How Brentwood Residents Think About Climate Change, Policies to Improve the Environment, and Their Role in Climate Change Mitigation

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Methodology in Brief: This survey was funded by the Stern Civic Engagement Lab at the University of Maryland as part of a partnership study with the town of Brentwood, Maryland. The survey was designed and implemented by Professor Shanna Pearson-Merkowitz and Camille Wejnert-Depue, along with the 60 students enrolled in PLC 306 for Fall 2024. The town of Brentwood sought to gather information on resident awareness about climate change mitigation strategies, household environmental actions, and preferences for Brentwood's sustainability politics and programs to help inform its Climate Action Plan. The survey was designed to help the Town understand resident awareness and interests to facilitate community programs and policies geared toward climate resilience.

The survey was administered by students in "Policy Analysis in Action" (PLCY 306) for Fall 2024. Students from PLCY 306 were trained in research ethics and in-person survey methodology. Students were sent in teams to knock on the doors of the 686 households that had accessible doors. Apartment complexes were excluded from in-person survey collection due to accessibility. Each household received five attempts. If a household member answered and agreed to take the survey, they were offered a tablet to enter their answers electronically. If no one answered after the fifth attempt, a door hanger with a QR code and website was left to access the survey. Apartment residents were given a QR code in the town's newsletter to access the survey. Respondents were asked a total of 30 questions, with the option to opt out of answering a question (or the rest of the survey) at any point. The survey was offered in English and Spanish. The respondents' mode of survey participation was noted (QR code online vs. in-person at the door).

The survey was conducted between Friday, October 18th, and Monday, October 21st. The survey was open until the end of November for all apartment residents since they were notified later about the survey. In total, 130 households took the survey, a ten percent response rate given the town has approximately 1,293 households. However, only three apartment dwellers took the survey. As a result, the results reflect those who live in the 689 single-family homes that were available to reach through door knocking. Thus, the response rate is closer to 20%, which is fairly high given the demographics and small size of Brentwood.

Key Findings and Suggestions:

1. **Spread information about tax breaks and other incentives for purchasing electric vehicles.** The town was particularly interested in encouraging people to purchase electric vehicles. Residents are interested in electric vehicles, but the purchase cost is the largest barrier, and information about federal and state tax credits that reduce the cost is very low. About 20 percent of respondents own a hybrid (18%) or electric vehicle (2%), and 9 percent do not own a vehicle because they walk, bike, or use public transit. Of those who own a vehicle but do not own an electric vehicle or hybrid, many reported that the cost of the vehicles was a determining factor. Far more people were influenced by the price of the vehicle than the price of gas or the environmental impacts of the vehicle. For those individuals, information about tax credits proved to be very helpful, and they reported that the tax credits would increase their probability of purchasing an electric vehicle. However, overall, people reported knowing very little about what financial incentives there are for purchasing energy-efficient cars and other devices. This data indicates that the town could prioritize providing residents with information about the financial incentives for purchasing energy-efficient vehicles (as well as other appliances). Moreover, the data indicate that additional information on the long-term cost savings would improve the probability that residents purchase energy-efficient products. However, information about environmental benefits (which respondents already knew more about) seems unlikely to increase the probability of adoption.

2. **Framing climate-friendly actions in terms of the benefits to children and future generations may motivate adoption.** The town was interested in identifying the best ways to communicate to increase resident adoption of climate mitigation strategies. We ran an experiment to test if wording climate resiliency with a focus on short-term public health was more[less] persuasive than focusing on the future of the planet for the next generation. While both frames were fairly persuasive, framing the question in terms of the benefits to future generations was more persuasive. Respondents were asked if they supported the town "helping residents adopt energy-efficient technology and practices." Those who were first told that energy-efficient cars and appliances could reduce air pollution that increased asthma and other respiratory illnesses were significantly less likely to show strong support for the town efforts compared to those who were first told that energy-efficient technologies could "ensure that our children and grandchildren inherit a healthy planet." While both frames resulted in a majority supporting town efforts, that majority was much stronger when focusing on the future of the planet for the next generation.

3. **Provide residents with information about how to garden with native plants and why to do so.** The town was also interested in knowing how much residents in Brentwood

knew about the benefits of native plants and the extent to which residents utilize native plants in gardening. About a third of the residents reported having either mostly or all native plants in their gardens, but the majority of those who garden reported having either a mix or no native plants. A large number also reported not knowing what they had. The lowest adoption of native plants was among lower income and Hispanic residents. Almost half (46%) of respondents reported not knowing very much or nothing at all about the benefits of gardening with native plants. Non-white, and lower income residents were the most likely to report not knowing about the benefits. In each of these groups, over 50% reported knowing very little or nothing at all. The benefits of native plants that residents knew about the most were that native plants (1) are beneficial to bees and wildlife (33% of respondents) and (2) that they are more likely to thrive since they are planted in local soil (28% of respondents). Very few respondents knew that native plants could reduce the impact of stormwater damage. Importantly, a strong majority (75%) of residents, and particularly Hispanic residents (85%), reported being interested in learning more about native plants. Overall, respondents were very interested in knowing more about gardening with native plants and taking care of trees. In particular, non-white and Hispanic respondents responded that they had interest in education sessions on (1) how to take care for trees, (2) how to garden with native plants, and (3) the use of greener cleaning products.

4. **Invest in helping residents see their role in climate change.** Brentwood has very climate-conscious residents. Most report being very concerned about the environment. However, a large number do not see their actions as contributing to climate change. Over 80 percent of residents report that climate change is a very serious problem, and 83 percent also reported that humans contribute to climate change "a great deal." These are far higher than the national average of 45 percent who say humans contribute a great deal to climate change (Pew 2024). However, only 19 percent of respondents thought their personal actions contributed "a great deal," and 41 percent thought their actions contributed "a moderate amount." Forty percent overall and fifty percent of those who made less than 60k thought their personal actions were of little or no consequence. Spreading information about the impact of individuals could help translate concern into action for Brentwood residents.

5. **Invest in helping residents find job training and green jobs.** Non-white and Hispanic respondents were particularly interested in creating more jobs that help the environment, and a majority of these groups were interested in job training programs in environmental jobs. Given there has been a causal association found between working in the green economy and adopting environmentally friendly practices at home (Ciocirlan 2023), the town may want to help facilitate more residents finding work in the developing green technology sector. Earn Maryland provides job training for in-demand sector training programs, and two programs in Baltimore are specifically designed to train workers for green-jobs that pay family sustainable wages. Prince George's County, particularly

Brentwood and the surrounding towns, may want to work with the state Department of Labor, Licensing, and Regulation to build similar job training programs that would allow growth in green jobs.

Other key findings:

Brentwood Residents Climate Concerns

- **Storms and flooding:** Most of those surveyed are at least somewhat concerned about the immediate impacts of climate change in their environment, but concern levels varied greatly depending on the issue in question. Many Brentwood residents are concerned about the intensity of storms, with 45% reporting being very concerned and 47% being somewhat concerned about the intensity of storms. Respondents were less concerned about the frequency of storms than the intensity. While these results were fairly consistent across groups, Hispanic and older respondents were both more likely to be concerned about the intensity of storms than younger and non-Hispanic respondents.

- **Other concerns:** Top concerns regarding other climate change impacts included concerns over hotter temperatures, invasive plants and insects, and the amount of trash and landfills. Respondents indicated far less concern over sea level rise, wildfires, illnesses, or water quality. While concerns were fairly consistent across demographic groups, there were some variations. In particular, concern over rising energy prices as a result of climate change was higher among non-white and Hispanic residents. When discussing climate mitigation strategies that individuals can do, it may be beneficial to focus on these elements of climate change on which residents show high concern.

Resident Knowledge About Climate Change

- Of all respondents, the majority (79%) believe they know a "moderate amount" or "a great deal" about climate change. High-income respondents (38%), white respondents (37%), and non-Hispanic (33%) respondents said they know a great deal about climate change. Fewer non-white (23%), low-income (14%), and Hispanic respondents (11%) reported knowing a great deal about climate change.

- Across all demographics, LED light bulbs are the most common household technology (35%), with energy-efficient appliances (refrigerators, clothes washers, etc.) being the second most common (27%). Of the respondents who have LED lightbulbs, white respondents (37%), high-income respondents (37%), and non-Hispanic respondents (36%) had the largest uptake. For energy-efficient appliances (such as refrigerators or clothes washers), adoption was highest among non-white respondents (29%), high-income respondents (29%), and non-Hispanic respondents (28%).

- Almost half of respondents report not knowing very much or nothing at all (46% of respondents) about the benefits of gardening with native plants. Of those who said they knew a lot or a fair amount about gardening with native plants, the highest response rate came from white respondents (60%) and higher-income respondents (58%).

- The two highest categories that respondents knew about native plants were that they are (1) beneficial to bees and wildlife (33%) and (2) that they are more likely to thrive given local soil (28%).
- Three-quarters of respondents would be interested in learning more about native plants, regardless of demographics. Hispanic respondents were particularly interested (85%) in learning more about native plants.

Electric Vehicle Adoption

- Most respondents were unaware of incentives for purchasing an electric vehicle. Only 19 percent of respondents indicated they knew about the federal tax credit, and even fewer knew about the state tax credit (15%). Many residents suggested knowing about programs that do not exist and 24% indicated not knowing about any programs.

- Many residents (45%) have considered purchasing an electric vehicle but don't currently own one. More people own hybrid vehicles, with 18% of all respondents indicating ownership, compared to only 2% who own electric vehicles. Income appears to be a contributing factor; among high-income respondents, 3% own electric vehicles, and 23% own hybrid vehicles. In contrast, none of the low-income respondents own Electric Vehicles, and only 6% own hybrid vehicles.

- For those who do own an electric vehicle or hybrid vehicle, air pollution overwhelmingly influenced their vehicle purchase decision. Travel distance also influenced their vehicle purchase decision, but not as much as air pollution.

- For those who already own an electric or hybrid vehicle, household utility costs were not one of the primary factors in purchasing the vehicle, and this was especially true for higher-income and white respondents.

- Of those who own an electric or hybrid vehicle, most respondents (68%) said that the purchasing cost influenced their decision, regardless of demographics. In particular, the purchasing cost of the vehicle influenced non-white (78%) and non-Hispanic (68%) respondents the most. Most electric vehicle/hybrid owners also said that gasoline costs influenced their decision (68%), with Hispanic and low-income respondents saying this influenced their decision most. The majority of owners (73%) said noise levels from the vehicle did not influence their decision to purchase the vehicle.

- Lower income households were the most likely to say that the federal tax credit (26%), the MD tax credit (31%), the rebate for electric vehicle equipment and installation (38%), and public chargers (35%) would not make them more likely to purchase an electric vehicle compared to other demographic groups.

Resident Policy Priorities

- Across all demographics, the overwhelming majority stated that helping households get energy through cleaner resources is important.

- The overwhelming majority of respondents reported that creating more jobs that also help the environment is very important (70%). This was especially true for Hispanic (75%) and non-white (73%) respondents.
- When it comes to job training for environmental jobs, those who make under 60k (58%) saw this as more important than those who made over 60k (43%). Additionally, non-white (53%) and Hispanic respondents (60%) saw this as very important when compared to whites (47%) and non-Hispanics (48%).

- Preparing for extreme weather events is important to respondents across the board (72%). Seventy-seven percent of higher income respondents saw it as very important in comparison to 63% of lower income respondents.

- Helping households afford electric vehicles and electric vehicle chargers was not generally seen as very important (46% of all respondents see this as very or somewhat important) in comparison to some of the other investments the town and state could make. However, Hispanic respondents did believe this investment was very important (60% of all Hispanic respondents).

- For (1) supporting Brentwood households and businesses' environmental efforts and (2) composting food waste, more non-white respondents (76% found it very important to have government policies and projects for households and business environmental efforts, 53% for composting food waste) found it very important than white respondents (55% found it very important to have government policies and projects for households and business environmental efforts, 44% for composting food waste) and more Hispanics (75% found it very important to have government policies and projects for households and business environmental efforts, 60% for composting food waste) found it very important when compared to non-Hispanics (59% found it very important to have government policies and projects for households and business environmental efforts, 48% for composting food waste).

- There was very strong support among non-white (75%) and Hispanic (76%) respondents for government programs to help residents reduce their utility bills. Only 57% of white respondents and 63% of non-Hispanic respondents reported thinking it was important to help households reduce their utility bills. This highlights that for these groups, financial constraints may be the largest priority and barrier to adopting more environmentally friendly practices.

Participation

- Almost half of respondents (42%) plant a mix of native and non-native plants. More people who make over 60k (39% of high-income respondents) plant mostly/all native plants than those who make under 60k (14% of low-income respondents) plant mostly/all native plants.

- Some residents expressed interest in attending town-sponsored events, but these were fairly low overall. Litter/ trash cleanups had the most interest, with 14 percent of all respondents responding that they were interested in this event. This was followed by how to garden with native plants (13% of all respondents) and tree planting (12% of all respondents). Low-income respondents are particularly most interested in litter/trash clean-ups (39% of low-income respondents).

Citations

Ciocirlan, C. E. (2023). Have me do, and I'll always be true: Exploring the match between green employees and their jobs. *Journal of Cleaner Production*, *383*, 135471.

Pew Research Center (2024). Brian Kennedy and Alec Tyson. "How Americans View Climate Change and Policies to Address the Issue" Available at: https://www.pewresearch.org/science/2024/12/09/how-americans-view-climate-change-and-policies-to-address-the-issue/