

Overview of NECAP Public Polls on Climate Change Adaptation in Wells

Background

Prior to running New England Climate Adaptation Project (NECAP) role-play simulation workshops, project staff commissioned an independent firm to randomly poll 100 Wells 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 Wells. 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 age and gender breakdown for both Poll 1 and Poll 2 was similar. However, since the distribution for age and gender in Poll 1 and Poll 2 were slightly different than the population of Wells at large, the poll data were weighted for age and gender to reflect a more demographically representative sample.

There were a few demographic differences between Polls 1 and 2. Respondents in Poll 2 had more formal education, less membership in environmental organization, more self-identified liberals, as compared to the Poll 1 respondents. Gender, age, and length of residence were very similar between the two polls. Neither poll well captured the perspectives of part-time or seasonal residents in Wells, likely because the polls were conducted via landline. Only three percent of Poll 2 respondents stated that they attended a NECAP workshop over the past year, indicating a very minor overlap between the Poll 2 population and the NECAP workshop population for Wells.

High Levels of Climate Change Concern

Both Poll 1 and Poll 2 found high levels of concern about the possible impacts of climate change on the Town of Wells, with about two-thirds of respondents in both polls saying they are somewhat to very concerned about local climate change impacts (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.

How concerned are you about the possible impacts a changing climate might have on your town?

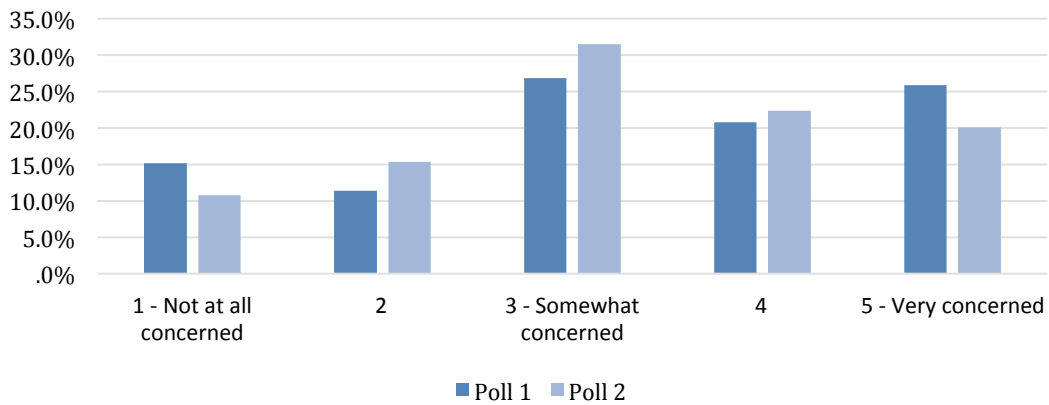


Figure 1: Comparison of Poll 1 and Poll 2 respondents' concern about local climate change risks

Moreover, when asked in Poll 2 if their concern about local climate change impacts had shifted, nearly 30 percent of respondents indicated their concern had increased during the past year. Moreover, 70 percent of respondents indicated no change in their concern, and less than one percent said their concern had decreased in the last year. These respondents' top reasons for the increase in their concern, out of the options provided, are listed in Table 1.

Natural weather event	29 %
The National Climate Assessment or another scientific report	14 %
News story	13 %
State or national government action	8 %
Personal or professional interaction	4 %
Local government action	3 %
Educational workshop or presentation	0 %
School	0%
Other reason	29 %

Table 1: Reasons for increased concern about local climate change impacts

Despite this increase in levels of concern, the number of Poll 2 respondents who said they thought about how climate change would affect their community “often” was 42 percent, versus 54 percent in Poll 1. Conversely, the number of respondents who said “every once in a while” went up from 19 percent in Poll 1 to 32 percent in Poll 2. This trend may reflect that Wells did not experienced a severe storm between the two polls, whereas Hurricane Sandy had occurred much closer to the time of the first public poll. While not statistically significant, these results mean there is a trend towards thinking about climate change “every once in a while” rather than “often” between Poll 1 and Poll 2.

Overall, these results suggest that the level of public concern about future climate change impacts is higher than many public officials and stakeholders in Wells may think. Natural weather events,

scientific reports, and news stories were the most cited reasons for increased levels of concern over the past year. This suggests that public officials seeking to increase support for climate change adaptation efforts might consider capitalizing on future events in these categories, such as the release of major scientific reports or news stories related to climate change risks, to focus on increasing people’s level of concern about climate change impacts in Wells. The “other reasons” for an increase in climate change concern are unknown, as the polling process did not record open-ended responses.

Takeaway: Overall levels of concern about local climate change risks were consistently high among Poll 1 and Poll 2 respondents in Wells, with about 30 percent of Poll 2 respondents indicating an increase in concern and the remainder indicating no change. Wells respondents, however, tend to think about climate change risks with only moderate frequency and Poll 2 respondents reported thinking about climate change risks less frequently than Poll 1 respondents.

Sea level rise, flooding, and severe storms seen as the most significant impacts of concern

When asked, “What do you think the most significant impacts of a change in climate might be in your community?” the most common top three responses from Poll 2 respondents were sea level rise (33 percent), increased flooding (24 percent), and more severe storms (16 percent) (Table 2). Ten percent of respondents felt there would be no significant impact on Wells from climate change. Poll 1 respondents gave similar responses. However, Poll 1 only collected one response, as opposed to three, from each respondent so the results are not directly comparable.

Sea level rise	33%
Increased flooding	24%
More severe storms	16%
Ecosystem impacts	11%
No significant impact	10%
More heat waves	3%
Drought	2%
Infrastructure impacts	1%

Table 2: Poll 2 respondents’ perceptions of the most significant local climate change risks

Takeaway: Poll 2 respondents identified sea level rise, flooding, and severe storms as the most significant possible impacts of climate change in Wells.

Support for making climate change preparedness a priority

Nearly two-thirds of Wells Poll 2 respondents expressed support for their town prioritizing preparing for climate change over the next decade (Figure 2). When asked whether they agree with the statement “Preparing for climate change risks should be a priority for my town over the next decade” 36 percent said they strongly agree and 27 percent said they somewhat agree, indicating relatively strong local support for local climate change adaptation. Respondents

political affiliations correlated with answers to this question. Of note, those identifying as liberal or independent were more likely to see climate change risks as a priority for their town than were those identifying as political conservatives.

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.

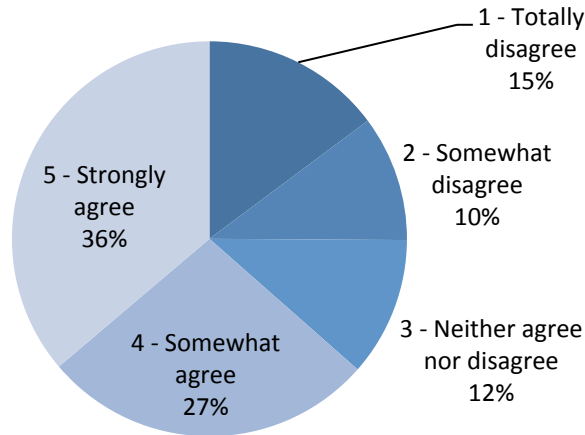


Figure 2: Poll 2 respondents’ perspectives about whether preparing for climate change should be a priority for their town in the near future

Moreover, the majority of Wells respondents in both polls think addressing climate change risk should be an important part of local planning in the next decade, with 80 percent in Poll 1 and 89 percent in Poll 2 saying it should be somewhat to very significant – a noticeable but not statistically significant increase (Figure 3).

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

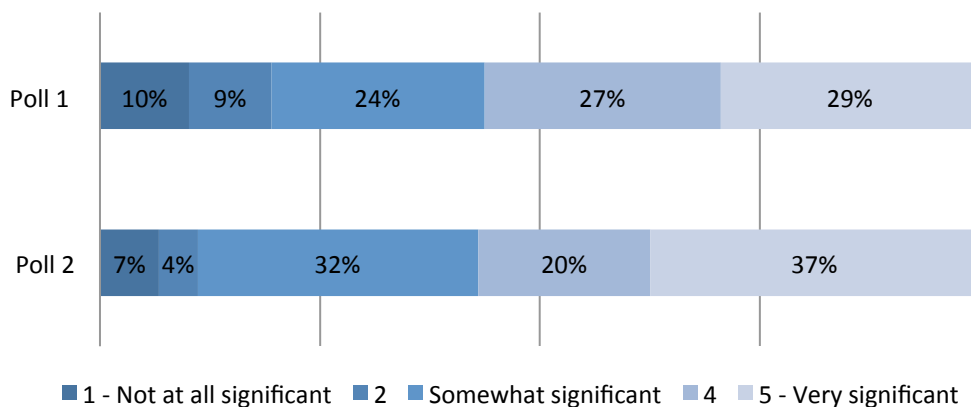


Figure 3: Comparison of Poll 1 and Poll 2 respondents’ beliefs regarding the importance of local efforts to address climate change risks

Takeaway: The majority of Wells respondents in Poll 1 and Poll 2 think that preparing for climate change risk should be both a priority and a significant part of town planning and decision-making – indicating that Wells respondents believe that climate change adaptation should be an important issue in relation to other issues facing the town.

Confidence gap between how significant climate change adaptation *should be* and *actually will be* in town planning

Both polls show a confidence gap between the number of poll respondents who think that addressing climate change risk *should be* significant in their town’s planning decisions over the next ten years, and those who think it *actually will be* significant. As discussed above, the large majority of Wells respondents think addressing climate change risk should be an important part of local planning in the next decade. However, when asked if they think it will actually be important, this number dropped to 45 percent for Poll 1 and 54 percent for Poll 2, with very few people thinking it will be very significant (Figure 4 and Figure 5).

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

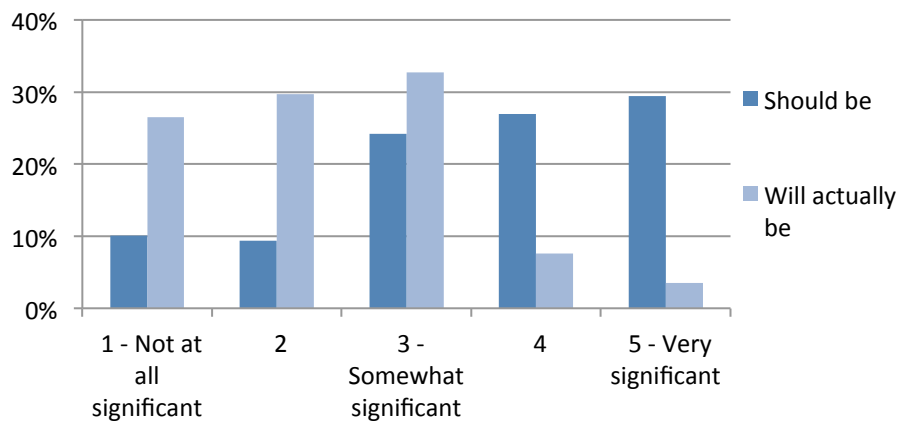


Figure 4: Confidence gap among Wells Poll 1 respondents

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

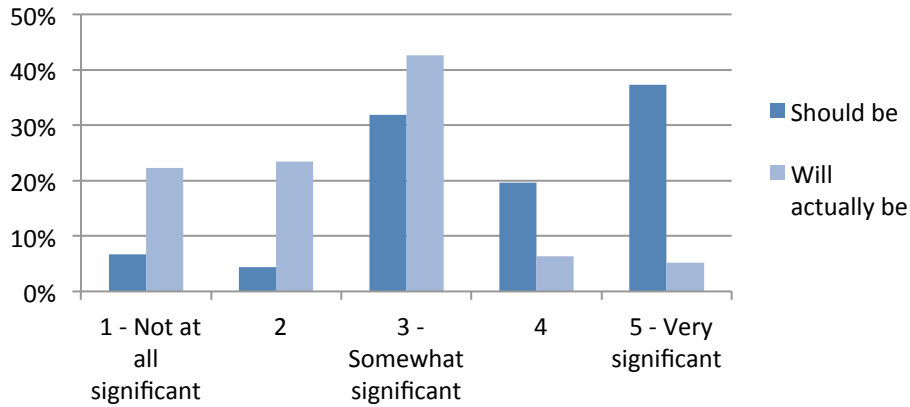


Figure 5: Confidence gap among Wells Poll 2 respondents

It is important to note that, while this confidence gap was still present in the more recent poll, there was an increase in both the percentage of respondents who think that addressing climate change risk *should be* significant in their town’s planning decisions over the next ten years (Figure 3, above) and those who think it *will be* significant from Poll 1 to Poll 2. Figure 6 shows that there is a shift in Poll 2 towards a modestly higher level of confidence that climate change *will actually be* significant in future local decision-making; however, this shift was not statistically significant. This suggests an increase in both the belief that the town should take climate preparedness action in the near future as well as in confidence that the town will actually do so.

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

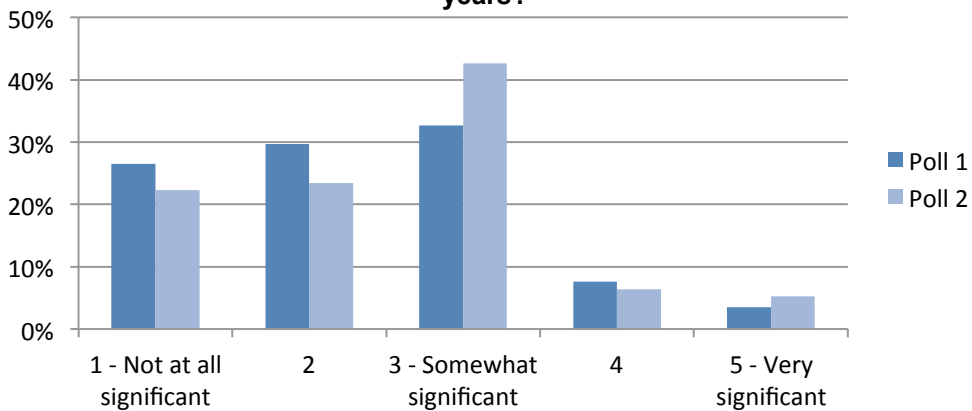


Figure 6: Comparison of Poll 1 and Poll 2 respondents’ beliefs regarding the significance of climate change adaptation in actual town planning and decision-making

The observed confidence gap was reinforced by the finding that when asked, “How confident are you that your government will be able to effectively respond to climate-related risks despite

uncertainty?” 58% of Poll 1 respondents and 59% of Poll 2 respondents said they were somewhat to very confident. This means that respondents’ confidence in their town’s ability to respond to climate-related risks roughly aligns with how significant they believe climate change adaptation will actually be in town planning over the next 10 years.

Our data do not explain the exact reasons for this confidence gap, nor do they explain why confidence increased between Poll 1 and Poll 2. However, survey and interview data from NECAP workshops show that participation in the role-play workshops helped close the confidence gap regarding local action among Wells participants. For example, in response to the workshop survey question “How confident are you that your town will be able to respond to climate risk?” there was a statistically significant shift in the after-workshop survey toward more confidence in town government. In this light, the public polls results reinforce that residents want to see Wells take action on preparing for climate change impacts. Our workshop data suggest that role-play simulation workshops provide one avenue for increasing public confidence in the town’s ability to do so.

Takeaway: Many people think that climate change should be important in Wells’ planning over the next ten years. However, they generally lack confidence that the town will take action to prepare. While there was a small increase in confidence in Wells’ ability and willingness to address climate change between Poll 1 and Poll 2, a noticeable confidence gap remains.

Main perceived barriers include uncertainty about the future, lack of funding, and lack of political will

Poll 2 respondents were asked what barriers they think will prevent their community from taking action on climate change adaptation. They were given the options presented in Table 3. As indicated in the table, the most commonly chosen first option was uncertainty about the future (29 percent), followed by lack of funding (20 percent) and lack of political will (13 percent). Importantly, only 7 percent of respondents in Poll 2 answered that Wells was already prepared for climate change.

Uncertainty about the future	29%
Lack of funding	20%
Lack of political will	13%
Lack of agreement about what to do	10%
Lack of scientific information	8%
Lack of public support	8%
Nothing, my community is prepared	7%
Lack of technical know-how or capacity	5%

Table 3: Barriers to climate change adaptation perceived by Poll 2 respondents

These Poll 2 findings about perceived barriers are similar to results from Poll 1, the NECAP Stakeholder Assessment for Wells, and the NECAP workshop data. Given this consistency across data sources, local leaders may want to be mindful of and address these concerns in their efforts to prepare for climate change.

Takeaway: Poll 2 respondents identified uncertainty about the future, lack of funding, and lack of political as the top three barriers to climate adaptation action in Wells.

A majority of Wells residents support taking science into account in decision-making

In both Poll 1 and Poll 2, a majority of Wells respondents said they agree or strongly agree that town decision-makers should take scientific projections about the climate into account when making decisions today (Figure 7). Unlike in the other three NECAP towns, however, there was a general trend toward less agreement with this statement in Poll 2 than in Poll 1. Unfortunately, the poll did not provide enough information to know the reasons for this shift.

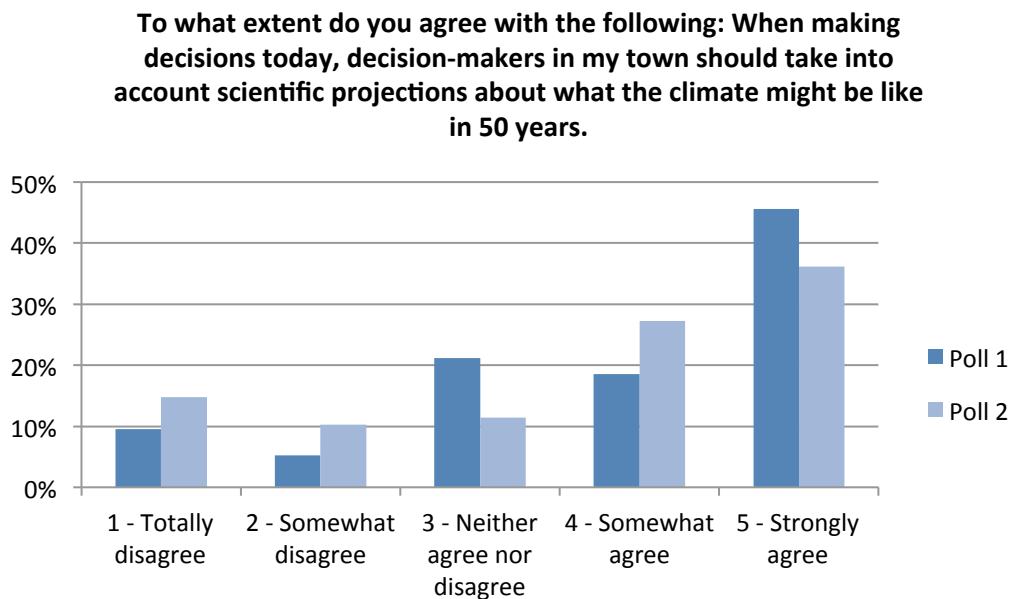


Figure 7: Comparison of Poll 1 and Poll 2 respondents' beliefs regarding the integration of scientific climate projections into current decision-making

Takeaway: The majority of Wells respondents believe that scientific climate projections should be integrated into today's town decision-making. However, this belief dissipated somewhat among Poll 2 respondents, as compared to Poll 1 respondents.

Some willingness to pay for adaptation among Wells residents

Poll 2 included a question about people's willingness to pay slightly higher taxes so that Wells can prepare for climate change risks. Two-thirds of respondents indicated that they were somewhat to very willing to pay slightly higher taxes for climate change preparation (Figure 8).

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

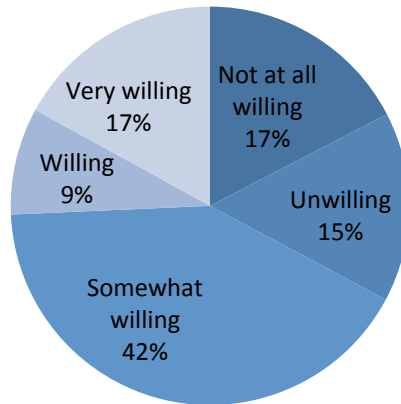


Figure 8: Poll 2 respondents’ willingness to pay higher taxes to fund town climate change adaptation

Higher levels of concern about climate change risk were correlated at a statistically significant level with a willingness to pay for adaptation. Similarly, those respondents who assigned a higher level of priority to local-level climate change adaptation were also willing to pay slightly more in taxes for preparation, a correlation that was statistically significant.

When asked what would increase willingness to pay more in taxes, top responses from Poll 2 respondents included: an increased confidence in the town’s ability to effectively manage climate change risks (24%), starting to see the impacts of climate change (21%), and the integration of climate change preparations in everyday decision-making (10%) (Table 4). Of note, 11% of respondents said they were already willing to pay more in taxes for climate change adaptation and 23% said that no changes would make them more willing to pay more in taxes for this purpose. Overall, these responses indicate that, while people see finances as a barrier to adaptation, many are also currently or potentially willing to pay slightly more in taxes for adaptation purposes. Willingness to pay, however, seems to be tied for some to a need for more confidence that local government can plan and prepare for climate change impacts.

If I was more confident in my town’s ability to effectively manage climate change risks	24 %
I do not want to pay more taxes for this purpose	23%
If I started seeing the impacts of climate change	21%
I am already willing to pay slightly higher taxes for this purpose	11%
If my town decision-makers included climate change preparation in everyday planning decisions	10%
If my town got hit by another storm or a major disaster	8%
If my voice was represented in my town’s decision-making about how to prepare	2%
Other	3%

Table 4: Changes or reasons that would increase Poll 2 respondents’ willingness to pay more in taxes for local climate change adaptation

Takeaway: The majority of Wells 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.

Individuals, then government seen as being most responsible for adaptation

When asked who should be responsible for preparing for the impacts of a changing climate, the largest number of respondents in both Poll 1 and Poll 2 chose individuals as their first response (27 percent in Poll 1 and 37 percent in Poll 2)(Figure 9). In Poll 2, there was a shift toward more people selecting individuals and businesses as their first response, and fewer choosing any level of government. In both polls, more people selected national government as their first response than selected local government. The shifts between Poll 1 and Poll 2 were statistically significant. Worth note, upwards of 20 percent of respondents from each poll chose “other” for this question.

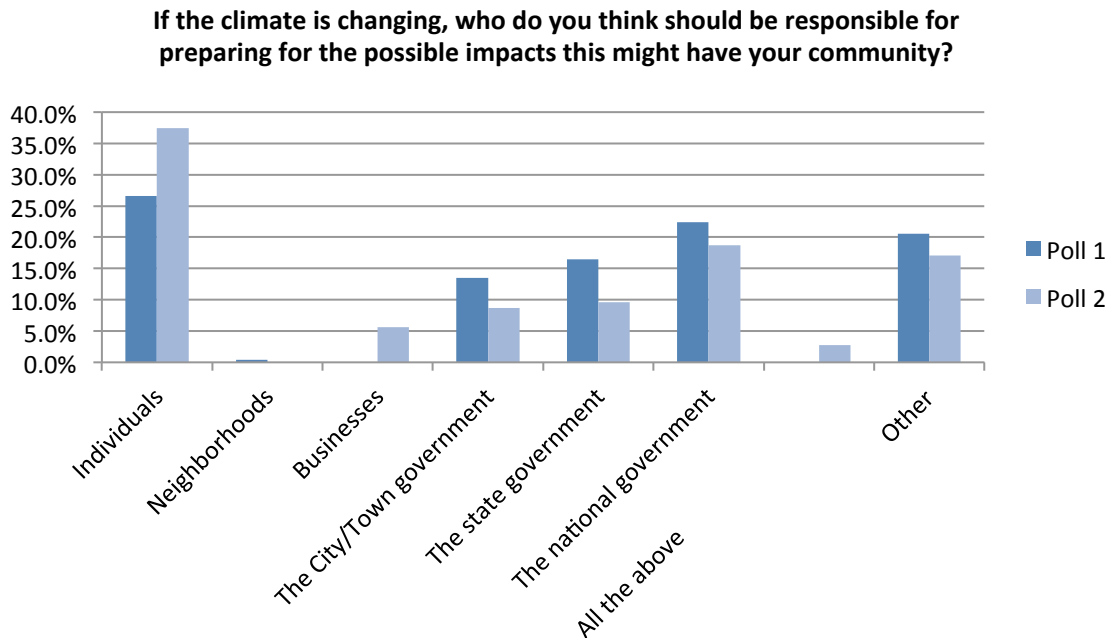


Figure 9: Comparison of Poll 1 and Poll 2 respondents’ beliefs regarding who should be responsible for local climate change adaptation

While our data do not explain the reason behind the focus on individual responsibility, it is possible that this is a sign of Maine’s strong culture of personal responsibility. It may also be an indication that many people in Wells, more so than other towns, see climate change preparedness primarily as the concern and responsibility of at-risk individual home and business owners, which may reflect the fact that the most vulnerable homes and businesses are right on the coast, whereas the majority of full-time residents live inland. Given the important role local government needs to play in collective adaptation efforts, town leaders may need to focus on making residents more aware of the collective nature of climate change risks and the critical role that local government will likely play in preparing for climate change risks.

Takeaway: Many people see preparing for climate change as primarily an individual, national, or state government concern. This is not entirely surprising—not only does Maine have a strong culture of personal responsibility; poll data from some of the other NECAP towns suggest similar trends. Yet this finding is problematic in light of the fact that adaptation will primarily occur at the local planning level.

Conclusion

The findings of these two public polls in Wells provide valuable information on Wells residents' opinions about climate change risks and adaptation. The changes between Poll 1 and Poll 2 also give a sense of what sentiments may have shifted between May 2013 and May 2014.

The findings from both polls show a high level of public concern about climate change risks to Wells, with two-thirds of respondents in both polls indicating they were concerned. Additionally, Poll 2 found that around 30 percent of respondents experienced an increase in concern over the past year, and natural weather events, scientific reports, and news stories were the most cited reasons for this increased levels of concern. Notably, 70 percent reported no change in concern and less than one percent of respondents said their concern had decreased over the past year.

Sea level rise, increased flooding, and more severe storms are their top concerns about local level climate impacts. In Poll 2, nearly two-thirds of poll respondents expressed that Wells should make climate change preparation a priority over the next decade. Only 10 percent of respondents in Poll 2 felt there would be no significant impact on Wells from climate change.

Both polls, however, show a confidence gap between those who think that local adaptation planning should be significant in the coming decade as compared to those who believe it actually will be significant. Poll 2 respondents cited uncertainty about the future, lack of funding, and lack of political will as the predominant barriers to local adaptation. Data from NECAP work in Wells indicate that the climate adaptation workshops and role play simulations are one educational tool the local government can use to build confidence in local government action.

While Wells residents see finances as a barrier to adaptation, they are willing or potentially willing to pay slightly more in taxes for adaptation purposes. Willingness to pay, however, seems to be tied for some to a need for more confidence that local government can plan and prepare for climate change impacts. Again, NECAP work in Wells indicates that climate adaptation workshops may help overcome this barrier. Lack of scientific information was not identified as a significant barrier and the majority of Wells respondents agreed that scientific climate projections should be integrated into today's decision-making.

Finally, the public poll data for Wells suggest that individuals, followed by federal and state government are seen as having the most responsibility for climate change preparation. Given the important role local government will need to play in preparing for and managing climate change risks, these responses and the confidence gap present in both public polls suggest that more effort should be put into raising public awareness of the completed and future work of the Wells Town government on climate adaptation.