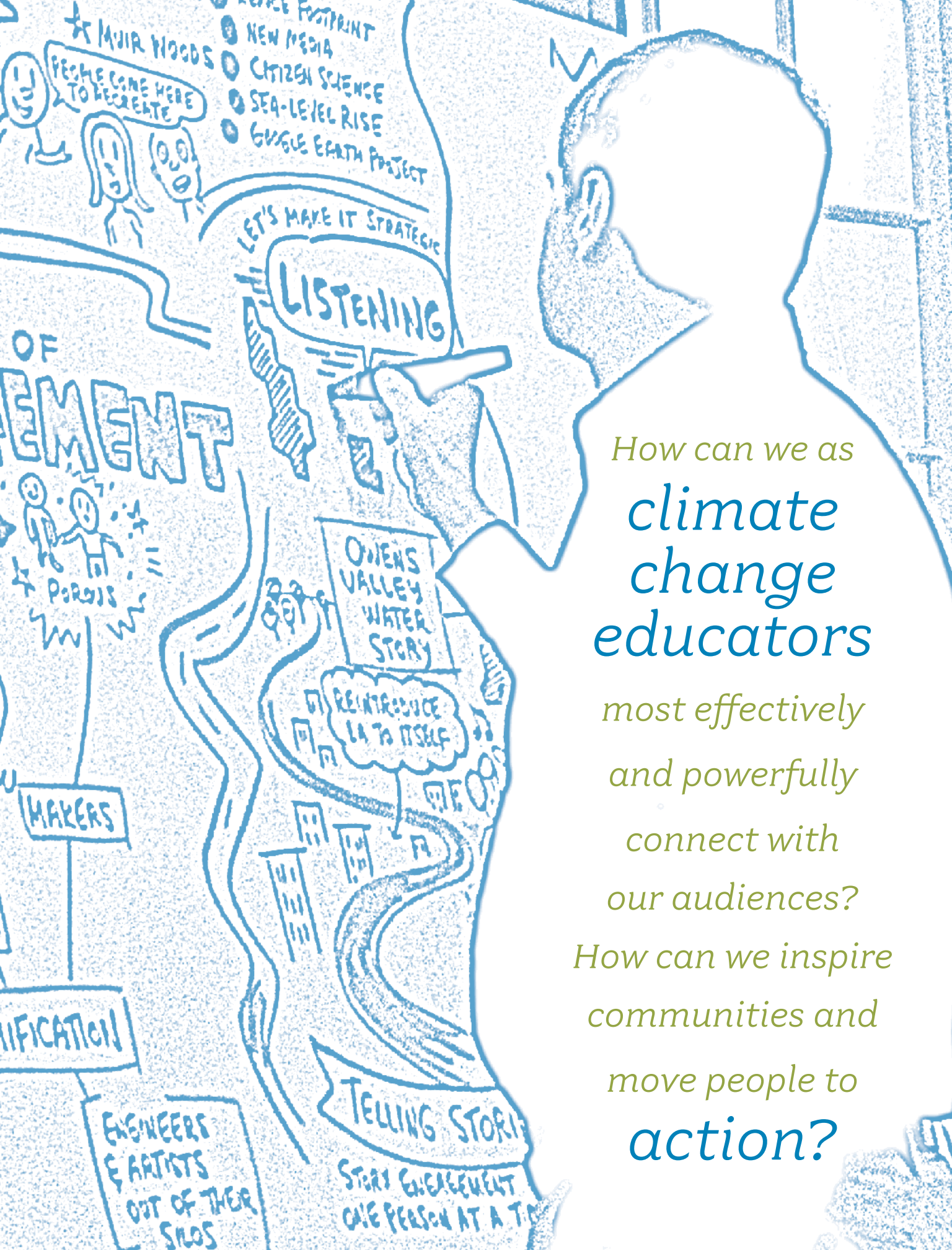


# PARKS: THE NEW CLIMATE CLASSROOM

INSIGHTS FOR CLIMATE CHANGE COMMUNICATION & EDUCATION





How can we as  
*climate  
change  
educators*

*most effectively  
and powerfully  
connect with  
our audiences?*

*How can we inspire  
communities and  
move people to  
action?*



From November 6–9, 2013, stakeholders from as far afield as Australia gathered at Cavallo Point-The Lodge at the Golden Gate in Sausalito, California to share their perspectives on how climate change communicators and educators can connect with new audiences and inspire them to take action on this important issue. *Parks: The New Climate Classroom*, hosted by the Institute at the Golden Gate, brought together leaders and innovators in the fields of interpretation, communications, park management, environmental policy, research, and advocacy. Participants shared strategies for expanding the reach of climate change programming and engaging and empowering the public on this critical issue.

Conversations throughout the three days explored the importance of making the climate story personal, place-based, and solution-oriented. How is climate change affecting our own lives? What can individuals and communities do to rise to the challenge? The conference explored topics such as the importance of place and storytelling, cross-sector collaboration, designing for action, and the role of technology.

This report identifies the main lessons, resources, and opportunities for future action that emerged from this content-rich event. It highlights some of the critical elements for effective climate change communications, including the need to know your audience, to inspire “hearts over minds,” and to design for action.

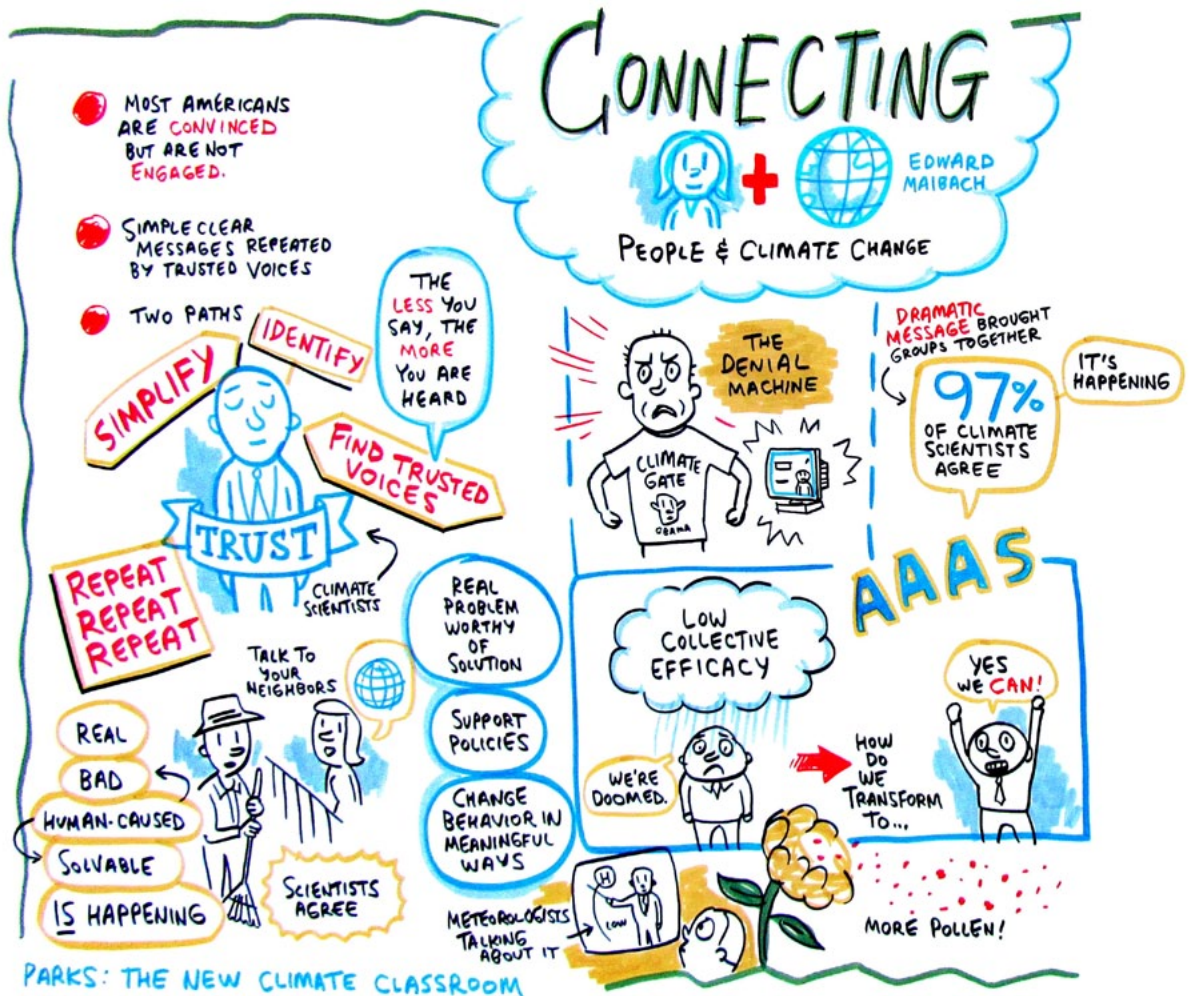
We encourage communication and education practitioners to take some of these ideas to build more effective, impactful climate change programming. The momentum and passion coming out of the conference was truly inspiring; we hope that this report can act as a tool to move the conversation and collaborative spirit forward.

*“It’s not just what we learn  
and how we learn,  
but where we learn.”*

Christine Lehnertz, Pacific West Regional  
Director, National Park Service



**Visual storytelling:** This gathering benefited from the talent of Lloyd Dangle, who provided live graphic recordings of the presentations and discussions. Graphic recording can be a great tool for increasing engagement and helping people retain more of what they hear. Visit our website to view the full collection of graphic recordings from the conference: [instituteatgoldengate.org/climate-graphic](http://instituteatgoldengate.org/climate-graphic).



## KNOWING YOUR AUDIENCE

Nearly all of the conference presenters touched on the critical importance of understanding the needs, values, and motivations of your audience when designing and implementing climate change education and communication programs.

Professor Ed Maibach of George Mason University provided an important starting point for the conversation by focusing on recent research into climate beliefs of the United States population. Maibach presented findings from the Yale Project on Climate

Communications (YPCC), highlighting the “Six Americas”—terminology coined to describe the range of beliefs around climate change. While those on either end of the Six Americas spectrum (Alarmed and Dismissive) are wholeheartedly committed to their perspectives, the majority of Americans (67%) fall between the two extremes. Professor Maibach suggested that this middle segment of the population is most receptive to new information and represents the ideal target for climate programming—and should be the focus of our efforts.

To reach the majority of the population, Maibach highlighted the importance of **simple messages, repeated often**, by a variety of **trusted voices**. His research indicates that the following beliefs are strong predictors of supportive attitudes and actions around climate change:

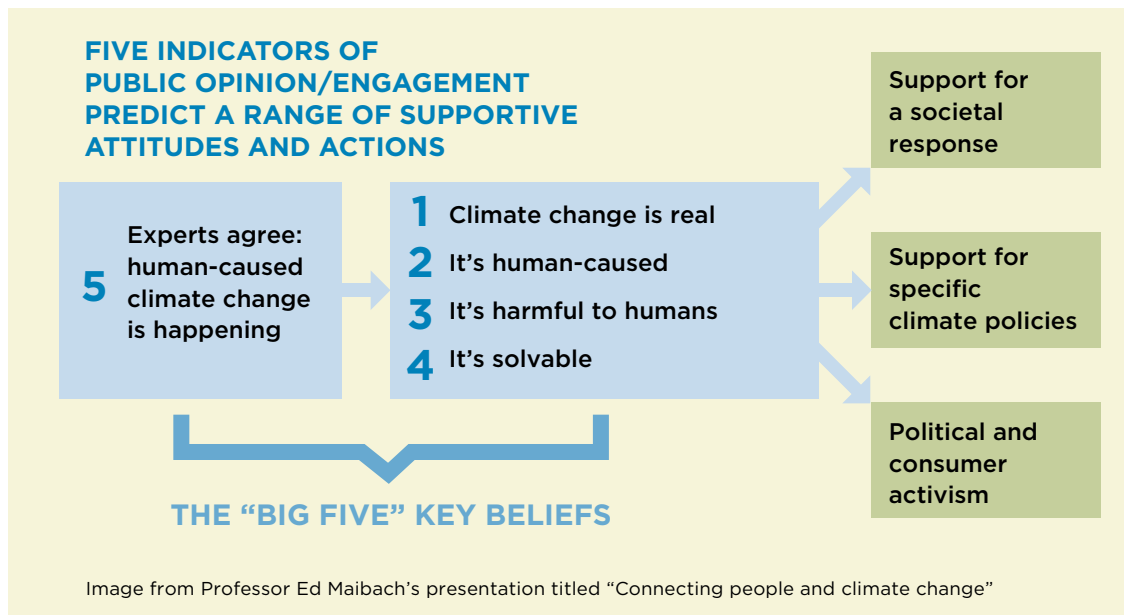
- It's real
- It's us
- It's bad
- Scientists agree
- There's hope

These indicators can provide a starting point for a clear, unifying climate education message nationwide. In particular, Maibach highlighted the *scientists agree* message as vitally important. In their research, YPCC found that if individuals believe that, "Based on the evidence, more than 97% of climate scientists are convinced that human-caused climate change is occurring," then they are more likely to believe the other key indicators.

Want to learn more? Watch all of Professor Ed Maibach's presentation from *Parks: The New Climate Classroom* on our website: [instituteatgoldengate.org/climate-videos](http://instituteatgoldengate.org/climate-videos)

Julian Mocine-McQueen from Green For All and Christy Rocca and Francis Taroc from the Crissy Field Center highlighted the need to closely examine our target audiences and to include a broader range of people in the climate movement. To begin with, organizations should assess which perspectives are missing from the table and work to include new voices. Are hiring structures unwittingly creating barriers to entry? How can today's leaders reach new audiences, more representative of our growing demographic diversity, to foster the next generation of environmental leadership?

Panelists urged practitioners to use accessible language for all audiences, teach with



Ding, D., Maibach, E., Zhao, X., Roser-Renouf, C. & Leiserowitz, A. (2011). Support for climate policy and societal action are linked to perceptions about scientific agreement. *Nature Climate Change*, 1, 462-466. doi: 10.1038/NCLIMATE1295

Roser-Renouf, C., Maibach, E., Leiserowitz, A., & Zhao, X. (2011, May). The Genesis of Climate Change Activism: From Key Beliefs to Political Advocacy. Paper presented to the International Communication Association Conference, Boston.





Fred Kent, President of Project for Public Spaces, spoke about Placemaking, the art of helping communities define their future through public spaces. Elements of Placemaking include gathering intelligence about what people value in a place and how they use places to connect to the environment and to each other. Utilizing this approach helps communicators develop programs that speak to community needs and better understand how those needs might be impacted by climate change.

stories, and lead through listening. Instead of pre-determining community priorities around climate change, practitioners first must show up and listen. In this way, they can discover what people really care about and better tailor their messages. Instead of pollution, community members might be more

concerned about asthma; instead of the carbon footprint of a tomato, the priority might be access to healthy food.

Jad Daley from the Trust for Public Land (TPL) shared his experiences working on building green corridors in South Central Los Angeles. While the South Central community's primary interest in the Green Alley project came from potential benefits to safety and public health, TPL was able to use those existing values as an entry point to begin introducing climate-related topics. However, first TPL had to understand and champion the existing values in order to build buy-in and support.

San Francisco's work to reach its goal of zero waste by 2020 presented another successful example of meeting people where they are at. In her presentation, Melanie Nutter, Director of San Francisco

Department of the Environment, discussed how San Francisco has become the first major U.S. city to initiate a large-scale curbside collection program for food waste. Much of the program's success can be attributed to extensive community outreach efforts. By understanding the needs of the community and making the effort to meet customers on their terms, San Francisco has been able to build not only a successful curbside collection program but also a solid base of support in local communities.

## EFFECTIVE CLIMATE COMMUNICATIONS STRATEGIES

- Take the time to listen and understand the priorities of your target audience
- Make it easy for people to repeat your points to others
- Utilize your target audience's existing trusted sources of information
- Demonstrate how communities are experiencing climate change
- Utilize experiential learning

## PARTNERSHIPS

In their panel, Maureen Blanc of Charge Across Town, Jad Daley of the Trust for Public Land, Jenn Fox of the Bay Area Open Space Council, and Mary Miller of the Exploratorium addressed the benefits and challenges to partnerships, highlighting key principles to building successful collaborations. Many of these principles echoed the concepts of knowing your audience:

- Meet your partners where they are—define engagement around the things people care about
- Be sure you're using the same language
- Structure matters—if you have more than two meetings with large groups without creating structure and delegating activities, people stop showing up
- Give all partners the opportunity to get out on the ground and get their hands dirty
- Utilize each other's strengths and complementary experiences
- Define a genuine, mutual, agreed-upon goal

In an example of a successful partnership, Mary Miller, Director of the Exploratorium-NOAA Partnership, shared her experience collaborating with a government agency. Through this partnership, the Exploratorium is able to draw on the scientific expertise of the National Oceanic and Atmospheric Administration (NOAA) to inform its programs and exhibits. At the same time, NOAA can use the reputation and reach of the Exploratorium to engage with the public in a manner that is relevant, accessible, and place-based.





# INSPIRING HEARTS OVER MINDS

Early on in the conference, award-winning journalist and author Mark Hertsgaard emphasized the importance of speaking to people’s hearts rather than their minds when talking about climate change. This sentiment was echoed and expanded upon by numerous practitioners throughout the three days, highlighting the critical importance of appealing to audiences on an emotional level.

Through his presentation “Using Storytelling to Motivate Meaningful Action,” Story Wars author and Creative Director of Free Range Studios Jonah Sachs spoke to the power of myth to appeal to our deeper values. He noted that historically myths were used as tools that captured and conveyed salient information to keep us out of trouble.

*“The way we tell stories as human beings is through people.”*

Lauren Sommer, Science Reporter, KQED

Today, myths are often supplied by marketers who rely on the “inadequacy approach” in which consumers are damsels in distress and the brand is the hero. This model relies on anxiety, fear, and greed as motivators. Instead, Sachs said practitioners should focus on a different model, that of “empowerment marketing” in which the individual is the hero of their own adventure. In these stories, an individual is called towards an epic journey of higher purpose, motivated by feelings of nobility, altruism, and passion.





Empowering myths call people to be better citizens and live their values. We want stories that give our lives meaning and place us at the center of the solution. Some people are ready for the big ask, for actions that match the scale of the problems the world is facing today. Sachs posited that parks are ideal places to create experiential journeys for visitors that tie a spirit of adventure with potential actions. As practitioners, we have an opportunity to set people up to be courageous, show them that the difficult actions are worthwhile, and empower them by providing specific things to do.

Professor Maibach argued that although an overwhelming majority of Americans think that we could solve the problems related to climate change, they perceive that we do not have the will as a society to act meaningfully and effectively. The end result is that fewer individuals take action.

This reveals one of the big challenges that we face as practitioners: how do we give people hope? Like Sachs and Hertsgaard, Maibach viewed storytelling as a great tool for motivating and inspiring our audiences and giving them hope. To really engage new audiences, the stories must be personal, grab the heart strings, and show the impact of what is at stake.

Maibach revealed that our brains process information related to risks in two ways: through the experiential system which is effortless and vivid; and the analytic system which is based on logic and mental effort. Rather than relying on analytical data and figures to convince people of the importance of climate change, Maibach suggests that communicators focus on what communities are experiencing.

Climate change is seen as a relatively distant threat in space and time for most Americans. Highlighting current weather changes can help connect climate change to daily life. By

Youth representatives, Xiuhtezcatl Roske-Martinez (pictured below) and Kelsey Juliana, spoke to the importance of including youth voices early when designing climate change education programs.



Our Children's Trust has created a series of videos featuring young activists such as Xiuhtezcatl Roske-Martinez and Kelsey Juliana. These inspiring individuals speak to how climate change resonates with them personally, now, where they live, in their own words. To view all of the videos produced by Our Children's Trust, including Kelsey and Xiuhtezcatl's, visit their website: [ourchildrenstrust.org/trust-films](https://ourchildrenstrust.org/trust-films).

tapping into this system of learning, practitioners are once again emphasizing human experience and values over simply providing more statistical data. By empowering people on climate change, powerful storytelling and human engagement have a clear advantage over data every time.

Lauren Sommer, Science and Environment Reporter for KQED Public Radio, a PBS member station, further emphasized the concept that the most important facts are not always the most memorable. When developing environmental stories for radio, she focuses on peoples' stories rather than just the facts. The personal experiences, humorous moments, and emotional stakes help the audience get through difficult information and make it memorable.

The Golden Gate National Parks Conservancy Roving Ranger made an appearance on the first day of the conference, demonstrating different tools for meeting people where they are at and engaging new communities in the dialogue around parks and education.



Maria Mortati, Principal of her own Museum Exhibit Design firm, helps museums achieve deeper community engagement through developing visitor-centric exhibitions. She highlighted effective experiments that utilize participation as an exhibit driver, the gamification of experiences to foster civic engagement, Do-It-Yourself spaces, and mobile museums that go to people.

Panelists also stressed the importance of collaborations among artists, scientists, and communicators. Artists can be effective public programmers, and act in concert with scientists to bridge the gap between technology, art, and conservation.

As parks and museums emphasize the importance of audience participation, new types of interactions and collaborations become possible. For example, in 2013, the California Academy of Sciences hosted Science Hack Day, in which designers, developers, scientists, and others gathered for a brief period of collaboration. Through its NightLife program, the Academy also draws 1,700-4,000 adults each week to the science center to experience science adventures along with food, drinks, and music. Presenters also discussed examples of innovation in bringing exhibits into the community such as the San Francisco Mobile

Museum, and the Golden Gate National Parks Conservancy's Roving Ranger. These interactive programs all present new opportunities for climate communicators to engage and connect with new audiences in new ways.

Individuals and communities are becoming increasingly involved in data collection and analysis with the aid of technology. Dan Rademacher from Stamen Designs and Nerds for Nature discussed his efforts to start a series of grassroots BioBlitzes in urban parks. A BioBlitz is an event that lasts from a few hours to a full day, during which volunteers conduct biodiversity surveys. In recent years, participants have been able to record, photograph, and map their findings with a smartphone application called iNaturalist.

Panelists underscored the importance of leveraging citizen science and technology to engage audiences with climate change, inspire new caretakers of critical ecosystems, and document changes in shifting landscapes. BioBlitz and other citizen science-based activities provide opportunities for in-depth engagement and strengthen the relevance of climate change by allowing individuals, particularly youth, to explore the impacts of climate change in their backyard.

A number of panels discussed important strategies for engaging and empowering young people with respect to climate change.

**Jon Christenson and Eric Rodenbeck discussed projects that use crowdsourcing and social media to engage new audiences. The Year of the Bay Project invites individuals to add their own stories to mark the 150th anniversary of the Port of San Francisco, while Stamen Designs is gathering park-based social media posts to show the important role that parks play in our lives.**

[historypin.com/project/22-yearofthebay](http://historypin.com/project/22-yearofthebay)  
[parks.stamen.com](http://parks.stamen.com)



Youth climate activist Xiuhtezcatl Roske-Martinez emphasized the need to flip the mindset that only certain types of people can be activists. He argued that youth, as future caretakers of the earth, must be at the table and he called on his peers to seize the opportunity to make a difference.

Students today no longer rely solely on schools for information. There is a growing need for educators to create experiences for students that exist online, after school, and in broader settings. Milton Chen, Senior Fellow at Edutopia, spoke about a growing trend in museums, parks, and science centers to award badges for learning achieved outside of the traditional school setting. Through Chicago City of Learning, students are able to earn badges for activities outside of the classroom. The program establishes the city of Chicago as the campus, and invites students to explore their interests in a variety of settings and modalities. Practitioners at the California Academy of Sciences have found that integrating youth voices into the

development of their platforms cultivates leaders and increases relevance, which is a prerequisite for interest, knowledge, and equitable access to science and sustainability.

The idea of using parks as the new climate classroom is well-timed, as it represents an opportunity for educators to develop programming for students in the natural world that is experiential, fun, and collaborative. Xiuhtezcatl Roske-Martinez urged educators to give kids choice and variety, celebrate success, and be funny!

### KEY INTERPRETATION AND EDUCATION DESIGN PRINCIPLES

- Co-creating with audiences
- People-to-people engagement
- Bringing content to people in new ways
- Creating space for popular events in museums
- Leveraging citizen science

## DESIGNING FOR ACTION

While understanding, inspiring, and motivating your audience are crucial steps, they do not inherently move people to action. It takes a thoughtful, intentional process of design to build communication and education platforms that result in behavior change.

In Matt Kresse's presentation he introduced the Behavior Design process developed at Stanford's Persuasive Technology Lab, which underscores that behavior change happens by design.

According to BJ Fogg's Behavior Model ([www.behaviormodel.org](http://www.behaviormodel.org)), three elements must be present for a behavior to occur: Motivation, Ability, and a Trigger. If one of these elements

is missing the behavior will not happen. If an individual is motivated to combat climate change but does not have the ability to complete a desired behavior he or she will not

The Stanford Woods Institute for the Environment is conducting a study of the most effective mechanisms for transforming the immersive experience of nature-based tourism into long-term stewardship behavior.

To learn more, visit their website: [www.woods.stanford.edu/environmental-venture-projects/facilitating-pro-environmental-behavior-leveraging-nature-based](http://www.woods.stanford.edu/environmental-venture-projects/facilitating-pro-environmental-behavior-leveraging-nature-based)

complete it. Similarly, people can be motivated and have the ability, but without a trigger or cue in their path they will not act.

The Behavior Design process includes: starting with a list of desired behaviors, making targeted behaviors more specific, prioritizing a set of behaviors, generating intervention ideas, and running quick tests to surpass faulty assumptions.

Kresse stressed the importance of being specific about the behaviors you want to promote. The more context and precision, the better you can design your interventions to encourage those behaviors. Will the behavior happen once or will it be recurring? Asking people to pick up three pieces of litter while at the beach is more specific than asking them to reduce littering.

Another key element of designing effective interventions is choosing appropriate

triggers. Triggers are reminders, prompts, or calls to action. Common triggers take the form of texts, signs, Post-its, e-mails, alarms, or physical objects in your path. A trigger can be hot or cold. Cold triggers prompt us to do something we cannot do at the moment (e.g., a billboard on the highway about replacing bulbs with CFLs). Conversely, hot triggers can be acted on immediately (e.g., timers in the shower). Kresse urged practitioners to design with hot triggers in mind.

Behaviors should be prioritized according to ease and size of intended impact. Designers should simplify behavior and develop interventions that trigger the behavior and make it easy to start. The less time, money, physical effort, and thinking required at the outset, the better. As behaviors become routine, people trigger themselves and no longer need external prompts.

## CASE STUDY

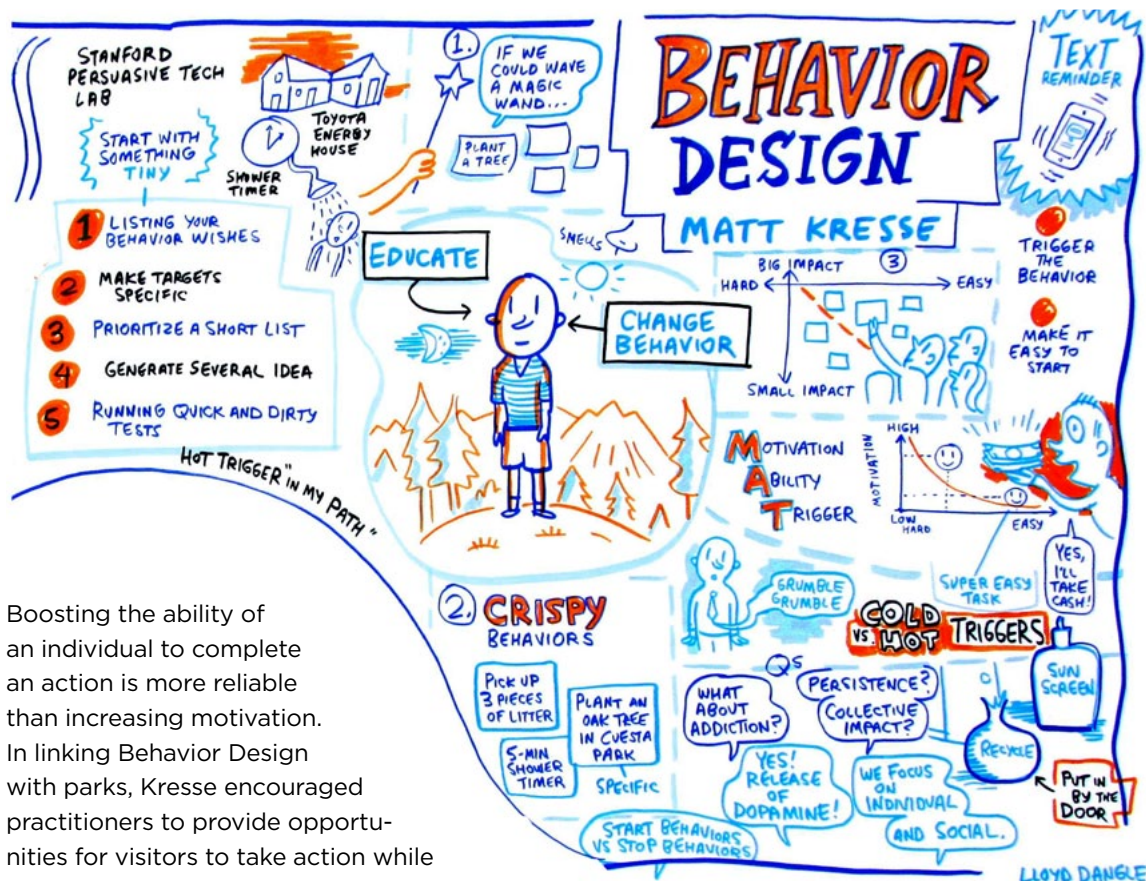
Inspired by the presentations of Matt Kresse and IDEO, Karen Hevel-Mingo (Climate Program Manager, National Parks Conservation Association) and Tim Watkins (Science and Education Coordinator, NPS Climate Change Response Program), decided to conduct their own Behavior Design trial.

The goal of the trial was to get attendees of BioBlitz: Golden Gate National Parks to sign up to receive text alerts reminding them to keep behavior pledges that they took at the event. The team partnered with National Geographic with the intention of sending out texts for three months following BioBlitz. Initial lessons from their experience are highlighted below.

- Make the bar for signing up as low as possible. Consider having registrants check a box on the on-line registration form in which they have already provided their cell phone numbers.

- Be as specific as possible about the behaviors you are asking people to do. Drive less can mean many things, whereas teleworking once a week on Fridays is more specific.
- The text message can be simple and uniform for all participants regardless of the behavior. For example, “On behalf of BioBlitz, thank you for taking action today!”
- Have people think about when they want to get a reminder. Find a way to fit it into their existing routine.
- Consider providing information during the trigger period that increases a participant’s ability to continue doing the behavior in the future (e.g., information on local bike groups, bike maps, coupons to a bike store if they are biking to work more often).
- Do quick trials before the event to test your design on people in your circles and beyond.





Boosting the ability of an individual to complete an action is more reliable than increasing motivation. In linking Behavior Design with parks, Kresse encouraged practitioners to provide opportunities for visitors to take action while at the site. Even small actions taken in the moment can lead to greater success once individuals have left the park. Another strategy is to have people sign up to receive alerts in the future related to specific behaviors.

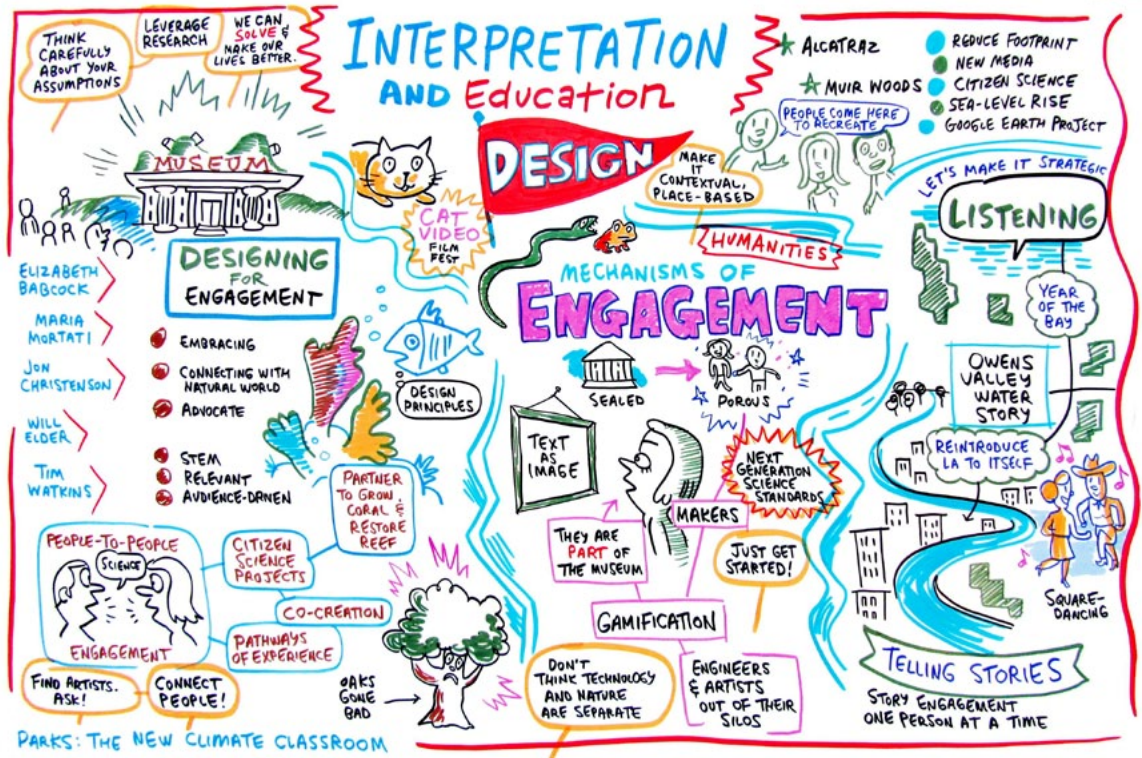
While Kresse's presentation focused on smaller, easier asks, other panelists discussed the need to also provide a call to action that is proportional to the scope and scale of climate change. As practitioners, we have an opportunity to set people up to be courageous—to show them that big actions are worthwhile and empower them with specific things to do.

With this in mind, the focus for practitioners shifts from trying to get people to care about climate change to facilitating specific actions that allow them to become part of the solution. Amanda Starbuck from the Rainforest Action Network discussed the success of their Power is in Your Palm campaign, which provided the public with a clear call to action: put market pressure on snack food companies that use conflict palm oil.

The international design firm and innovation consultancy IDEO shared elements of their Design Thinking approach during an evening discussion on designing for climate education, as well as in a design workshop on the last morning of the conference.

Design Thinking is a methodology that integrates innovation with human-centered design to match people's preferences and latent desires with what is technically and logistically feasible. Participants in the morning workshop interviewed park visitors and combined empathy, listening, and observation skills with IDEO's brainstorming techniques to design prototypes for climate education experiences. Whether designing to inspire behavior change, or

Throughout the conference, participants highlighted the importance of solution-oriented messaging. What specific actions do you ask of your audience? Continue the conversation on Twitter with #teachclimate.



#### IDEO tips for better brainstorming:

- Defer judgment
- Encourage wild ideas
- Build on the ideas of others
- Stay focused on topic
- One conversation at a time
- Be visual
- Go for quantity

In brainstorming, it is also effective to clarify when you are generating—as opposed to selecting—ideas. These two processes should be separated since they engage different ways of thinking. Similarly, deferring judgment until the selection phase is critical for encouraging the emergence of new ideas.

creating more engaging experiences in parks, innovation should be fundamentally driven by the direct observation of what people want.

A key lesson from the workshop was the utility of having multiple touchstones or entry points for visitors. Practitioners suggested combining ideas into one experience. For example, a bike path through the park can be designed to include a game in which visitors

choose their own path and encounter visual information, physical challenges, and art installations—all leading to incentives at the end to purchase green products.

Elizabeth Babcock, Chief Public Engagement Officer and Dean of Education at the California Academy of Sciences, shared that authenticity, audience-centered design, relevance, fostering youth leadership, and focusing on solutions are vital elements to the Academy's exhibit design process. The Academy integrates co-creation and co-design with the audience, and youth in particular, into their strategic plan. The exchanges between visitors and designers create powerful, transformative experiences based on the audiences' expressed needs and interests.

Instead of waiting until an exhibit or experience has been perfected, IDEO co-founder David Kelley is quoted famously as saying, "Fail often to succeed sooner." For those designing for climate education, ask for feedback based on prototypes, bring your stakeholders along with you in a transparent iteration process, and encourage co-creation.



# CONCLUSIONS & NEXT STEPS



## **Design for action.**

## **Speak to people's hearts instead of their heads.**

## **Take the time to understand and co-create experiences with our intended audiences.**

These were a few powerful themes that stood out over the three days of *Parks: The New Climate Classroom*.

The power of storytelling should be harnessed to connect people to the human impacts and personal effects of climate change, as well as place them in a role of empowered actors. Efforts need to be made to broaden the conversation, bring in diverse voices, and use peer-to-peer learning. Young people can be effective leaders, and are ready to take action inside and outside of the classroom.

As facilitators and designers we need to meet the challenge of encouraging behavior change, and making it easier for people to participate. Participants echoed the phrase “the silos are dead” with respect to art and

engineering, science and design, and education and technology.

As you seek to engage and empower people with your climate programs in parks or any other place, we encourage you to build prototypes, gather feedback early, iterate quickly, and share your successes and failures with colleagues. Taking the best practices and continuing these professional partnerships beyond this conference will strengthen the networks we need to scale our efforts; help us discover what works; and use parks to educate, excite, and empower generations to come.

The extraordinary momentum and ideas generated at Cavallo Point would not have materialized without the energy, contribution, and dedication of the organizers, presenters, and attendees. Thank you to those who participated and will carry these ideas forward. Your work on climate change and passion for solving big problems collectively are critical to meeting this global challenge.

*“We need to talk about the human impact and what’s at stake with climate change—not just polar bears.”*

Amanda Starbuck,  
Energy & Finance Program Director,  
Rainforest Action Network

## THE NATIONAL PARK SERVICE AND CLIMATE CHANGE

Today's rapid climate change is challenging our national parks on multiple levels—from changing habitats to threatening cultural resources. The National Park Service (NPS) recognizes the urgency of climate change and has committed to addressing these threats. Through various presentations, conference participants gained a broad understanding of the different actions NPS is taking to address these issues, nationally, regionally, and locally.

At the national level, Tim Watkins, Science and Education Coordinator for NPS' Climate Change Response Program (CCRP), gave an overview of NPS' primary climate change strategy, which is built on four pillars: science, adaptation, mitigation, and education. The key messages that guide NPS climate change strategy are:

- Human activities are changing the Earth's climate
- Climate change affects national parks and the treasures they protect
- The NPS is addressing climate change
- The choices you make today do make a difference

To learn more about the NPS Climate Change Response Program, visit their website: [www.nps.gov/orgs/ccrp/index.htm](http://www.nps.gov/orgs/ccrp/index.htm).

In the Pacific West, Regional Director Christine Lenhertz highlighted that climate change is a critical issue for the region and spoke about the need for strategic communication, sharing information, and establishing a common vision and goals. Ray Sauvajot, Deputy Associate Director for Natural Resources and

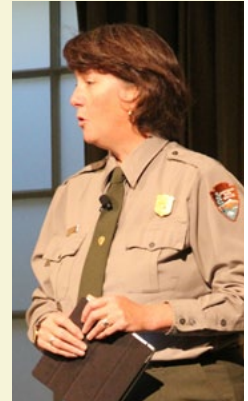
Science, spoke about the value of coordination and collaboration across programs and disciplines.

Amanda Schramm, Realty Specialist and Climate Change Coordinator for the Pacific West Region, discussed the three primary regional climate change initiatives:

- Climate Champions Program: Recognizes current staff that are catalysts and motivators around climate change programming
- Climate Change Town Hall Initiative: Familiarizes staff with the regional climate strategy and reaffirms national and regional commitment within the agency
- Park Climate Actions Toolkit (currently in development)

At the local level, Interpretive Ranger Will Elder discussed how the Golden Gate National Recreation Area is leading by example, including efforts to make Alcatraz more sustainable through the use of solar panels, rainwater capture, waste recycling systems, and hybrid ferries. Current communication strategies use mitigation efforts as education tools, as well as waysides and signs addressing the impacts of sea level rise.

To learn more about regional and national efforts, visit our website to watch the panel discussion from the conference: [instituteatgoldengate.org/climate-videos](http://instituteatgoldengate.org/climate-videos)





# RESOURCES

## SPEAKERS

### Wednesday, November 6

**Doug McConnell** - Convergence Media Productions, Independent filmmaker and long-time host of “Open Road” on PBS

### Thursday, November 7

**Christine Lehnertz** - Pacific West Regional Director, National Park Service

**Matt Kresse** - Designer, Persuasive Technology Lab, Stanford University

**Jonah Sachs** - CEO, Free Range Studios, Author of *Winning the Story Wars* and interactive workshops

**Mark Hertsgaard** - Independent journalist and author of *HOT: Living Through the Next 50 Years on Earth*

**Kelly Matheson** - Filmmaker; Our Children’s Trust; Senior Program Manager, Witness

**Kelsey Juliana** - Our Children’s Trust, Oregon

**Xiuhtezcatl Roske-Martinez** - Our Children’s Trust, Colorado; Earth Guardians

**Edward Maibach** - Director, Center for Climate Change Communications, George Mason University

**Elizabeth Babcock** - Chief Public Engagement Officer & Dean of Education, California Academy of Sciences

**Maria Mortati** - Principal, Mortati

**Jon Christenson** - Adjunct Assistant Professor, Institute of the Environment and Sustainability, UCLA

**Will Elder** - Interpretive Ranger, Golden Gate National Recreation Area, National Park Service

**Julian Mocine-McQueen** - Director of Education & Outreach, Green For All

**Francis Taroc** - Science Specialist, Crissy Field Center, Golden Gate National Parks Conservancy

**Christy Rocca** - Director, Crissy Field Center, Golden Gate National Parks Conservancy

**Steve Bishop** - Global Lead of Environmental Impact, IDEO

**Meija Jacobs** - Senior Design Lead & Brand Strategist, IDEO

### Friday, November 8

**Fred Kent** - President, Project for Public Spaces

**Mary Miller** - Director, Exploratorium-NOAA Partnership, Exploratorium

**Jad Daley** - Climate Change Program Director, The Trust for Public Land

**Maureen Blanc** - Director, Charge Across Town

**Jenn Fox** - Executive Director, Bay Area Open Space Council

**Tim Watkins** - Science & Education Coordinator, Climate Change Response Program, National Park Service

**Ray Sauvajot** - Deputy Associate Director for Natural Resources and Science, National Park Service

**Sheri Forbes** - Chief of Interpretation and Education, Pacific West Region, National Park Service

**Amanda Schramm** - Realty Specialist, Pacific West Region, National Park Service

**Melanie Nutter** - Director, San Francisco Department of Environment

**Amanda Starbuck** - Energy & Finance Program Director, Rainforest Action Network

**Jess Dervin-Ackerman** - Conservation Coordinator, Sierra Club, San Francisco Bay Chapter

**Greg Dalton** - Founder, Climate One at Commonwealth

**Craig Miller** - Science Editor, KQED

**Lauren Sommer** - Science and Environment Reporter, KQED

**Eric Rodenbeck** - CEO, Stamen Designs

**Dan Rademacher** - Program Manager, Stamen Designs

**Milton Chen** - Senior Fellow / Director Emeritus, Edutopia

**Ernesto Pepito** - Associate Director, Crissy Field Center, Golden Gate National Parks Conservancy

**Andrew Leider** - Former Senior Program Manager, Institute at the Golden Gate

**Chris Spence** - Director, Institute at the Golden Gate

### Saturday, November 9

**Whitney Mortimer** - Partner, IDEO

## REPORTS & ARTICLES

**Global Warming's Six Americas**, September 2012, Center for Climate Change Communication:  
[environment.yale.edu/climate-communication/files/Six-Americas-September-2012.pdf](http://environment.yale.edu/climate-communication/files/Six-Americas-September-2012.pdf)

**Climate Change in the American Mind**, November 2013, Center for Climate Change Communication:  
[environment.yale.edu/climate-communication/article/Climate-Beliefs-November-2013](http://environment.yale.edu/climate-communication/article/Climate-Beliefs-November-2013)

**How to Transform a Community? It Starts With a Personal Connection**, Green For All Blog:  
[greenforall.org/?post=how-to-transform-a-community-it-starts-with-a-personal-connection](http://greenforall.org/?post=how-to-transform-a-community-it-starts-with-a-personal-connection)

**Building Place-Based Climate Change Education through the Lens of National Parks and Wildlife Refuges**, Colorado State University, National Parks Conservation Association, National Park Service, U.S. Fish & Wildlife Service: [climateaccess.org/sites/default/files/NSF\\_Place-based%20Climate%20Change%20Education%20Partnership%20Report.pdf](http://climateaccess.org/sites/default/files/NSF_Place-based%20Climate%20Change%20Education%20Partnership%20Report.pdf)

**What is Placemaking?**, Project for Public Spaces: [www.pps.org/reference/what\\_is\\_placemaking/](http://www.pps.org/reference/what_is_placemaking/)

**Facilitating Pro-Environmental Behavior: Leveraging Nature-based Experiences into Everyday Stewardship**, Stanford Woods Institute for the Environment: <https://woods.stanford.edu/environmental-venture-projects/facilitating-pro-environmental-behavior-leveraging-nature-based>

## BOOKS

*Thinking Fast and Slow*, by Daniel Kahneman

*The Hero with a Thousand Faces*, by Joseph Campbell

*Winning the Story Wars*, by Jonah Sachs

*HOT: Living Through the Next Fifty Years on Earth*, by Mark Hertsgaard

*Creative Confidence*, by David Kelley & Tom Kelley

*The Ten Faces of Innovation*, by Tom Kelley

*Change by Design*, by Tim Brown

KQED e-books: [kqed.org/community/mobile/ibook/](http://kqed.org/community/mobile/ibook/)

## VIDEOS

**Climate Matters**, Climate Central, George Mason University, NOAA:  
[climate.gov/news-features/videos/climate-matters](http://climate.gov/news-features/videos/climate-matters)

**Connecting People to Climate Change, Professor Ed Maibach**, George Mason University:  
[instituteatgoldengate.org/climate-videos](http://instituteatgoldengate.org/climate-videos)

**Kit Kat Campaign**, Greenpeace: [greenpeace.org/international/en/campaigns/climate-change/kitkat/](http://greenpeace.org/international/en/campaigns/climate-change/kitkat/)

**Mobilizing an Agency at Regional and National Scales**, Sheri Forbes, Ray Sauvajot, Amanda Schraam, Tim Watkins, National Park Service: [instituteatgoldengate.org/climate-videos](http://instituteatgoldengate.org/climate-videos)

**Power is in Your Palm Campaign**, Rainforest Action Network: [laststandoftheorangutan.org](http://laststandoftheorangutan.org)

**TRUST Colorado**, Xiuhtezcatl Roske-Martinez, Our Children's Trust:  
[ourchildrenstrust.org/video/351/trust-colorado](http://ourchildrenstrust.org/video/351/trust-colorado)

**TRUST Oregon**, Kelsey Juliana, Our Children's Trust: [ourchildrenstrust.org/video/392/trust-oregon](http://ourchildrenstrust.org/video/392/trust-oregon)

**Winning the Story Wars Part 1: The Myth Gap**, Jonah Sachs: [vimeo.com/42416260](http://vimeo.com/42416260)

**Winning the Story Wars Part 2: The Hero's Journey**, Jonah Sachs:  
[freerange.com/thinking/post/winning-the-story-wars-the-heros-journey](http://freerange.com/thinking/post/winning-the-story-wars-the-heros-journey)

## ONLINE RESOURCES

**BJ Fogg's Behavior Grid**: [behaviorgrid.org](http://behaviorgrid.org)

**BJ Fogg's Behavior Model**: [behaviormodel.org](http://behaviormodel.org)

**BJ Fogg's Behavior Wizard**: [behaviorwizard.org/wp/](http://behaviorwizard.org/wp/)

**Center for Climate Change Communication**, George Mason University: [climatechangecommunication.org](http://climatechangecommunication.org)

**Climate Access**: [climateaccess.org](http://climateaccess.org)

**HCD Connect**, IDEO: [hcdconnect.org](http://hcdconnect.org)

**Human Centered Design Toolkit**, IDEO: [ideo.com/work/human-centered-design-toolkit/](http://ideo.com/work/human-centered-design-toolkit/)



# ABOUT US

## THE INSTITUTE AT THE GOLDEN GATE

**Fort Baker | Sausalito, California | (415) 561-3560 | [www.instituteatgoldengate.org](http://www.instituteatgoldengate.org)**

The Institute at the Golden Gate, a program of the Golden Gate National Parks Conservancy in partnership with the National Park Service, contributes to a more sustainable and healthy world by harnessing the power of parks and public lands to advance environmental stewardship and human wellbeing. The Institute fosters new ideas, shares best practices, encourages leadership, and supports and implements public policy changes that will benefit people and the planet.

## GOLDEN GATE NATIONAL PARKS CONSERVANCY

**Fort Mason | San Francisco, California | (415) 561-3000 | [www.parksconservancy.org](http://www.parksconservancy.org)**

The Golden Gate National Parks Conservancy is the nonprofit membership organization created to preserve the Golden Gate National Parks, enhance the experiences of park visitors, and build a community dedicated to conserving the parks for the future. Since 1981, the Parks Conservancy has provided over \$300 million in aid for site transformations, trail improvements, habitat restoration, research and conservation, volunteer and youth engagement, and interpretive and educational programs.

## NATIONAL PARK SERVICE

**[www.nps.gov](http://www.nps.gov)**

The National Park Service is a federal agency within the U.S. Department of the Interior responsible for the preservation and public enjoyment of America's most significant natural, cultural, historic, and scenic treasures. The agency manages the three Golden Gate National Parks (Golden Gate National Recreation Area, Muir Woods National Monument, and Fort Point National Historic Site) and 398 other parks across the country.

## ABOUT THE AUTHOR

Julia Townsend is an Environmental Policy Consultant specializing in strategic communications, community mobilization, and behavior change. She has been a Policy Analyst for the National Oceanic and Atmospheric Administration, Congressional campaign staffer, and teacher. She received her Master's in International Environmental Policy from the Monterey Institute of International Studies, has been a member of the World Commission on Protected Areas since 2012, and is currently based in Santa Cruz, CA.

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# CLIMATE CHANGE EDUCATION & PARKS PROGRAM

The Institute at the Golden Gate's Climate Change Education & Parks Program aims to help parks serve as platforms for climate change education. By exploring the ways in which parks are engaging audiences on climate change, the Institute seeks to unify knowledge from different agencies, organizations, and geographies. In doing so, the Institute hopes to foster increased information sharing, collaboration, and collective action among parks, partners, other educators, and communities.

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