

In July 2022, we received a \$1,500 grant to support Climate Solutions Deliberative Forum through the Pennsylvania NewsMedia Association Foundation Fellows Grant program. Below is a complete final report detailing how outcomes matched the proposed goals and prove the effectiveness of our efforts.

The Climate Solutions collaboration held a deliberative forum in October 2022. A key part of that was the availability of subject experts to make short topic-specific presentations and to be available throughout the event to answer attendees' questions. The PNA Foundation grant helped us secure a top-level set of experts:

- Richard A. Niesenbaum, Professor of Biology and Sustainability Studies, Muhlenberg College
- Michael Roth, Policy Director, Pennsylvania Department of Agriculture
- Carl Helrich, Owner, Allegro Winery (in York County, PA)
- Alfonso Mejia, Associate Professor of Civil and Environmental Engineering, Penn State College of Engineering*
- Teri Provost, Flood resiliency program director, SEDA - Council of Governments
- Tom Daniels, Crossways Professor, University of Pennsylvania, Weitzman School of Design
- Paulina Jaramillo, Professor of Engineering & Public Policy, Carnegie Mellon University
- Colton Brown, Energy Program Specialist, Pennsylvania Department of Environmental Protection
- *Alfonso Mejia had to pull out at the last second and was replaced by Shirley Clark, Chair, Civil, Construction, and Environmental Engineering, Penn State Harrisburg

Roth and Helrich each gave presentations on how climate is affecting agriculture and farmers – including Helrich's personal story about how his business has changed in response to climate challenges.

Clark and Provost discussed how expected heavier rainfall is expected to increase flooding – not only in places known to flood, but in some places that are not used to experiencing floods – and how municipal governments are trying to respond.

Daniels talked about the growing solar economy and the challenges it can present, including in terms of potential solar developments on open land in central Pa.

Jaramillo and Brown gave detailed presentations about electric vehicles, their predicted growth and possible use on larger scales (such as government vehicle fleets).

Niesenbaum was a key member of our planning committee, attending a series of meetings during months of planning. He acted as much as an expert for us, the planning group, to advise us on science issues and help us word the questions we posed to attendees, among other things.

Attendees praised the event; some of their comments can be seen in the enclosed [final report](#). One measure of the event's success: At the day's end, we asked for volunteers for a focus group to review ongoing Climate Solutions work. Sixteen of the 24 attendees expressed interest in that group; we brought in nine of them, and our relationship with them continues today. We have also kept in touch via occasional emails with the attendees and the experts on the work we are doing, or with climate-related questions, and a couple of the experts have contributed to those discussions.

The experts themselves were also pleased with how the deliberative forum went. A sample of the feedback:

- Teri Provost said, "Thank you for allowing me to be an 'expert' during this deliberative forum, I found the entire day to be outstanding!"
- Tom Daniels said, "I thought it was an excellent event and the participants stayed engaged and focused over a full day deliberative workshop. They raised a lot of thoughtful questions."
- And Rich Niesenbaum said he was going to take his experience and incorporate aspects of it into his teaching.

Climate Solutions sincerely thanks the PNA Foundation for its grant that helped us pull together this distinguished group of experts who helped make this event a success.

Thank you very much,

Scott Blanchard, Climate Solutions editor and Director of Journalism, WITF

Mike Williams, Climate Solutions project manager

CLIMATE SOLUTIONS

DELIBERATIVE FORUM **OCTOBER 1, 2022** FINAL REPORT

OVERVIEW

This document provides an overview of the Climate Solutions Deliberative Forum Process, results from a survey of central Pennsylvania residents about climate change used to inform the deliberative process, and the themes and priorities the emerged from the Forum itself.

What is a Deliberative Forum?

Deliberative forums have been used to gauge considered public opinion for over 30 years.¹ Considered public opinion emerges from thoughtful deliberation and engagement among citizens who have considered balanced information about a topic. These forums give citizens the resources they need to develop an informed opinion that comes from relevant facts, expert information, and an understanding of the way issues and policies affect other citizens as well as their community.

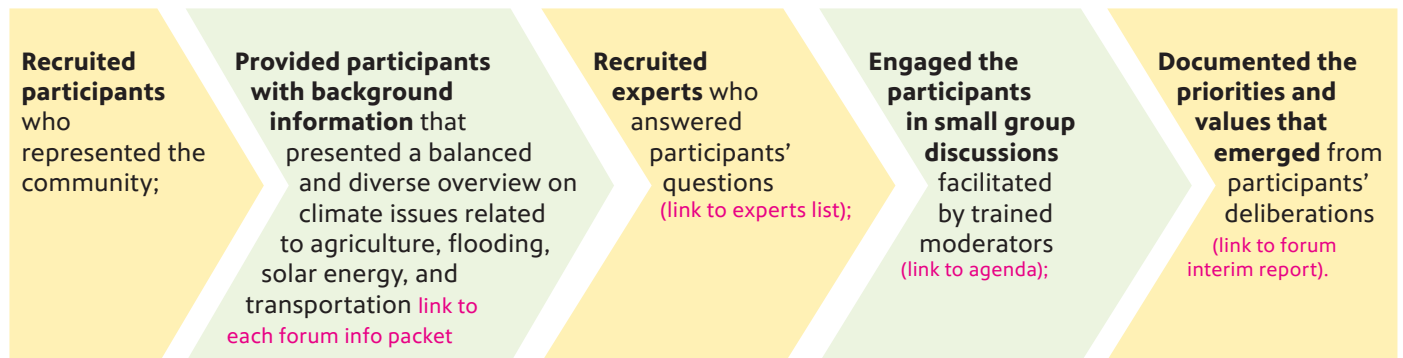
The primary goal of a deliberative forum is to make sure the voices of ordinary citizens are heard and considered as collective decisions about issues of consequence are being made.



The Climate Solutions Deliberative Forum Process

[\(link to DF Process and Climate Change Framework documents\)](#)

The process used for the Climate Solutions forum was straightforward. The organizers of the event:



Topics discussed during the Climate Solutions forum:



¹ See James S. Fishkin (1991) *Democracy and Deliberation: New Directions for Democratic Reform*. New Haven, CT: Yale University Press.

The Climate Solutions survey: Climate Knowledge, Attitudes, Beliefs, and Behavior

To better understand community knowledge and attitudes about climate change and to establish the community's baseline beliefs, the Climate Solutions team conducted a representative survey of central Pennsylvania residents ([link to topline summary document](#)). Data collection for the Climate Solutions Survey was conducted from September 6 - 18, 2022 and included 656 completed interviews. The survey, conducted by the Center for Opinion Research at Franklin & Marshall College, used a mixed-mode survey to collect data for this project. The Center sampled households in Adams, Cumberland, Dauphin, Franklin, Lancaster, Lebanon, Perry,

and York counties ([link to full methodology statement](#)).

The survey found that most (79%) central Pennsylvania residents believe that the earth is warming and most (61%) of these respondents believe that warming is caused by human activity. These beliefs about climate change exist despite the fact that respondents scored moderately low on climate knowledge, with an average knowledge score of four correct answers out of seven items that asked specific questions about weather and climate (see **Table 1**). The climate knowledge score was calculated by summing the total correct responses to the questions listed in Table 1.

Table 1. Assessment of Climate Knowledge

	Definitely True	Probably True	Probably False	Definitely False	Do Not Know
Weather often changes from year to year. (T)	59%	29%	6%	4%	2%
Climate means the average weather conditions in a region. (T)	40%	37%	7%	6%	10%
Climate often changes from year to year. (F)	30%	28%	19%	19%	4%
Ocean currents carry heat from the equator toward the north and south poles. (T)	29%	34%	4%	4%	29%
Weather means the average climate conditions in a region. (F)	18%	31%	16%	24%	12%
Climate and weather mean pretty much the same thing. (F)	8%	17%	24%	44%	6%
The atmosphere carries heat from the north and south poles toward the equator. (F)	7%	17%	14%	22%	42%

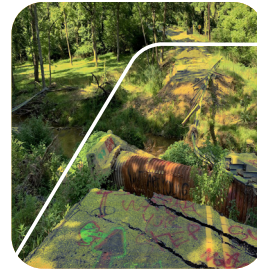
Note: The questions asked, "Do you think each of the following statements about the earth's climate is definitely true, probably true, probably false, or definitely false?"

The relative consensus that residents expressed about the existence of rising temperatures and the role of humans in that change did not lead to any consensus about local impacts or policy solutions (see Table 2).

Table 2. Perceptions of Selected Climate Impacts and Policy Actions

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Do not know
The frequency of flooding in my area has increased because of climate change	17%	19%	16%	38%	9%
The intensity of storms that produce flooding in my area has increased because of climate change	22%	19%	15%	34%	11%
Policymakers in PA should work to increase the share of vehicles on the road that are electric	28%	20%	12%	34%	6%
The air is often bad in my neighborhood	10%	17%	21%	47%	4%
Agricultural production is hurt by climate change	47%	17%	11%	19%	6%
Instead of trying to stop global warming from occurring, we should focus on adapting to a warmer climate.	9%	25%	19%	41%	6%
Transitioning to renewable energy will reduce the number of jobs in central PA	19%	15%	19%	33%	14%
I'd like to have access to transportation options for local trips other than a private vehicle	28%	26%	15%	26%	4%

Note: The questions asked, "Do you agree or disagree with the following statements?"



Perhaps the most significant finding from the survey given the Climate Solutions partnership and goals is that an equal proportion of respondents (46%) believe that reporting about the climate by news organizations has mostly resulted in scaring people as believe that reporting has helped people be more knowledgeable about the problem.



Respondents who were randomly selected to participate in the survey were also invited to participate in the Deliberative Forum itself. More than 100 survey participants signed up to participate and Center for Opinion staff selected and invited 60 survey participants who collectively provided a representative sub-sample of all survey participants.

The Climate Solutions Deliberative Forum Priorities

The forum deliberations were designed to identify participants' main climate priorities among those topics covered during the day. Some groups did not agree on which issue deserved the most urgent attention, suggesting how complex these issues are to tackle, how inter-related the issues are to one another, and participants' feelings that they needed to learn more. But the consensus of those who did rank the issues identified solutions around flooding as the main priority, with the other topics generating similar levels of concern. In addition to prioritizing flooding, the forum deliberations also identified four clear themes:

THEME 1

Give people incentives to choose things like electric vehicles or solar power, but don't mandate personal choices.

THEME 2

Government mandates were favored for some things, such as requiring new development to be solar-capable.

THEME 3

Polluters should pay to help those affected by climate change – such as farmers – adapt to challenges they face and losses they may incur.

THEME 4

We need to know more. All groups mentioned education in various ways – underscoring the need for accurate, independent information on the issues we face and potential solutions.

The Climate Solutions Deliberative Forum Post-Forum Survey

The forum produced more than priorities and consensus in the aggregate—it also produced some change in the participants' personal attitudes. Forum participants were invited to complete a post-forum survey that repeated some of the questions asked in our initial survey as well as additional questions that asked for feedback about the forum experiences. Three in four (18 out of 24) forum participants completed the post-forum survey, and although the sample size is small, it does provide useful insights into how the survey affected participants' knowledge and attitudes about climate change.

Perhaps the most significant finding is that participation in the forum changed how people thought about climate change. By matching responses from the post-forum survey to each

participant's response to the Climate Solutions Survey, it was clear that more participants believe the earth is warming and that human activity is responsible for that warming as a result of their conversations at the forum. More also believe there is consensus among scientists that global warming is happening (rising from 83% to 94%). These changes led more forum participants to believe that policymakers should prioritize renewable energy and promote greenhouse gas reductions ([link to climate forum participant topline summary](#)) than did so prior to the event.



Forum attendees' reflections

Post-forum reflections from attendees speak to the effectiveness of the deliberative forum format. Many participants praised the process and the experience:

“
It was a very productive environment. It was nice to have a place where people could freely give their opinions.
”

“
This is a great idea and I want to be a part of it and helping all of our futures with hopeful ideas and possible solutions.
”

“
This forum was really important to me, now I'll be able to share with friends and family the importance of the clean energy.
”

“
The civil tone of our discussion made it a pleasure.
”

The forum gave participants access to information and experts, and a format that allowed them to discuss ideas and solutions without the weight of politics. Their reflections underscored the complexity of the subject matter and the forum's success in bringing out thoughtful discussion and ideas on how to address climate challenges. A sample:

Find economical ways to supplement energy production with renewable means then design products to use that energy. Solar should be that primary means in PA.

It is important to use already available space for multiple purposes such as building solar “roofs” over parking lots so that sunlight can be harvested and it's shade can also be used to cool vehicles parked beneath them.

Let's be proactive to reduce the impact of flooding and disincentivize building and rebuilding in flood-prone areas.

This subject is not an easy fix. We must bring science, inventors, designers, and business entrepreneurs together on the same page to attack this mission.

Conclusion

Climate Solutions' deliberative forum marked the beginning of a conversation among attendees and the Climate Solutions partnership. For example, Climate Solutions has kept the attendees informed about its work, and has sought (and received) their input on that work. A subset of attendees is now part of a group that is meeting regularly to examine climate issues and how solutions-based journalism can help address the finding that almost half of survey respondents said climate reporting more often scares them than helped them increase their knowledge.

The deliberative forum and its two associated surveys have also provided Climate Solutions – and any public or elected official, government agency, news organization or other interested party – with a roadmap about what people know about climate-related issues, how eager they are to learn more, and their level of interest in finding real-world solutions to the challenges posed by climate change.

*Material researched and written by Madison Goldberg
Research assistance from Sriya Chattopadhyay*

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