

TO: Climate Education Partners – San Diego Region

FROM: David Metz and Miranda Everitt
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RE: Key Countywide Survey Findings on San Diego County Residents’ Knowledge of and Attitudes Toward Climate Change

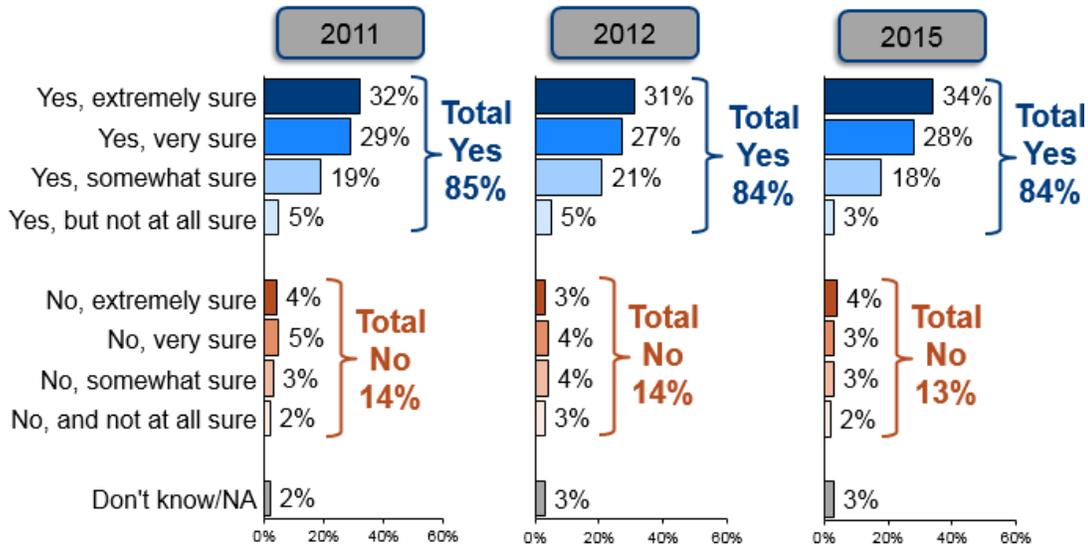
DATE: August 21, 2015

Earlier this year, the bipartisan research team of Fairbank, Maslin, Maullin, Metz & Associates (FM3) and Public Opinion Strategies (POS) conducted a telephone survey of 600 residents in San Diego County to assess their views on issues related to climate change and public policies designed to address it.¹ The survey found that County residents continue to express a high degree of confidence that climate change is happening, are confident that they can take action to address it, and increasingly consider themselves a part of the community concerned about climate change. While some effects of climate change are not yet clear to San Diegans, the causes are well understood. Taken together, these factors contribute to a broadly shared belief among San Diegans that their own actions can contribute to slowing global climate change, and a shared willingness to take action.

The following are some of the key specific findings to emerge from the survey:

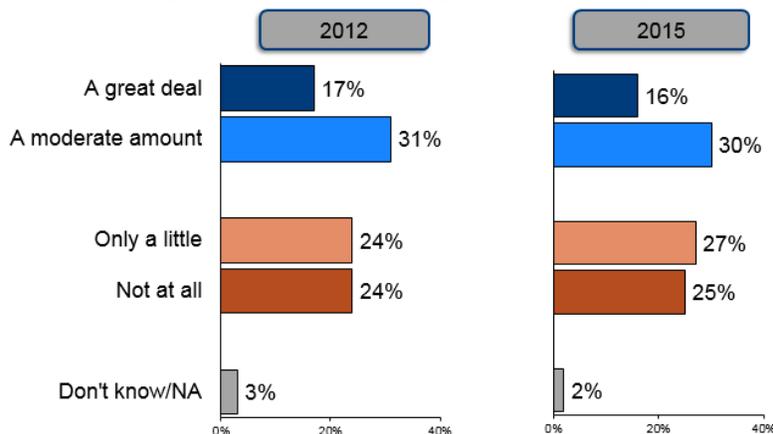
- **San Diegans believe climate change is happening.** As shown on the following page in **Figure 1**, more than four in five San Diegans (84 percent) say they believe climate change is happening. These sentiments have remained very steady since 2011, when 85 percent expressed the same belief. They are very strongly felt, with more than one-third of County residents (34%) indicating they are “extremely” sure that climate change is happening.

Figure 1:
Perception of Whether Climate Change is Happening, 2011 through 2015
“Do you think climate change is happening?”



- **San Diegans are increasingly confident that climate change is caused by human activities.** A majority of San Diego County residents (55%) say that climate change is “caused mostly by human activities,” while a smaller subgroup (30%) sees it as mostly the result of “natural changes in the environment.” This is a marked increase from 2012, when just 48 percent believed human activity was at the root of climate change.
- **A majority of San Diegans think that climate change will harm them personally.** As detailed below in **Figure 2**, nearly half of all San Diegans (46%) believe that climate change will cause them at least “moderate” harm. More than seven in ten expect at least some negative impact, saying that it will hurt them at least “a little” (73%).

Figure 2:
San Diegans’ Perception of the Effect Climate Change Will Have on Them Personally
“How much do you think climate change will harm you personally?”



- **San Diegans believe that many key scientific facts about climate change science are true.** San Diegans’ expressed concern about climate change rests upon a firm scientific foundation. During the survey, respondents were read a list of statements about climate science and climate change and, based on their personal knowledge, were asked to rate each statement on a scale from one (“not true”) to six (“absolutely true”).

San Diegans broadly accept many facts that inform the scientific understanding of climate change – and reject evidence that runs counter to scientific evidence. Those statements shaded in green in the table are factually true, and those shaded in red are false. As **Figure 3** makes clear, there were no *untrue* statements that San Diego residents rated as being accurate, and only three *true* statements that fewer than half of San Diegans recognized as such. And many of the true statements inspired particularly broad agreement, with a majority of San Diegans recognizing them as accurate – including the statement that both gasoline engines and electric generation are sources of carbon dioxide; the assertion that climate change will lead to San Diego water shortages (up ten percent since 2011); and the fact that there is a strong scientific consensus about climate change. San Diegans have the least understanding about the impacts of climate change on Santa Ana winds and higher nighttime temperatures.

Figure 3:
Perceptions of Facts About Climate Science

“Next, I am going to read you some statements about climate change in the San Diego region. Based on your personal knowledge, tell me how true you think each of the following statements is. Please rate each statement on a scale from one to six, where one means you believe it is NOT true at all and six means you believe the statement to be ABSOLUTELY true. You can use any number between one and six.”

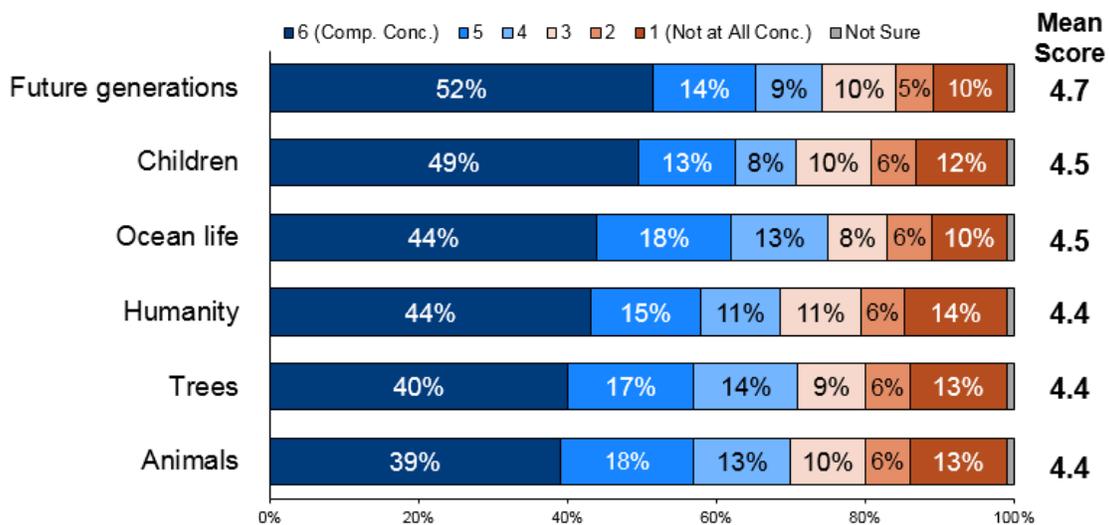
Statement <i>Those highlighted in red are untrue</i>	% Believing that the Statement is True (Rated 4-6)
Both gasoline engines and the generation of electricity emit carbon dioxide into the atmosphere	79%
Projected San Diego regional climate change in the next 40 years will result in severe water shortages	74%
There is a strong scientific consensus about climate change, and any minor disagreements about the details is part of the scientific process	57%
Sea level rose a few inches over the last century, but will rise several feet in the next century	54%
In the next 40 years, large rainstorms will damage beaches and coastal habitats	47%
In 40 years, Santa Ana winds will be rarer, but hotter and drier	40%
Humid heat waves in the summer are no more frequent than they were decades ago	39%
Higher nighttime temperatures have harmed San Diegans’ health	34%
Projected climate change in the next 40 years will have no impact on the frequency or intensity of wildfires	32%

- **San Diegans are most concerned about the effect climate change will have on future generations.** Respondents were presented with a detailed list of elements of life in their local community, and were asked to rate their concern about the impact of climate change on each of them, using a scale from one (“not at all concerned”) to six (“very concerned”). As shown

in **Figure 4**, majorities of San Diego adults rated their concern about “future generations” and “children” at the very top of the scale. Every single item, however, was rated between four and six by substantial majorities of respondents – reflecting broad public concern that each of these aspects of life in San Diego is likely to be negatively impacted by climate change. This is consistent with past polls in 2012 and 2011.

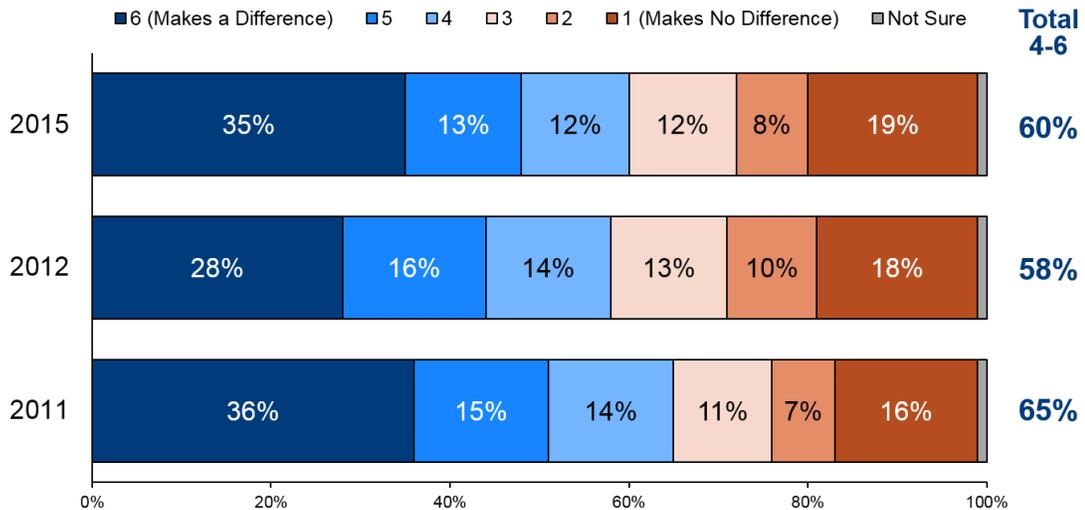
Figure 4:
Concern About the Effects of Climate Change

“I am going to read you a list of people or things in your local community. Please indicate how concerned you are about the effect that climate change may have on each one. Please use a scale from one to six, where one means you are NOT concerned about it at all, and six means you are COMPLETELY concerned about it.”



- **While most San Diegans consider themselves “part of the community concerned about climate change,” fewer believe their neighbors care about the issue.** More than two-thirds of San Diegans identify themselves as members of a community that cares about climate change. On a scale from one (“absolutely not part of that community”) to six (“absolutely part of that community”), 39 percent ranked their connection a five or six. However, when asked to what extent their neighbors care about climate change on the same scale, only 13 percent perceived that their neighbors had an equivalent level of concern. When asked about the San Diego region more broadly, a slightly higher proportion (22 percent) said local residents are highly concerned.
- **A clear majority of San Diegans believes its personal actions can make a difference to impact climate change.** On a scale from one to six, where one means their personal actions *cannot* make a difference, and six means it *does* make a difference, 60 percent of San Diegans indicate (with a rating of a four or more) a belief that their personal actions can reduce the negative outcomes associated with climate change in the next forty years. As shown in **Figure 5** on the following page, more than one-third (35 percent) say that their actions will *definitely* make a difference (as reflected in a rating of six on the scale) – substantially more than dismiss that assertion with a rating of one (saying that their actions will make no difference at all).

Figure 5:
Local Residents’ Perception of Their Own Efficacy on Climate Change
“On a scale from one to six, where one means your personal behavior can NOT make a difference, and six means your personal behavior CAN make a difference, do you feel changes in your personal behavior can reduce the negative outcomes associated with climate change in the next 40 years?”



- **San Diegans recognize a wide range of ways that their actions could help to reduce climate change.** Survey respondents were presented with a list of actions that they could take to help address climate change, and after each item were asked to rate their ability to do the activity using a scale from one to six, where one meant they definitely could *not* do it, and six meant they were definitely *able* to do it. As shown in **Figure 5**, a majority of San Diegans is confident in its ability take a variety of personal actions to help address climate change – ranging from reducing water and electricity use to telling interested neighbors how to do the same.

Figure 5:
What San Diegans Believe They Can Do to Affect Climate Change
Taking into consideration all the responsibilities you have, where you live and your life circumstances, to what extent do you feel you can do the following? Use a scale from 1 to 6, where 1 means you DEFINITELY CANNOT do this, and 6 means you ABSOLUTELY CAN do this.

Action	% Strongly Believe They Can Do (Rated 5 or 6)
Intentionally reduce water used in your yard or in your home	78%
Intentionally reduce electricity used in your yard or in your home	72%
Vote in favor of laws that increase energy efficiency or renewable energy	62%
Walk or bicycle to places near your home	58%
Tell a person who asks how they could reduce their electricity, water or gasoline use	57%

Taken together, the survey results show that climate change remains a major concern for San Diego residents. San Diegans believe that climate change will have a negative impact on their communities; on the County's environment; and on their own lives. Most San Diegans believe that their own actions can help to mitigate the impact that a changing climate will impose on San Diego, and perceive that they are part of a community that cares about climate change. Accordingly, San Diegans express broad interest in a range of activities – from reducing their water use to walking or bicycling more – that will help to reduce greenhouse gas emissions in the region.

About the Fairbank, Maslin, Maullin, Metz & Associates / Public Opinion Strategies Partnership

Fairbank, Maslin, Maullin, Metz & Associates (FM3) – a national opinion research firm with offices in Oakland, Los Angeles and Madison, Wisconsin – has specialized in public policy-oriented opinion research since 1981. Over its three-decade history, the firm has conducted literally thousands of surveys and focus groups. FM3 also provides research and strategic consulting to public agencies, businesses, political campaigns and public interest organizations nationwide.

Public Opinion Strategies is the largest Republican polling firm in the country. Since the firm's founding in 1991, they have completed more than 10,000 research projects, interviewing more than five million Americans across the United States. Public Opinion Strategies' research is well respected, and prestigious media outlets such as *The Wall Street Journal*, NBC News, CNBC, and National Public Radio rely on Public Opinion Strategies to conduct their polling. The firm conducts polling on behalf of hundreds of political campaigns, as well as trade associations, not-for-profit organizations, government entities and industry coalitions throughout the nation.

FM3 and Public Opinion Strategies have conducted bipartisan research on a wide range of issues over the last several years, in particular on energy and environmental initiatives and policies. Together, the two firms have jointly conducted research on behalf of political campaigns, businesses, not-for-profit organizations and public agencies in 44 states and nationally.

About Climate Education Partners

Climate Education Partners is a collaboration of professors, scientists, researchers, educators, communications professionals, and community leaders who think San Diego is a special place and believe that future generations deserve to enjoy the San Diego we know and love, with its natural beauty and ideal weather. The partnership consists of representatives from the University of San Diego, The San Diego Foundation, CSU San Marcos, Scripps Institution of Oceanography, The Steve Alexander Group and UC San Francisco. The group works with local civic, business, government, and education leaders to communicate the causes of climate change, its impacts in our region, and options for how to adapt to or prevent those impacts. For more information about this project, visit www.sandiego.edu/climate.

This research was conducted by Fairbank, Maslin, Maullin, Metz & Associates and Public Opinion Strategies by contract for the San Diego Regional Climate Education Partnership, a project funded by National Science Foundation Award # DUE –1239797.

Methodology: From March 8-12, 2015, FM3 and POS completed 600 telephone interviews with adult residents of San Diego County. Interviews were conducted on landline and cellular telephones and in English and Spanish. The margin of sampling error for the full sample is +/- 4%, margins of error for other subgroups within the sample will be higher. The survey followed similar surveys of San Diego residents conducted in October 2011 and December 2012.