



4C George Mason University
Center for Climate Change Communication

**A Virginia Public Opinion Survey on Climate Change,
Public Health and the Environment**

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In the past year, Virginia has moved rapidly to reinstate the state's climate commission, initially created in 2007, and sign on to a new Chesapeake Bay Watershed Agreement that addresses climate change. These events represent a window of opportunity that is opening to broadly engage citizens on climate change in the Commonwealth of Virginia. Assessing public opinion – policy priorities and perceptions of climate change risks – and conveying that information to policymakers, private industry, non-profits, and the residents of the Commonwealth is needed to expand this discourse and inform decisions about implementing greenhouse gas emission reductions and increasing Virginia's resilience to the effects of climate change.

Importance of conveying social consensus

Conveying areas of public agreement is one of the most critical functions of public opinion surveys, especially for topics on which there is pervasive misunderstanding of the level of social consensus. In Maryland, we will be conducting a statewide mail survey in spring 2015, in its third year,¹ with funding from the Town Creek Foundation. The Center for Climate Change Communication has established a survey model for Maryland that can easily be implemented on the other side of the Potomac River (see appendix for methodology). We are currently seeking funding for the Virginia side of this work.

In Maryland, our survey data representing public support for current and expanded state policies have been used by state agencies, universities and environmental organizations in outreach to media, the public and policymakers. Just in the last few months, the survey data have been cited in *Baltimore Sun* articles, an op-ed, and in a local public radio program.² A Center for Climate Change Communication survey report on television news viewers in Virginia in 2013 found high levels of certainty that climate change was occurring,³ suggesting that the Commonwealth may not be as unlike Maryland in its climate change public opinion as many might think.

¹ The Maryland survey reports from 2013 and 2014 are available at <http://www.climatemaryland.org/survey/>.

² Wheeler, T. (2014, Oct. 15) Marylanders want more solar, wind power. *Baltimore Sun*. Available at <http://www.baltimoresun.com/features/green/blog/bal-marylanders-want-more-solar-wind-power-20141015-story.html>; Wheeler, T. (2014, Sept. 15). Marylanders face worse climate-drive flooding, report warns. *Baltimore Sun*. Available at http://articles.baltimoresun.com/2014-09-15/features/bal-maryland-faces-worse-climatedriven-flooding-report-warns-20140915_1_climate-change-zoe-johnson-climate-central; Rodricks, D. (2014, Oct. 14). Midday, NPR, WYPR. Available at http://cpa.ds.npr.org/wyprmain/audio/2014/10/Midday_102114_HR1_PowerHour.mp3; Boesch, D., & Maibach, E. (2014, Sept. 25). Marylanders recognize climate change. [Op-ed] *Baltimore Sun*. Available at http://articles.baltimoresun.com/2014-09-25/news/bs-ed-climate-change-20140925_1_greenhouse-gas-emissions-sea-levels-energy-systems

³ George Mason University's Center for Climate Change Communication conducted a [study](#) in 2013 with television news viewers. Eight-five percent of Virginians said that climate change is happening. About half (49%) said that climate change either was currently harming people in Virginia or would harm them within the next 10 years.

Public opinion information is also used to help design communication efforts for specific audiences defined by demographics, attitudes, or behaviors. “Global Warming’s Six Americas” is one such example of an audience segmentation developed by George Mason’s Center for Climate Change Communication and the Yale Project on Climate Change Communication that could be conducted in Virginia and that has been widely used by organizations across the country in the development of their communication and public outreach programs.

No regionally representative Virginia public opinion data

In 2008, researchers conducted the first statewide public opinion survey on climate change in Virginia.⁴ Since then, a number of short political polls addressing EPA regulations have been conducted with representative populations in the Commonwealth, but there has not been a comprehensive study of climate change public opinion to date.⁵ Additionally, none of the studies that have been conducted, including in 2008, have been large enough to be able to describe differences among residents who live in the geographically and culturally distinct regions of the Commonwealth, and will experience climate change in different ways.

State data with regional importance

Many of the environmental, economic and public health impacts from climate change cross state lines. Chesapeake Bay is an important natural resource for Virginia, and a critical component of its economy, but its restoration is a shared responsibility across multiple governments. In working across both states, we would have an opportunity to create a public opinion data set of broader regional utility, especially for issues that span state borders, such as the Chesapeake Bay’s restoration and water quality. We would ask the same survey questions of residents in Maryland and Virginia on issues of relevance to both the individual states and greater region.

For the past two years, we have partnered with Maryland Department of Health and Mental Hygiene, the Climate Communication Consortium of Maryland, and the Town Creek Foundation. Each year, we reach out to 6,400 Maryland households and receive surveys back from more than 1 in 3 of them. We sample at the regional level, allowing us to be able to cite data for the Eastern Shore as compared to the Western Appalachian region with a margin of error of +/- 5 percentage points, in addition to the state (+/- 2 percentage points). In Virginia we would use the same methodology, including regional sampling.

In the surveys we ask questions that cover the following topics: public health, climate change, and energy. Many of these questions are based on research developed by the Yale Project on Climate Change Communication and George Mason’s Center for Climate Change

⁴ Rabe, B., & Borick, C. (2008). *Report of the Virginia Climate Change Survey*. Charlottesville, VA: Miller Center of Public Affairs, University of Virginia. Available at http://web1.millercenter.org/panels/pdf/panel_2008_1021_borick.pdf

⁵ Political polls from the last two years include: [Better Energy Future](#) (2014), [League of Conservation Voters](#) (2014), [Clean Energy Works for Us](#) (2014), [Politico](#) (2013).

Communication for the long-running national “Climate Change in the American Mind” surveys. This year, we propose that the focus of one of the modules for Maryland – and indeed Virginia – be on Chesapeake Bay, its fisheries and water quality. While Maryland and Virginia are only two of the six states, and District of Columbia, that are signatories to the Chesapeake Bay Watershed Agreement, the coastal regions of the Bay fall almost entirely within the confines of those two states.

Stakeholder participation

In Maryland, we work with stakeholder organizations through the Climate Communication Consortium in developing the surveys. For Virginia, we will also develop a panel that will participate in the development of Commonwealth-specific measures and dissemination of the final reports. We will work with stakeholder groups on climate and energy, and the Chesapeake Bay, including environmental non-profits, universities, government agencies and regionally representative bodies. This effort will begin in fall/winter 2014 in order to capture questions that are of most interest to those working on science and policy in this area.

Timeline and strategy for report dissemination

The Virginia study would be conducted in parallel to the Maryland survey, fielding in spring 2015 with five individual reports released in summer 2015. These reports would include: climate change and public health, energy, climate change policies, Chesapeake Bay, and a regional report. The reports will follow the same model as those in Maryland. We would work with our stakeholder panel to determine opportunities for the release of the reports. Additionally, we propose to partner with a public relations firm to conduct media outreach, design the reports, and create infographics from the data. We would develop a freestanding website for the reports, and publicize them via the Center for Climate Change Communication’s listserv and website, which reach national audiences with interest in public opinion and climate change communication.

Timeline for Virginia survey	
Stakeholder discussions for survey item development	Nov. 2014-Jan. 2015
Survey to human subjects review board for approval	Feb. 2015
Survey mailings 1-4	Mar.-Apr. 2015
Complete survey fielding	May 2015
Website development to support public access to the reports	Jun. 2015
Data analysis	Jun./Jul. 2015
Report delivery (<i>Virginia climate change and public health, energy, climate, Chesapeake Bay; regional report</i>); media alerts; infographics	Jul./Aug. 2015
Stakeholder outreach	Sept./Oct. 2015

Conclusion

Public opinion can have enormous impacts on the direction that local governments and states take on policy. As Virginia moves forward in making decisions about how best to respond to the challenges that we face from climate change, efforts to actively engage the public in these questions, and discern and communicate areas of agreement, will help to maintain the course. George Mason University's Center for Climate Change Communication is optimally positioned to contribute to this effort based on its location at one of the state's premier research institutions, and its reputation as one of the only academic centers in the country with expertise in climate change communication and public opinion research.

Staffing

Dr. Karen Akerlof is a Research Assistant Professor in the Center for Climate Change Communication at George Mason University. She is the Primary Investigator for research conducted on behalf of the Climate Communication Consortium of Maryland (www.climatemaryland.org), a public-private partnership of organizations collaborating in generating and implementing research data to further public engagement statewide. Akerlof uses surveys, in-depth interviews, and content analyses to explore public perceptions of science, and factors that influence individuals' responses to environmental risks. Her work spans topics such as deliberative processes in local communities considering sea-level rise impacts, how individuals personally experience climate change, and depictions of climate modeling in the media.

Dr. Edward Maibach is Director of the Center for Climate Change Communication and University Professor of Communication at George Mason University. Trained in public health and communication, Maibach has extensive experience as an academic researcher and as a communication and social marketing practitioner in government, business, and the non-profit sector. His research focuses on the question of how public engagement in climate change can be expanded and enhanced. Maibach is currently a Principal Investigator on several climate change education grants funded by the National Science Foundation, NASA, Robert Wood Johnson Foundation, and Grantham Foundation for the Protection of the Environment. He served on the National Climate Assessment Development and Advisory Committee and advises a wide range of organizations on how to improve their climate change communication, education and outreach. Maibach has published over 100 peer-reviewed journal articles and book chapters. His edited book *Designing Health Messages* earned a distinguished book award from the National Communication Association. Maibach received a Ph.D. in Communication Research from Stanford University.

Survey methodology

The survey will be mailed by Princeton Survey Associates International (<http://www.psrai.com/>) to a random sample of 6,400 households in Virginia sampled from four distinctly different regions of the Commonwealth: the eastern coastal, southwestern and western, central, and northern counties. These will be derived from the typical eight-region typology for the Commonwealth. We will sample at the regional level to ensure the final data is generalizable to Virginia's distinctly different geographic and cultural areas, as well as the Commonwealth as a whole.

The survey will be fielded in March-May 2015. Each household will be sent up to four mailings: an announcement letter introducing the survey, a copy of the survey with a \$2 bill as a thank you, a reminder postcard, and a follow-up survey. In order to achieve randomization of respondents within each household, we will request that the person with the most recent birthday complete the survey. Households that complete and return the survey are taken off of subsequent mailing lists.

We anticipate a response rate of approximately one-third, which translates to just over 2,000 respondents for the Commonwealth as a whole, and at least 400 respondents per region. The unweighted sample margin of error is +/- 2 percentage points at the 95% confidence interval for the Commonwealth, and less than +/- 5 percentage points for each region. State data will be weighted based on demographic data from the U.S. Census Bureau.