution for age and gender in Poll 1 and Poll 2 were slightly different than the population of Barnstable at large, the data from both polls were weighted for age and gender to reflect a more demographically representative sample.

Only two percent of Poll 2 respondents attended a NECAP workshop over the past year, indicating very minor overlap between the Poll 2 population and the NECAP workshop population for Barnstable. This small overlap was anticipated and wanted, since the intent of the poll was to gauge the public opinion of Barnstable residents at large.

High Levels of Climate Change Concern

Barnstable residents exhibit a high level of awareness and concern about climate change. In response to the question "Do you ever think about whether a change in the climate could affect your community," many polled residents (45 percent in Poll 1 and 47 percent in Poll 2) reported that they think about climate change often. Another 31 percent in both Poll 1 and Poll 2 said that they think about climate change "every once in a while." As indicated by these numbers, the frequency of climate consideration in Barnstable remained fairly constant from Poll 1 to Poll 2 (Figure 1).

¹ It will be indicated in this write-up where findings from the polls were statistically significant. If no indication is given, the finding from the poll was not statistically significant.

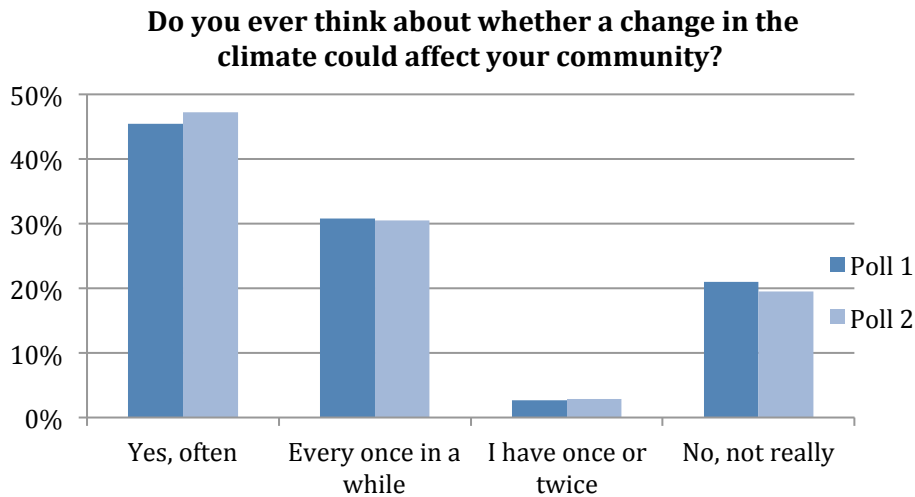


Figure 1: Frequency of climate change consideration

Polled residents also expressed a significant degree of concern about local climate change impacts. In response to the question, “How concerned are you about the possible impacts a changing climate might have on your town?” approximately four-fifths of both Poll 1 and Poll 2 respondents expressed some level of concern, with well over 20 percent in both polls saying they are “very concerned” (Figure 2).

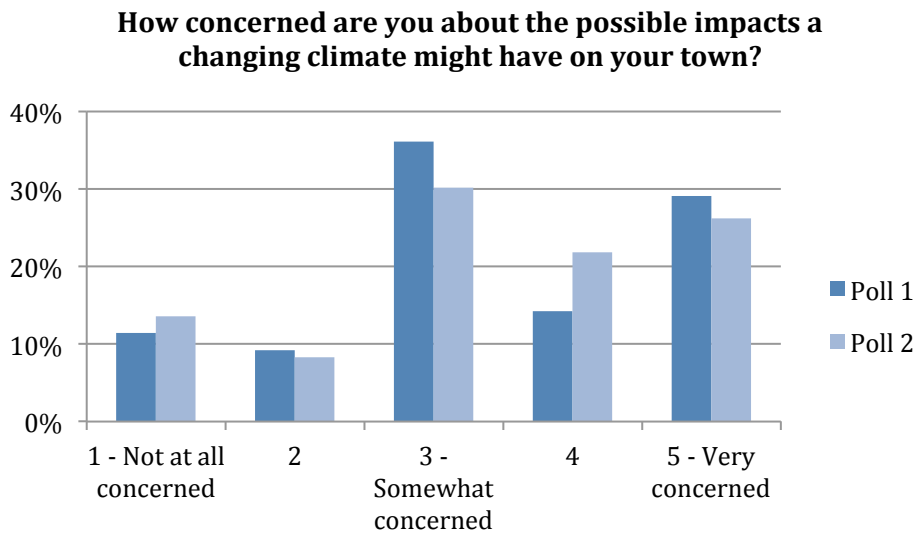


Figure 2: Comparison of Poll 1 and Poll 2 respondents’ concern about climate change

Poll 2 also asked respondents if their concern about local climate change impacts had shifted during the past year. Interestingly, 45 percent of Poll 2 respondents indicated that their concern had increased (Figure 3). Only 1 person (0.6 percent) reported that their concern had “decreased” and no one reported that their concern had “significantly decreased.”

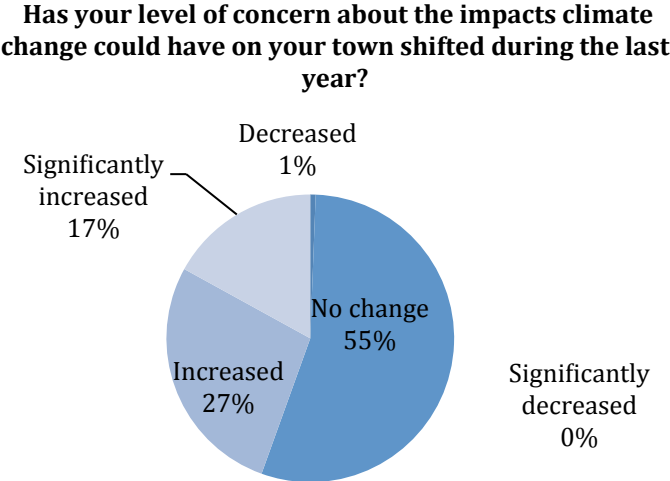


Figure 3: Change in level of concern about the impacts of climate change during the past year for Poll 2 respondents.

Of the respondents who said they had experienced an increase in concern, most ascribed this to either a natural weather event or to a news story (Table 1). However, Barnstable had a relatively high percentage of respondents attributing their increase in concern to an educational workshop or presentation (11 percent), as compared to other NECAP partner communities (5 percent in Cranston and 0 percent in both Dover and Wells).

What was the primary cause of this shift in your concern about the possible impacts climate change could have on your town?	Percentage
Natural weather event	47%
News story	25%
Educational workshop or presentation	11%
A personal or professional interaction	7%
Other	6%
The National Climate Assessment or another scientific report	5%
Local government action	0%
State or national government action	0%
School	0%

Table 1: Primary reason for increase in concern for Poll 2 respondents who reported an increase in their level of concern about the potential local impacts of climate change during the past year.

Takeaway: The majority of Poll 1 and Poll 2 respondents in Barnstable think about and are concerned about climate change. Almost half of Poll 2 respondents indicated that their concern about climate change impacts had increased during the past year. Natural weather events were the most significant causes of these shifts in concern, followed by news stories and educational workshops.

Respondents’ views on most significant climate change impacts

In Poll 2, respondents were asked: “What do you think the most significant impacts of a change in climate might be in your community?” They were given a set of choices and were allowed to select up to 3 options, in rank order.

Respondents’ first responses (i.e. the impact they think will be most significant), as shown in Table 2 below, were sea level rise, increased flooding, and more severe storms. Twelve percent of respondents felt there would be no significant impact.

What do you think the most significant impacts of a change in the climate might be for your community? [First ranked response]	Sea level rise	32%
	Increased flooding	20%
	More severe storms	15%
	Ecosystem impacts	13%
	There will be no significant impact	12%
	More heat waves	8%
	Infrastructure impacts	2%
	Drought	0%

Table 2: Top perceived impacts of climate change identified by Poll 2 respondents

Takeaway: Many Poll 2 respondents think of sea level rise, increased flooding, and more severe storms as the most significant climate risks for Barnstable.

Support for climate adaptation action

Both Poll 1 and Poll 2 results indicate that there is significant support for climate adaptation action in Barnstable. When asked “To what extent do you agree with the following: When making decisions today, decision-makers in my town should take into account scientific projections about what the climate might be like in 50 years,” a large majority of both Poll 1 and Poll 2 respondents said they either agree or strongly agree (Figure 4). In Poll 1, 49 percent said they strongly agreed and another 19 percent said they agreed. These numbers were even higher in Poll 2 (54 percent said they strongly agreed and another 28 percent said they agreed), although the shift between the two polls was not statistically significant. In Poll 2, only 10 percent of Poll 2 respondents expressed some level of disagreement with this statement.

To what extent do you agree with the following: When making decisions today, decision-makers in my town should take into account scientific projections about what the climate might be like in 50 years.

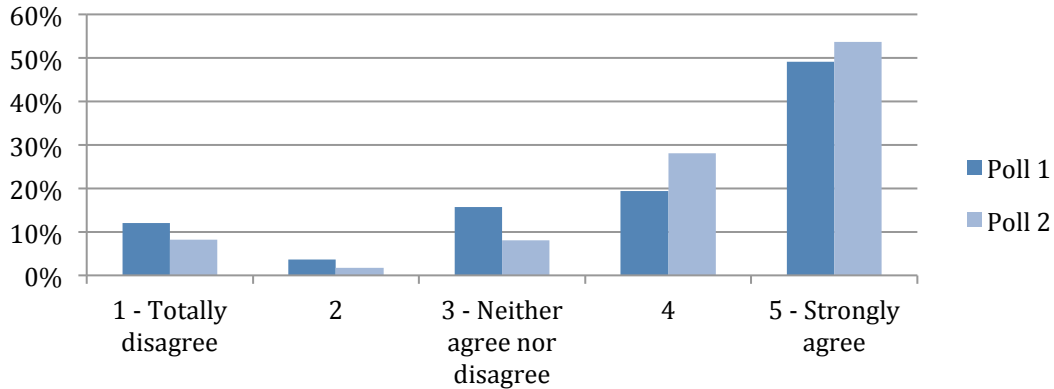


Figure 4: Poll 2 respondents’ support for integrating scientific climate projection into current local decision-making

Both polls also asked respondents: “How significant do you think addressing climate change risk should be in your town’s planning and decision-making over the next ten years?” Poll 1 and Poll 2 responses were similar, with the majority of people saying that addressing climate change should be significant in Barnstable’s planning (Figure 5). In both polls, 48 percent of polled residents said it should be “very significant.” Another 38 percent in Poll 1 and 36 percent in Poll 2 reported that it should be “somewhat significant” to “significant.”

How significant do you think addressing climate change risk should be in your town’s planning and decision making over the next ten years?

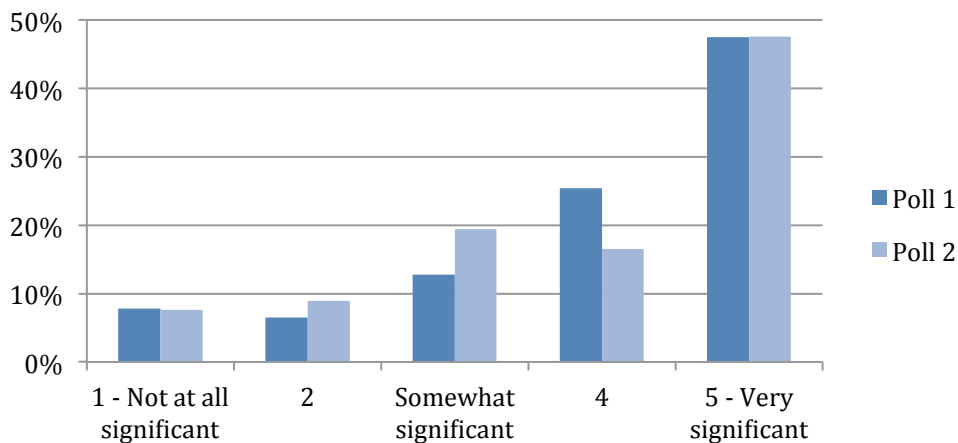


Figure 5: Poll 1 and Poll 2 respondents’ beliefs regarding how significant climate change should be in Barnstable’s decision-making over the next decade

In addition, nearly three-quarters (74 percent) of Poll 2 respondents said that Barnstable should prioritize preparing for climate change risks over the next decade, with 43 percent reporting that they “strongly agree” with the statement “Preparing for climate change risks should be a priority for my town over the next decade” and another 31 percent expressing that they “somewhat agree” (Table 3).

To what extent do you agree with the following: Preparing for climate change risks should be a priority for my town over the next decade?	Totally disagree	9%
	Somewhat disagree	12%
	Neither agree nor disagree	5%
	Somewhat agree	31%
	Strongly agree	43%

Table 3: Poll 2 respondents’ support for Barnstable’s prioritization of climate change adaptation over the next decade

Takeaway: Many people in Barnstable believe that climate adaptation is important and should be a priority in town planning and decision-making over the next ten years.

Confidence gap

As indicated in Figure 5 above, both Poll 1 and Poll 2 revealed that the significant majority of respondents (upwards of 80 percent in both polls) think that climate change *should be* significant in Barnstable’s planning during the next ten years. However, far fewer said they think climate change *actually will be* significant, with close to half of respondents saying they think it will not be significant. The discrepancy was similar in both Poll 1 and Poll 2 (Figure 6 and Figure 7), indicating a persistent confidence gap in Barnstable. There was a slight decrease in the number of Poll 2 respondents that believe climate change actually will be significant in Barnstable’s planning, broadening the confidence gap by a small margin. This “confidence gap” was found in all four NECAP communities, both in Poll 1 and Poll 2.

Poll 1: How significant do you think climate change risk should/ will actually be in your town’s planning and decision making over the next ten years?

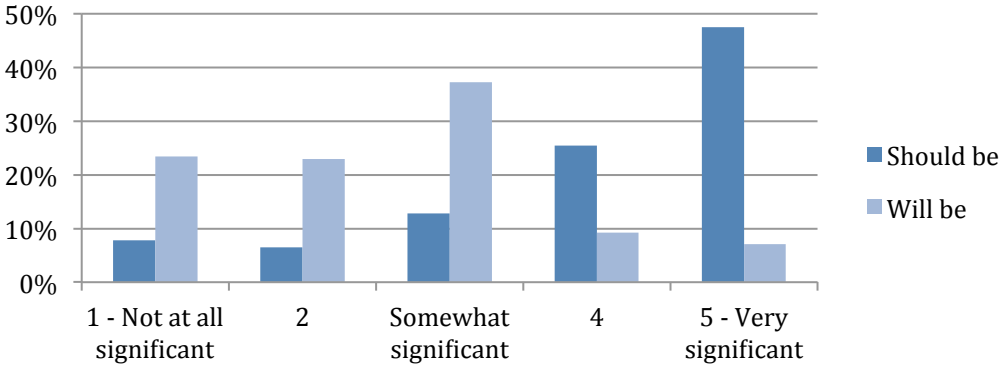


Figure 6: Confidence gap among Poll 1 respondents

Poll 2: How significant do you think climate change risk should/ will actually be in your town's planning and decision making over the next ten years?

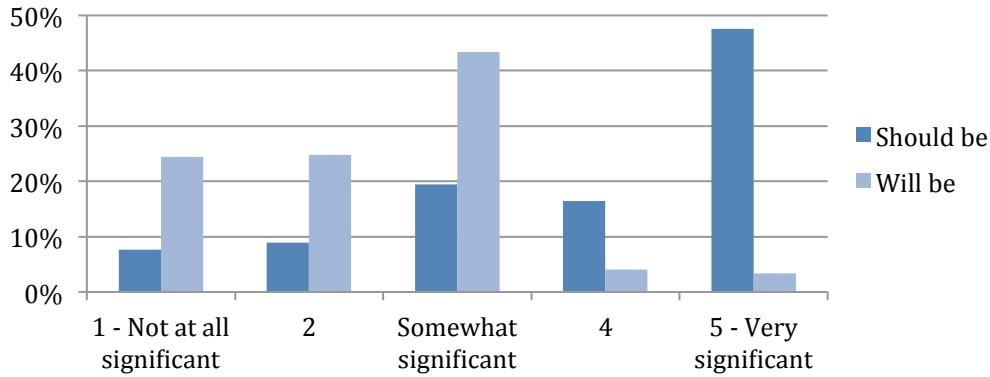


Figure 7: Confidence gap among Poll 2 respondents

This observed confidence gap was reinforced by the finding that when asked when asked “How confident are you that your town will be able to effectively respond to climate-related risks despite uncertainty about what the future climate will be like?” only 26 percent of Poll 1 and 23 percent of Poll 2 respondents said that they were either “confident” or “very confident” (Figure 8).

How confident are you that your town will be able to effectively respond to climate-related risks despite uncertainty about what the future climate will be like?

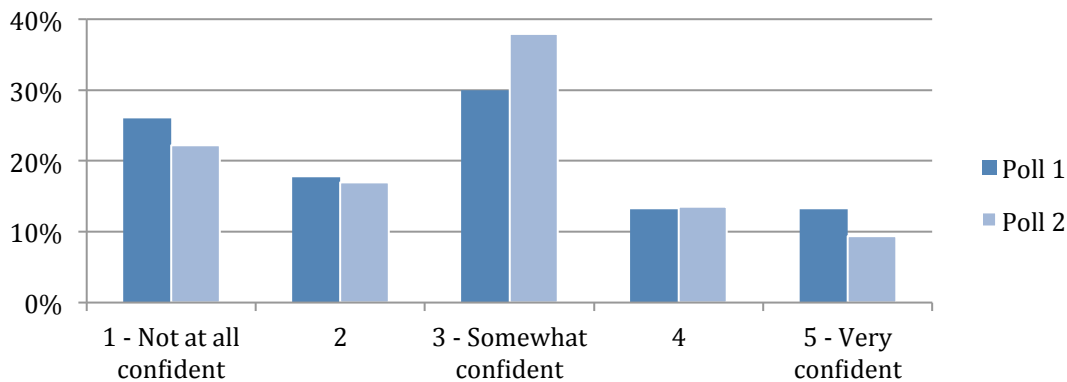


Figure 8: Comparison of confidence in the local government’s ability to effectively manage climate change risks between Poll 1 and Poll 2 respondents

Takeaway: Despite widely held sentiments in Poll 1 and Poll 2 that climate change should be significant in Barnstable’s future planning and decision-making, both Poll 1 and Poll 2 respondents were not very confident that it actually will be significant. This confidence gap, however, is a trend across all four NECAP study areas and is not unique to Barnstable.

Perceived barriers to action

In Poll 2, respondents were asked, “If the climate is changing, what is most likely to prevent your community from taking appropriate action?” They were given a set of options and were asked to choose up to three options in rank order, starting with most important.² The most common first response was “lack of funding or financial resources,” with 32 percent of respondents choosing this as the primary barrier. “Lack of agreement about what to do about it” was the second most common primary barrier, selected by 27 percent of respondents. This is consistent with data from NECAP Barnstable workshop surveys, which found that workshop participants also generally identified funding and lack of agreement as two of the key barriers to addressing climate change. Notably, only 2 percent of Poll 2 respondents said “nothing; my community is prepared” (Table 4).

Poll 2: If the climate is changing, what is most likely to prevent your community from taking appropriate action?	Lack of funding or financial resources	32%
	Lack of agreement about what to do about it	27%
	Uncertainty about what the future climate will be like	12%
	Lack of political will	10%
	Lack of scientific information	8%
	Lack of technical know-how/capacity	5%
	Lack of public support	4%
	Nothing; my community is prepared	2%

Table 4: Top perceived barriers to climate change action by identified by Poll 2 respondents

Takeaway: Poll 2 respondents and Barnstable workshop participants identified lack of funding and lack of agreement as key barriers to climate adaptation.

Some willingness to pay for adaptation

In Poll 2, respondents were asked about their willingness to pay slightly higher taxes so that their community could adapt to climate adaptation. Encouragingly, about a quarter of respondents (26 percent) said that they would be “very willing” to pay slightly higher taxes for this purpose, and another 43 percent indicated that they were “willing” to “somewhat willing” (Figure 9).

² This question was only asked in Poll 2, not in Poll 1.

Poll 2: How willing would you be to pay slightly higher taxes so that your town can prepare for climate change risks?

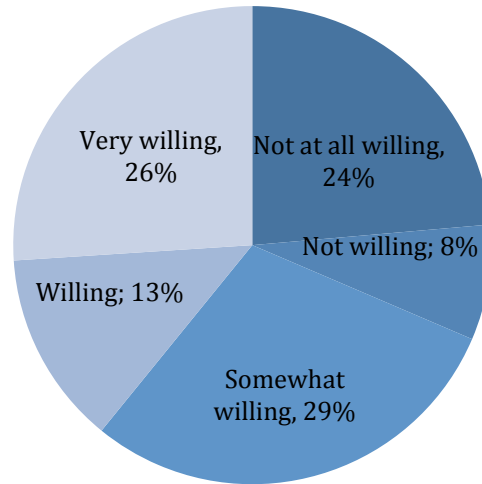


Figure 9: Poll 2 respondents' willingness to pay higher taxes to fund climate change adaptation in Barnstable

Unsurprisingly, there was a statistically significant positive correlation between willingness to pay and concern about climate change. Poll 2 respondents who indicated a higher level of concern in response to the question "How concerned are you about the possible impacts a changing climate might have on your town?" also tended to exhibit a higher willingness to pay. Similarly, a lower level of concern oftentimes corresponded to a lower willingness to pay. There was also a statistically significant positive correlation between willingness to pay and the belief that preparing for climate change risks should be a priority for Barnstable over the next decade.

Poll 2 also asked respondents the related question "What would make you more willing to pay slightly more in taxes so that your town can prepare for climate change risk?" Respondents were given the options listed in Table 5 below. Notably, and interestingly given the responses show in Figure 9 above, only 2 percent of respondents chose the answer "I am already very willing to pay slightly more in taxes for this purpose." In contrast, about 17 percent reported that they "do not want to pay more taxes for this purpose."

Of the approximately 81 percent of respondents who might be willing to pay more in taxes, the two most common responses were: "If I had more confidence in my town's ability to effectively manage climate change risks" (33 percent) and "If I started seeing the impacts of climate change" (21 percent). The results of this question suggest that, while many people say they would be willing to pay more in taxes to support Barnstable in planning for

climate change, most are not entirely ready to do this, and the reasons for this lack of readiness are very mixed.

What would make you more willing to pay slightly more in taxes so that your town can prepare for climate change risks?	If I had more confidence in my town’s ability to effectively manage climate change risks	33%
	If I started seeing the impacts of climate change	21%
	I do not want to pay more taxes for this purpose	17%
	If my town got hit by a major storm or other climate disaster	10%
	Other	8%
	If my town decision-makers included climate change preparations in everyday planning decisions	7%
	If my voice was represented in my town’s decision-making about how to prepare	2%
	I am already very willing to pay slightly more in taxes for this purpose	2%

Table 5: Factors that would increase Poll 2 respondents’ willingness to pay higher taxes to fund climate adaptation

Takeaway: The majority of Barnstable residents are willing to pay more in taxes to support climate adaptation efforts, but they are not entirely ready to do so, and the reasons for this apparent lack of readiness are mixed.

Stakeholder involvement

Both Poll 1 and Poll 2 indicate that Barnstable respondents believe it is important for stakeholders to be involved in deciding how to respond to climate change risks. When asked “How important is it that residents, local groups, and businesses be involved in deciding how to respond to climate change risks?” the vast majority of respondents in both polls answered “somewhat important” to “very important.”

How important is it that residents, local groups, and businesses be involved in deciding how to respond to climate change risks?

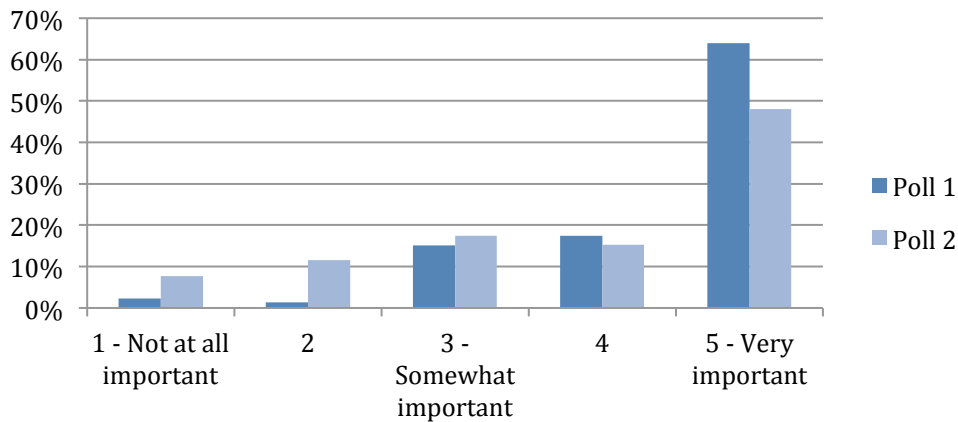


Figure 10: Importance placed on stakeholder involvement by Poll 2 respondents

It is important to note that there was a statistically significant decrease in the importance placed on stakeholder involvement from Poll 1 to Poll 2, although support for stakeholder engagement was still very high in the second poll. It is not clear why this change occurred. One possibility is that Poll 1 respondents’ support for stakeholder engagement was unrepresentatively high. Regardless, over 70 percent of respondents in both polls indicated that involving local stakeholders in adaptation decision-making is somewhat to very important, with X percent of Poll 1 and Y percent of Poll 2 respondents saying it is “very important.”

Takeaway: Barnstable respondents believe it is important for stakeholders to be involved in deciding how to respond to climate change risks.

Who should be responsible

When asked “If the climate is changing, who do you think should be responsible for preparing for the possible impacts this might have on your community?” 19 percent of respondents chose the “national government” for their first ranked response, another 19 percent said “city government,” and 16 percent said “individuals.” Interestingly, 27 percent of Poll 2 respondents chose “other” as their first ranked response (Table 6). It is possible that respondents who choose “other” attribute responsibility to a regional governing body, such as the Cape Cod Commission. Such perceptions would be in line with the strong regional identity of the Cape, of which Barnstable is the largest town. The percentage of respondents who chose individuals for their first ranked response in Barnstable was strikingly low compared to the other NECAP communities (31 percent in Cranston, 40 percent in Dover, and 37 percent in Wells chose individuals for their first ranked response).

Poll 2: If the climate is changing, who do you think should be responsible for preparing for the possible impacts this might have on your community?	Other	27%
	National government	19%
	City government	19%
	Individuals	16%
	Neighborhoods	8%
	State government	6%
	All of the above	4%
	Businesses	1%

Table 6: Poll 2 respondents’ beliefs regarding who should be primarily responsible for preparing for local climate change impacts

Takeaway: While Poll 2 respondents attributed some responsibility for climate change adaptation to the National and local government, the prevalence of the “Other” category makes it difficult to identify any trends in Barnstable on this matter.

Final Summary

The findings of these two polls provide valuable information about Barnstable residents’ beliefs regarding climate change and climate adaptation, as well as a sense of whether and how these sentiments changed between May 2013 and May 2014.

Our findings indicate there is a surprisingly high level of awareness and concern about climate change risks among the public in Barnstable. Almost half of Poll 2 respondents reported that their concern about climate change impacts had increased in the past year, and many attributed this shift to natural weather events or news stories. Most people perceive sea level rise, increased flooding, and more severe storms to be the most significant climate risks for Barnstable.

While many residents in Barnstable believe that incorporating climate change risks into decision-making is important, they generally lack confidence in the city to take near-term action to prepare for climate change risks. We found a similar confidence gap in all other NECAP towns. While the public polls do not provide an exact sense of why this is, our data from Barnstable suggest that people see financial constraints and a lack of agreement about what to do as key barriers to the town being able to effectively prepare for climate change.

In our 2014 poll, we found a surprisingly high percentage of people who may be willing to pay slightly higher taxes to help Barnstable undertake climate adaptation efforts. However, most respondents indicated they are not entirely ready to do so. When asked what would increase their willingness to pay slightly higher taxes to support their town in preparing for

climate change, people gave very mixed responses. While people may not be entirely ready to pay more in taxes to support local adaptation efforts, and it isn't entirely clear what it would take to increase this readiness, it is worth note that our data suggest most people are far from opposed to doing so.

One of the clearest takeaways from this data is that most people think it is important to engage stakeholders (such as local businesses and residents) in making decisions about how to respond to climate change risks. Barnstable has an important challenge ahead in figuring out how to do this. We are optimistic that effectively doing so will raise awareness of the important role that the city must play in responding to climate change risks, as well as build widespread buy-in and win financial support for adaptation efforts.