

# Survey on the Impact of Climate Change on Latino Communities in Arizona:

*Perspectives from Civic & Community Leaders*

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## Acknowledgments

The Sonoran Institute is pleased to present the results of a recent study on the impacts of climate change on Latino communities in Arizona. The survey and initial findings of this report represent the first piece of what we hope will become a larger body of work helping communities address climate impacts.

Under the guidance of Senior Adviser, John Shepard, we have been successful in reaching a broad audience in the state with this effort. Conducting a survey takes much time and effort, and this survey would not have been possible without the focused attention of consultant Nicole Gonzalez Patterson of Patterson Public Affairs, LLC, and that of the Sonoran Institute's own Susan Culp and Hannah Oliver. They spent many hours interviewing stakeholders and summarizing their responses into the findings outlined in this report.

Our partner in this initiative, Arizona Community Foundation (ACF), was instrumental in refining our focus, and organizing the August 18, 2014 presentation to Latino community leaders and members and environmental advocates. Thanks to Tony Banegas, Lindsay Moore, and Robbi Graham at ACF for their project guidance and assistance in promoting and organizing the event.

Attendees at the presentation heard from Nicole, Susan, and Hannah on a variety of aspects of climate change. We were fortunate to also have Jim Buizer of the Institute of the Environment, University of Arizona, present detailed climate change information at the event. Thanks as well to Ian Dowdy of the Sonoran Institute for moderating the facilitated dialogue that followed the presentations.

This project would not have been possible without funding from the Alki Fund of the Rockefeller Family Fund.

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# Contents

<b>Introduction.....</b>	<b>1</b>
<b>Anticipated Impacts of Climate Change in Arizona .....</b>	<b>2</b>
Increased Temperatures .....	2
Drought.....	3
Dust Storms and Floods.....	3
Wildfire .....	4
Public Health.....	4
Economic and Financial Impacts.....	5
<b>Survey Findings from In-depth Interviews of Latino Civic &amp; Community Leaders in Arizona .....</b>	<b>6</b>
Project Methodology.....	6
Survey Findings.....	7
Common Themes from Survey Responses.....	9
Latinos as High Value Audience .....	9
<b>Communication Tools.....</b>	<b>10</b>
Spanish Language Media .....	10
Social Media .....	10
Engaging Trusted Community Leaders and Holding Community Meetings .....	11
Youth Engagement.....	11
<b>A Dialogue with Latino Community Leaders &amp; Environmental Organizations on Actions to Address Climate Impacts on Latinos .....</b>	<b>12</b>
Framing the Issue.....	12
Methods of Engagement .....	13
Coordinating with Other Established Organizations .....	13
<b>Recommendations for Next Steps .....</b>	<b>14</b>
<b>End Notes .....</b>	<b>16</b>
<b>Appendices.....</b>	<b>17</b>



Photo: Sonoran Institute

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## Introduction

Climate change is recognized as one of the most significant environmental challenges of our age. Adaptation can be defined as efforts by society or ecosystems to prepare for, or adjust to future change, and is an emerging conversation with respect to climate change. For communities in the Intermountain West, the impacts of climate change are anticipated to be particularly severe in terms of temperature increases, shifts in precipitation patterns and snowpack levels, and increased drought and extreme weather events.

Most western communities are already facing a multitude of challenges, such as changes in population, demographics, and economic development. Climate change impacts will exacerbate these challenges and make adaptation difficult even under the best of circumstances. These difficulties can become quickly magnified in communities that already experience significant disadvantages and threats, particularly low-income communities and other underserved communities. Such communities often have few resources to invest in resilience planning and little access to, or influence on, political decision making.

Climate science leaders and conservationists alike increasingly understand that climate change impacts can present particularly

significant threats to underserved, vulnerable populations. Therefore, it is essential that any comprehensive and equitable approach to local-level adaptation be mindful of and responsive to the unique challenges that these communities face.

In Arizona, many predominantly urban Latino neighborhoods are among the most vulnerable. They are, on average, lower income, and are frequently disproportionately impacted by pollution and other environmental harms. Latino neighborhoods in Arizona are often found in areas with higher levels of air quality violations, industrial pollution, and toxic releases. Asthma rates in Latino neighborhoods in Phoenix tend to be higher than those for the metro areas as a whole. Housing in those neighborhoods also tends to be older, and less likely to be weatherized, or to have energy-efficient appliances or cooling systems. As a result, the anticipated negative impacts of climate change in Arizona – from heat waves, dust storms, and other severe weather – will be more disproportionate on these neighborhoods than on others.

The Sonoran Institute is currently developing training and technical assistance resources for communities across the Intermountain West that seek to address climate change impacts through local planning efforts. As part of this initiative, we are reaching out to underserved

and disproportionately impacted communities, particularly Latinos in Arizona, to ensure that the tools we develop will improve their ability to address climate-related issues while accounting for their communities' unique needs and circumstances.

To guide us in this effort, we surveyed over 20 local Latino civic leaders in Arizona to better understand how the Latino community views the threat of climate change, the actions communities are taking to address the impacts, and the potential role the Sonoran Institute can play in providing critical resources needed to build their capacity to cope with climate impacts. The questions ranged from how climate change may be impacting their communities to what kinds of information and resources are necessary to effectively address climate impacts. The survey findings were presented at an August 2014 convening of Latino leaders and environmental advocates working on climate resilience issues from across the state. The convening provided an overview of climate change impacts in Arizona, as well as a facilitated dialogue to solicit input on potential next steps to be taken to address the needs of the Latino community in Arizona.

The goal of the Sonoran Institute is to provide best practices, policies, and approaches that promote social equity, improve the quality of life, and protect the natural resources of the region for all residents, regardless of the degree to which they are impacted by a changing climate.

## Anticipated Impacts of Climate Change in Arizona

### Increased Temperatures

Arizonans are used to hot, dry weather. However, average temperatures in the desert Southwest are rising faster than in other regions of the United States; scientists predict that the Southwest will get even hotter and drier in years to come. Extreme heat waves, drought, high risk of wildfire in rural communities, and damaging flash floods are just some of the effects of rising temperatures.

According to the 2014 National Climate Assessment, the years 2001-2010 were the warmest on record, with temperatures almost 2°F higher than historic averages, including fewer cold air outbreaks and more heat waves.<sup>1</sup> By the end of this century, the average annual temperature in the Southwest is projected to rise approximately 4°F to 10°F above the average annual temperatures in the 1960s.<sup>2</sup> Moreover, summertime heat waves are expected to be longer and hotter than in the past. These hot and dry conditions have a tremendous impact on communities, right down to the health and well-being, and financial security of individual residents.

Escalation of heat wave severity considerably impacts public health with increased risk of heat-related illnesses, such as heat stroke and dehydration. Increased heat exposure can also magnify chronic cardiovascular and respiratory diseases. Higher temperatures result in increased ground level ozone concentration that worsens asthma and chronic obstructive pulmonary disease.<sup>3</sup> As the reading on the

thermometer goes up, it is natural for people to seek refuge in their air conditioned homes and businesses. But as their air conditioning systems work harder to combat the heat, families' energy bills rise along with the temperatures.

## Drought



Photo: JordiDelgado

Most Western states have experienced severe drought conditions over the past 10 years. Projections forecast that future droughts in the Southwest region will become more prolonged and severe. While conditions affecting the Colorado River, the water lifeline of many Southwestern cities, are complex, the decline in the snowpack of Western mountain states caused by lack of precipitation may result in critical water shortages.

## Dust Storms and Floods



Photo: Alan Stark

Prolonged drought conditions in the Southwest can result in extremely dry soil, particularly when previously cultivated farmland lies fallow. When mixed with high winds, dry soil becomes airborne, causing severe dust storms, also referred to as “haboobs.” Large dust storms reduce visibility on the roads, increasing the risk of automobile accidents, and aggravating respiratory illness by increasing exposure to particulates. In addition, dust storms can also carry airborne diseases, such as Valley Fever, which is caused by a soil-dwelling fungus. When inhaled into the lungs, Valley Fever may lead to debilitating fungal infections.<sup>4</sup>



Photo: You Touch Pix of EuToch Shutterstock.com

Climate change is also projected to increase flood risk, with higher frequency and severity of storms, as well as more rapid and earlier snowmelt in the spring, increasing overall runoff.<sup>5</sup> The drier soil makes Arizona susceptible to flash floods, as the heavy rainfall from severe storms on dry soil with poor absorption ability, can create flooding events that endanger people and property. Plant and tree die off, wildfire damage, and a loss of wetlands along rivers due to drought conditions may also reduce the flood-buffering zone and increase flood risk after a rainstorm.<sup>6</sup>

## Wildfire



Photo: ChameleonsEye Shutterstock.com

Wildfire is a natural process that can benefit forests and ecosystems. However, rising temperatures and reductions in spring snowpack and soil moisture contribute to larger and more frequent wildfires in the West. The frequency of wildfires in Arizona has increased dramatically. Since the 1970s, the average annual number of wildfires greater than 1,000 acres on U.S. Forest Service Land in Arizona has quadrupled.<sup>7</sup> During the first half of 2014, 1,200 wildfires had burned 173,000 acres of

land in Arizona. In addition to hotter and drier conditions, another driving factor of increased wildfire activity is the spread of invasive plants and noxious weeds, like buffelgrass, across the Sonoran Desert, because they provide more combustible fuel for wildfires.

Growing populations, particularly in rural, amenity communities, also push new development farther into the so called “wildland-urban interface,” or WUI. This is the zone where the built environment (human structures) is located close to or within forested lands or areas with highly flammable vegetation that pose significant wildfire risks to people and property.<sup>8</sup> Building homes and businesses in the WUI endangers residents, as wildfires continue to increase in frequency.

## Public Health

Extreme heat and weather can cause many health issues. Young children, older adults, people with medical conditions, those who work outdoors, and low-income families are at greater risk than others of experiencing heat-related illness, such as dehydration and heat stroke. In addition, people living without air conditioners are more susceptible to heat stroke than people with air conditioning in their homes. Arizona’s sustained, summer temperatures over 100°F put these vulnerable populations at greater risk of heat-related illness.

A hotter and drier climate, with its increased dust and particulates, can decrease air quality and lead to greater risk of respiratory illness. More than 147 million Americans, over 47 percent of the nation's population, live in areas with poor air quality, and Latinos in Arizona are much more likely to live in areas that experience frequent clean air violations.<sup>9, 10</sup> According to the Centers for Disease Control, Hispanic children are 3.2 times more likely to suffer from asthma than the general population.<sup>11</sup>



Photo: Arvind Balaraman

Frequent air quality violations are associated with an increase in asthma and other chronic lung conditions. Children are at a greater risk of asthma than adults, due to greater exposure to airborne pollutants, immature immune systems and organs, and narrower air passageways.<sup>12</sup>

### **Economic and Financial Impacts**

As mentioned previously, there are financial costs associated with rising temperatures. Summer temperatures over 100°F for extended

periods require air conditioners to run longer to maintain reasonable temperatures, thereby increasing electricity usage and energy bills. The urban heat island effect, which is a concentration of heat in urbanized, paved, and developed areas, magnifies the effects of temperature increases. This can lead to a much larger rise in energy costs for urban residents, particularly in poorer communities.



Photo: PanicAttack

Monsoon storms and other extreme weather events can also cause power outages, road closures, and home and property damage. A single extreme weather event, such as a dust storm, can cause hundreds of dollars' worth of personal property damage, and increase public costs required to maintain public safety and restore power.

Rising temperatures may also affect agriculture and food prices. Rising temperatures can affect yields and productivity of important Arizona crops, such as citrus and vegetables.



Photo: Monkey Business Images

## Survey Findings from In-depth Interviews of Latino Civic & Community Leaders in Arizona

### Project Methodology

In preparation for the survey of Latino civic and community leaders, the Sonoran Institute project team consulted with an ad hoc advisory team of Latino leaders in the Phoenix metro area. The advisory team provided counsel on the development of a survey instrument to guide the interviews of the civic and community leaders who participated in the study. The survey used for the in-depth interviews is included as Appendix I.

Through the survey, we sought to ascertain whether interviewees believed that climate changes were indeed happening, and to measure their general levels of concern about the impacts associated with those changes. The survey also attempted to identify effective messages around climate change, such as focusing on health effects and financial impacts to families. Also, we asked whether

existing Latino groups, nonprofit or otherwise, were already engaged with the community on addressing climate impacts, and what activities those programs entail.

The advisory team recommended an extensive list of potential interviewees from the Latino community that included a mix of elected officials, nonprofit and business leaders, and other high profile community leaders. From this initial list of candidates, we selected to interview over 20 people, representing multiple communities in Arizona, and a mix of elected officials and community leaders.

We contacted each potential interviewee to request an in-person interview. When face-to-face meetings were not possible, the interview was conducted by phone or e-mail.



Photo: Ideal Magazine

## Survey Findings

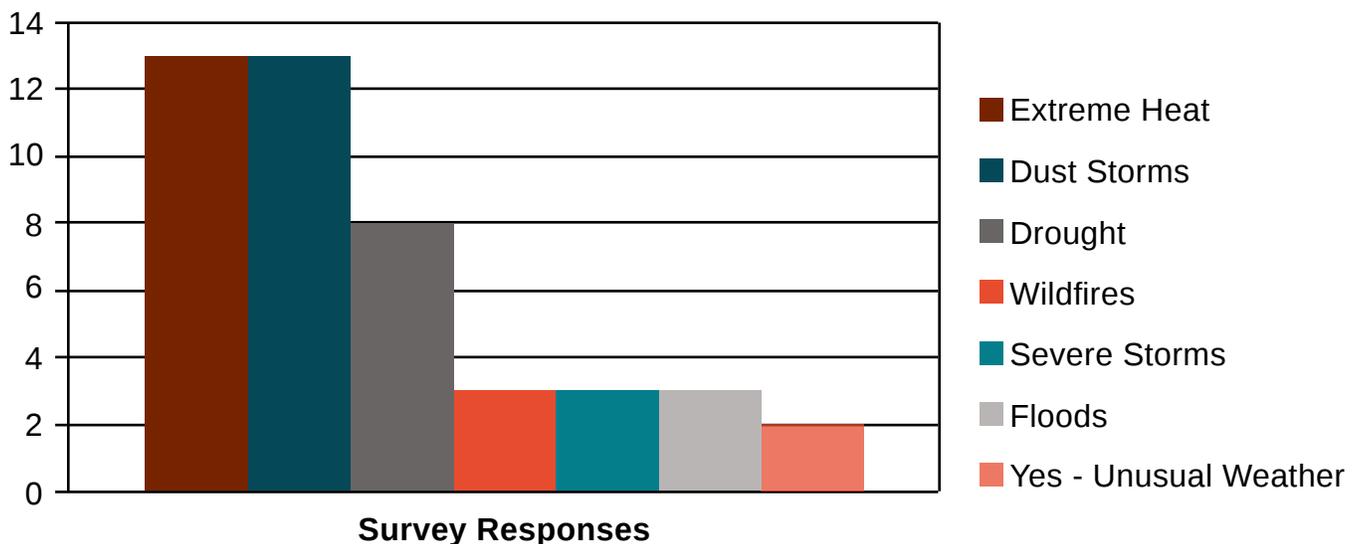
In reviewing the survey responses, the Sonoran Institute found that respondents were unanimous in their belief that climate change is happening and that there was significant consensus on a number of other key points:

- Over 75% of respondents said the weather in their community is getting worse, 20% said “about the same but trending worse,” and one respondent said the weather is becoming more “unpredictable.”
- Respondents have experienced a wide range of unusual weather events over the past year, including extreme heat, dust storms, and drought cited most frequently (see Figure 1).
- 95% of respondents believe that there is a link between extreme weather events and climate change.

This result reinforces the National Resources Defense Council finding that, “Nationally, nine in 10 Latinos want the government to take action against the dangers of global warming and climate change.”<sup>13</sup> This level of support for the concept of climate change is well above that of the general population. A significant majority of respondents also agreed that health and financial impacts of climate change are already being felt by Latino communities (Figure 2), and that these impacts will continue to grow and affect future generations (Figure 3).

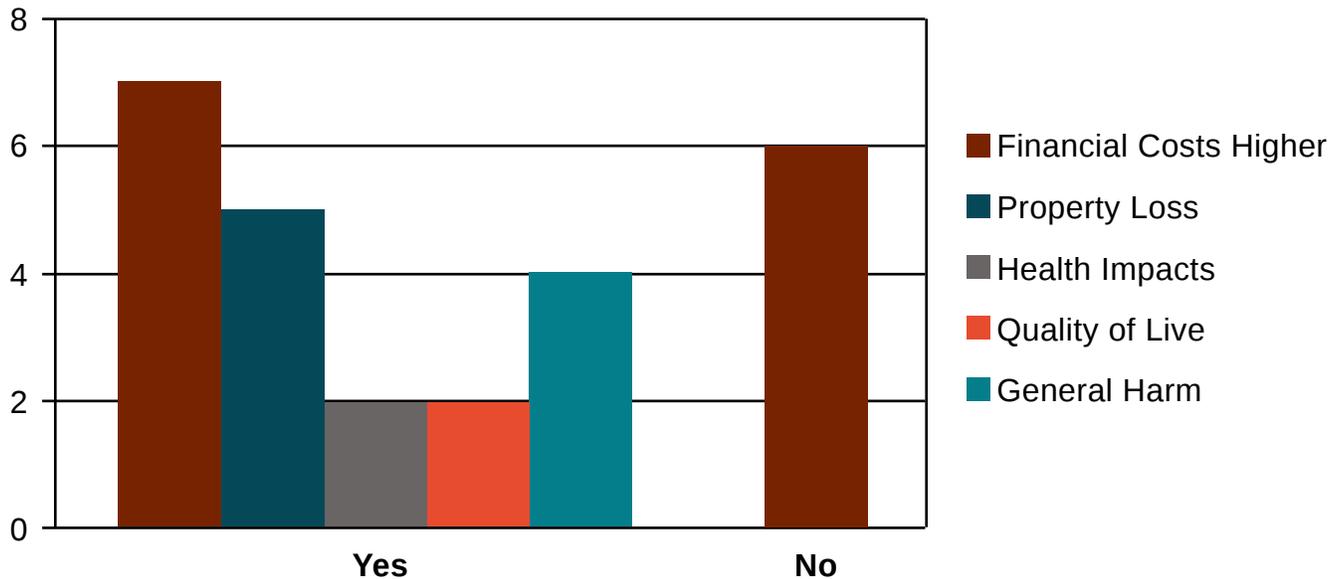
**Figure 1**

**Survey Question #2 - In the past year, has your community experienced any unusual weather events?**



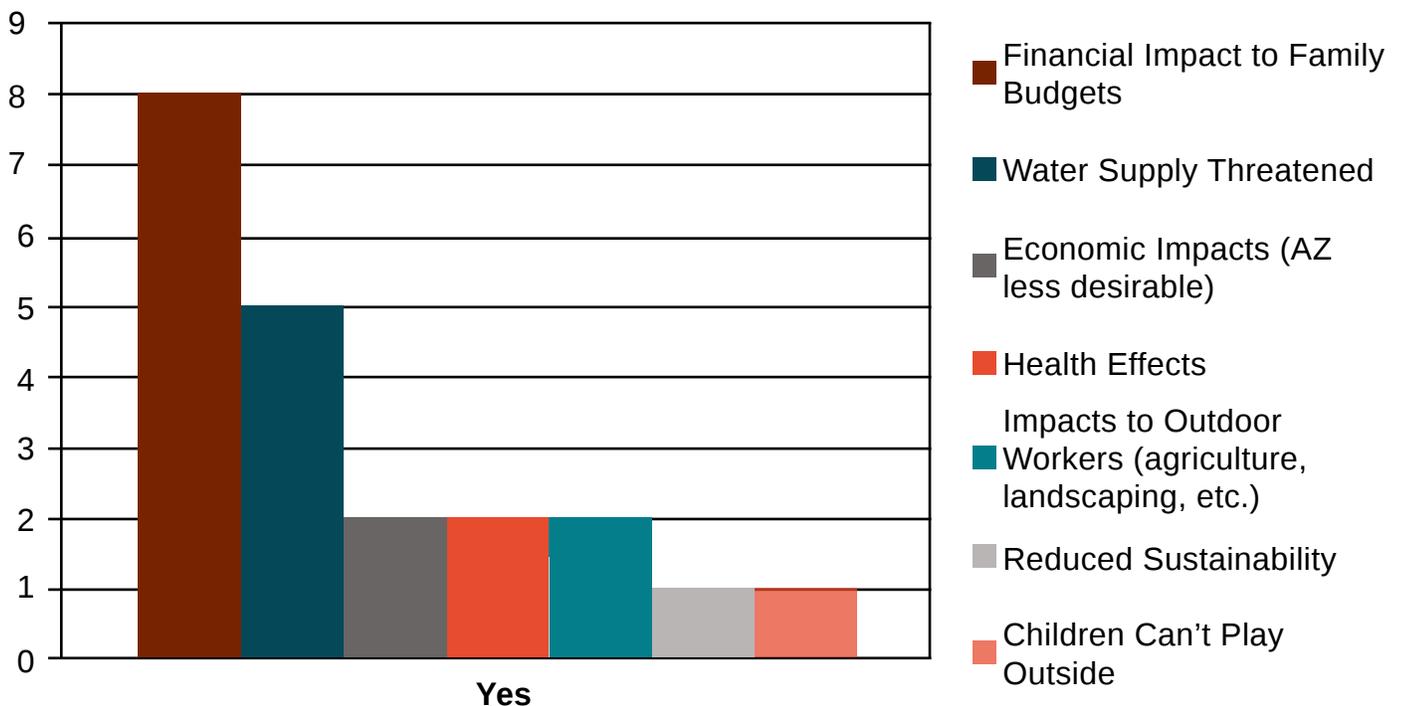
**Figure 2**

Survey Question #3 - Have you, or anyone in your community, experienced harm (financial or physical) from these weather events?



**Figure 3**

Survey Question #7 - Do you think climate change will harm future generations? How?



One of the most compelling findings from the survey is that climate change is not a priority issue of concern for Latinos in Arizona. Latino organizations are primarily focused on civil rights issues, voter engagement and empowerment, and economic development activities for their communities. A strong majority, however, support expanded efforts to help low-income Latinos improve their preparedness and adaptive capacity in response to a changing climate, with community education programs, energy and water conservation initiatives, and improved city planning cited most frequently (Figure 4). Respondents were split almost 50-50 on whether other Latino groups are working, at least to some extent, on the topic of climate impacts. Some indicated that a number of groups and

civic leaders are engaged, while, others feel that there is a significant gap in addressing climate resilience in Latino neighborhoods.

### Common Themes from Survey Responses

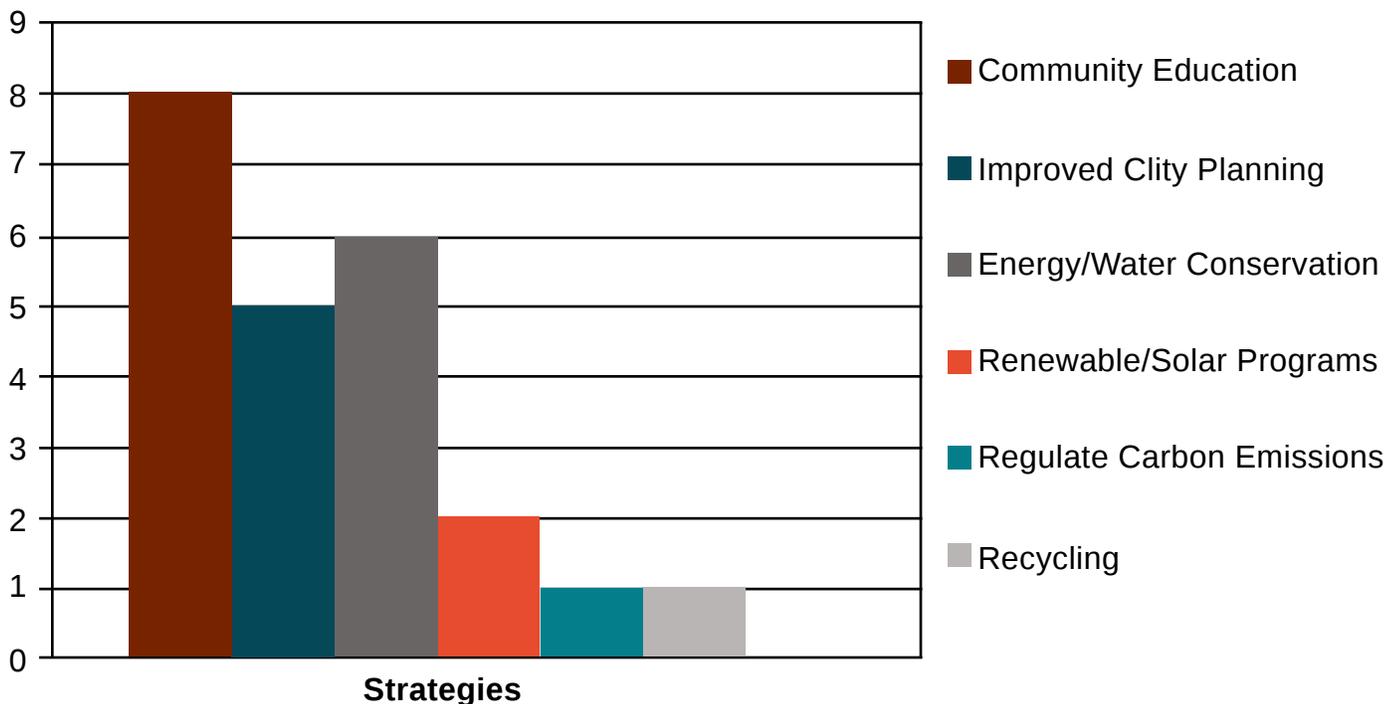
In analyzing survey responses, we identified several common themes and concepts. Below is a summary.

#### *Latinos as High Value Audience*

One of the most prominent themes that emerged from our research was that Latinos are a high-value audience, in that they are highly supportive of actions to maintain a healthy and sustainable environment, and are supportive of efforts to increase renewable energy, and maintain clean air and water. As stated earlier,

**Figure 4**

**Survey Question #9 - Are there actions you would like to see to address climate change in your community?**



there is little political polarization within the Latino community around climate change as an issue; nearly all survey respondents believed that climate change was happening, that it was causing negative impacts on the Latino community. There was also significant and broad support from a range of sectors for action to address climate impacts.

As much as Latinos care about a healthy environment, they have more pressing concerns, such as immigration and financial issues. Thus, the challenge in engaging the Latino community is to make climate change a more immediate and prominent issue. Respondents suggested that a way to prioritize climate change in the Latino community would be to highlight the connection between climate change and the impact those changes will have on family budgets. These financial impacts include increasing energy and utility bills that result from higher temperatures and water shortages. Some households, especially lower-income households, could experience devastating effects on their ability to keep up with rising costs of cooling their homes. Rising temperatures are likely to have a direct effect on jobs and the economy, and several respondents discussed the impacts upon Latinos who have jobs in construction, or other outdoor and manual labor service industries. Focusing on the practical link between supporting climate change resilience policies and reducing financial harm to low-income Latinos may be an effective way to engage the community on climate issues.

## Communication Tools

### *Spanish Language Media*

The respondents highlighted the importance of messaging in both Spanish and English media. While there are many different segments in the greater Latino community, a common theme in our surveys was the importance of Spanish media in how the Latino community receives information. Radio continues to be an important channel for receiving information. Specifically, respondents highlighted the local Spanish radio station, Radio Campesina, as a trusted source of information.

Television was identified as another important mode of communication. Telemundo and Univision are trusted sources of information, and would be useful in disseminating public service announcements or messages created to engage the Latino community.

With radio and television, participants indicated that engaging in both Spanish and English media would ensure a broader reach and should be a priority. Many older generations in the Latino community speak only Spanish, and they rely on Spanish language media for information.

### *Social Media*

Latinos tend to be highly active on social media as well. Using social media, such as Twitter and Facebook, was identified as an important component in outreach and messaging to the Latino community. These methods would likely be geared toward the younger Latino community.

Creating a targeted social media campaign will reach a larger segment of the Latino community, engage youth, and might make the topic of climate change easier to understand. It also conveys the information in a more immediate, easily digestible format.

### ***Engaging Trusted Community Leaders and Holding Community Meetings***

Many of our respondents highlighted the need for engaging trusted community leaders to communicate information about climate change in the Latino community. It was often stressed that because the Latino community has not been active or particularly engaged in issues facing the environment, the need for community leaders to be a part of the outreach process was important.



Photo: Sonoran Institute

Messaging directly from a trusted community or neighborhood leader would increase attention to the matter, and foster trust, participation, and connection to the issue. Survey participants identified these “leaders” as local elected officials, such as city councilmen and women,

as well as community sports coaches or grass top leaders or activists, who have high standing in the community, but are not necessarily formal or elected leaders.

Working with local faith-based leaders was also discussed frequently. As a trusted source with built-in modes of disseminating information, faith-based organizations within the Latino community have been effective at mobilizing and engaging their constituents.

Respondents stressed that communicating and engaging at a local level would be key to creating an effective campaign to realize change within the Latino community on climate issues. With this in mind, respondents suggested hosting local or neighborhood gatherings as a way to gain involvement.

### ***Youth Engagement***

Respondents identified Latino youth as both an important audience and messenger for climate change information. The family-oriented nature of the Latino community means that involving children is good way to reach the whole family. Additionally, since youth in the Latino community tend to speak both Spanish and English, they are able to take information targeted to English-speaking youth home to share with their Spanish-speaking parents and extended family. Latinos also favor participating in gatherings when there are opportunities for their children to take part. Local community gatherings with events for young people, or an event featuring the youth of the community, might yield greater Latino participation and engagement.

## **A Dialogue with Latino Community Leaders & Environmental Organizations on Actions to Address Climate Impacts on Latinos**

After the initial survey responses had been gathered and analyzed, the Sonoran Institute partnered with the Arizona Community Foundation to convene a meeting of leaders from the Latino community, NGO representatives, academics, and community activists to discuss the survey findings. During this convening, held at the Arizona Community Foundation offices on August 18, 2014, participants also discussed critical next steps to continue the important work of increasing preparedness and decreasing vulnerability of the Latino community to climate change impacts.

The convening included presentations on the science of climate change impacts and the survey results. A facilitated dialogue following the presentations discussed the impacts of climate change, the needs and vulnerabilities of certain sectors of the Latino community, and potential next steps to work with Latino leaders on increasing preparedness to climate impacts for those communities. Similar to our survey responses, the key themes of the discussion revolved around framing the issue of climate change and various engagement strategies for connecting with Latino communities and neighborhoods. The following summarizes several key points raised during the facilitated discussion.

## **Framing the Issue**

Many of the participants noted that climate change is not high on the list of concerns for many Latinos, because other issues such as immigration, fair housing, economic stability, and being able to pay the bills each month have a higher priority. For this reason, participants suggested that it is essential to frame the climate change issue in a way that connects on a personal level with individuals or communities.

Convening participants stated that simply using terms like “resilience” or “climate adaptation” will not successfully engage the Latino community. Instead, participants said, it would be much more effective to frame climate change as an environmental justice issue, since Latino communities are more likely to be impacted by climate events. In doing so, it would also be important to frame the issue in such a way as to give Latinos a sense of control and empowerment. Make it clear that by getting engaged, and speaking up about how climate change is affecting the health and financial well-being of people in their communities, they can effect change. Otherwise, members of the Latino community may feel little sense of urgency or ability to take action or engage on issues of climate impacts.

There were comments about connecting climate impacts with the immediate concerns of Latino families and communities, such as health, safety, and finances. For example, it is important to consider questions such as, “Can we afford our monthly utility bill as the prices rise?” and “Is our air clean or is it making our asthma worse?” Participants stressed that it is critical to make the connection to the immediate concerns of Latino communities instead of using

technical science and data to communicate the issue. Another participant proposed that implementation of solutions to climate impact could begin through emergency management/response planning, which is best done at the community level. These solutions might include water stations and cooling shelters to address urban heat island impacts, or assistance to residents with creating defensible space around their property in areas of high wildfire risk.

## Methods of Engagement

Meeting participants suggested that a lack of engagement around climate change in the past could be attributed to poor marketing. In suggesting how best to engage Latino communities on the issue, many of the meeting participants' suggestions echoed those of the survey respondents. In particular, participants noted the importance of engaging youth. While appropriate framing of the issue is one way to engage Latinos, there was mention of the need to engage youth on the issue of climate change.

One proposed strategy was to develop an outreach plan for public schools in predominantly Latino neighborhoods. Participants stated that engagement with Latino youth in the public schools would enable students to carry the message and action steps back to their extended families and prioritize climate impacts as an important issue for helping future generations.

In addition, participants stressed that climate change engagement should focus on providing solutions and not simply on communicating that there is a problem. Communities need to know that there are actions they can take to improve their preparedness and address the

problem. One participant stated that there must be concrete actions and "real wins" for Latino neighborhoods to help open minds and enable grassroots work on issues like climate change.

In addition to focusing on youth, some participants suggested that making the connection between climate change and its impacts on outdoor activities and recreation, like hunting, fishing, and gardening, may be effective.

## Coordinating with Other Established Organizations

Participants mentioned that there were several other organizations already working with Latinos, and that it might be a good strategy to partner with them to coordinate messaging. Some organizations suggested were Green Latinos and the National Latino Coalition on Climate Change (NLCC). Potential partnership opportunities were also discussed with the representatives from the Center for Neighborhood Leadership.

## Recommendations for Next Steps

The Sonoran Institute plans to continue important follow-up work that will build upon this survey project to further assess perspectives and concerns from the Latino community on climate issues. Because the survey results indicate that climate change, generally, is not a priority throughout most of the Latino community, an initial education and engagement strategy will be an important part of advancing climate preparedness in Latino communities. We will identify key messages and educational needs for reaching out to Latino communities and building their capacity to cope with climate impacts.

The Sonoran Institute will also work to identify community leaders who can assist with message development and messenger recruitment; promote Sonoran Institute's education and engagement activities; and advise community leaders in developing a climate resilience plan, specifically how to integrate the plan with ongoing public-sector-led efforts. By engaging elected local officials and community leaders, the Sonoran Institute expects to secure stronger support for the climate resilience plan and ensure greater success in its implementation.

As a result of the conversations held during the Latino leader surveys and the August 18th convening, our project team identified five immediate next steps. These include:

- Conduct a more extensive grassroots survey of Latino community members who are not in leadership roles. This may help clarify how much they understand about climate change, how they perceive the issue, and what their needs are more generally.

- Engage in “grasstops” leadership development on climate issues, specifically providing supportive information around communications, marketing, and public relations to increase or improve understanding of climate impacts and actions to address those impacts.

- Develop a network of leaders interested in working with the Latino community to increase preparedness and adaptive capacity to climate impacts.

- Identify specific, predominantly Latino communities or neighborhoods to pilot projects on climate adaptation, and continue to pursue funding opportunities to support such pilot applications. A “readiness” checklist on capacity, vulnerability, and potential local leadership support for such communities would help identify the best prospects for such pilot projects. Those pilot projects would then inform broader efforts to disseminate tools and strategies to increase preparedness to climate impacts.

- Look for partnership opportunities with other groups serving a similar, social support niche for Latino communities, such as Catholic Social Services, Center for Neighborhood Leadership, Chicanos por la Causa, etc.

In spite of our brief and limited experience reaching out to Latino leaders through this project, the Sonoran Institute has been struck by the enthusiastic response and willingness to engage demonstrated by Latino leadership and NGO partners. In the conversations held through the survey and the convening, most participants recognized the needs and vulnerabilities of low-income Latinos to climate

impacts. They also expressed strong interest in continuing to work with the Sonoran Institute to develop the tools, capacity, and local leadership needed to elevate the climate change issue among Latino constituencies and to support actions by communities to better prepare themselves for the inevitable impacts.

By securing Latino organizational partners, and establishing a network of Latino leaders interested in promoting awareness and action on climate change, the Sonoran Institute would be well-positioned to assist Latino communities in addressing climate impacts in a meaningful way.

## Endnotes

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# Appendices

## Appendix I

### Latino Community Leader Interviews on Climate Change Survey Instrument

<b>Background Questions</b>	<b>Questions:</b>
	Name
	Title
	Organization
	Phone
	Email
	Location/Region in Arizona
	How are you connected to the Latino Community in Arizona?
<b>Extreme Weather</b>	<b>Questions:</b>
	In your opinion, over the past several years, do you think that the weather in your community has been better, about the same, or worse?
	In the past year, have you or your community experienced unusual weather events?
	Have you or your community experienced extreme heat wave, wildfire, drought, flood, extreme winds, or dust storms?
	Was there harm to you or your community by these unusual weather events?
	Have you or your community experienced property loss or harm, financial harm or physical or mental harm from unusual weather events?

<b>Global Warming/Climate Change</b>	<b>Questions:</b>
	Do you believe that global warming or climate change is occurring?
	Is your community/constituency concerned about global warming or climate change? Explain.
	Do you believe that global warming or climate change is causing extreme weather in your community?
<b>Climate Action</b>	Do you think global warming or climate change will harm future generations in your community? How so?
	<b>Questions:</b>
<b>Messaging and Communication</b>	Is there any action that is currently taking place to address climate change in your community?
	Are there any specific actions you would like to see in your community to address climate change?
	<b>Questions:</b>
	Is it appropriate or effective to use the term climate change or global warming in your community or should the issue be framed by unusual weather events without using the term climate change or global warming?
	Is there another way to frame the issue?
	What is the best or most effective medium/method to communicate about climate change in your community?
	How do you normally get information on neighborhood issues?
How would you communicate the issue of climate change to your community?	
Are there Latino leaders already working on these issues in your neighborhood/community? Who are they and what are they doing? If not – should there be Latino leaders working on climate change?	

**Health and Air Quality**

**Background:** Air pollution and greenhouse gas emissions from the burning of fossil fuels pose a significant risk to human health. Latinos in particular find themselves among some of the most impacted communities. Latinos often live in geographic areas of concentrated vehicle traffic, industry and power plant activity. Roughly one out of every two Latinos live in areas that frequently violate clean air rules. According to the Center for Disease Control (CDC), 4.7 million Latinos have been diagnosed with asthma and Hispanic children are 60% more likely to have asthma, as compared to non-Hispanics.

**Questions:**

Do these facts align with your perceptions?

Do these facts accurately describe health issues in your community?

## Appendix II

See Climate Change Fact Sheet (English and Spanish)

## Appendix III

### Participant List from August 18, 2014 presentation, The Impact of Climate Change: Preparedness in the Latino Community

<b>Name</b>	<b>Organization</b>
Jennifer Allen	League of Conservation Voters
Amber Asburry	Arizona Department of Health Services
Sandy Bahr	Sierra Club
Tony Banegas	Arizona Community Foundation
Robert Berger	Nina Mason Pulliam Charitable Trust
Adrew Bernier	KJZZ News
Teresa Brice	Phoenix LISC
Angela Brooks	NxT Horizon Group
Dr. George B. Brooks, Jr.	NxT Horizon Group
Jim Buizer	Institute of the Environment, University of Arizona
Susan Culp	Sonoran Institute
Mario E. Diaz	Mario E Diaz and Associates
Ian Dowdy, AICP	Sonoran Institute
Violeta Duncan	Democracy Collaborative
Javier Espinoza	
Bret Fanshaw	Environment Arizona
Petra Fimbres	Arizona Pain, Latin American Division
Councilwoman Kate Gallego	City of Phoenix, District 8
Joseph Garcia	Morrison Institute Latino Public Policy Center/ ASU
Virginia (Vicki) Gonzalez	Southwest Network
Pamela Grieco	Arizona Bank and Trust
Sharon Harlan	Global Institute of Sustainability, ASU
David Hines	Arizona Interscholastic Association
Bill Hudson	
Kimberly Kerr	Arizona Community Foundation
Emily Knuerr	Arizona Grantmakers Forum
Joseph Larios	Center for Neighborhood Leadership
Ruth Lim	
Pedro Lopez	League of Conservation Voters
Matthew Marquez	Mario E Diaz and Associates
Monica Michelle Medina	Instituto del Desierto Sonorense
Oscar Medina	Educator and Community Organizer

Joe Murphy	
Hannah Oliver	Sonoran Institute
Nicole Gonzalez Paterson	Patterson PUblic Affairs, LLC
Marilyn Perez	Unidos Inc.
Peter Pollock	Lincoln Institute of Land Policy
Sarah Porter	Audubon Arizona
Al Preciado	Precision Real Estate Inc.
Raul Puente	Desert Botanical Garden
DD Ramirez	
Gretchen Reinhardt	Citizens Climate Lobby
Roberto Reveles	Somos America
Viviana Reyes	Girls Scouts, Arizona Cactus-Pine Council
Doris Roman	
John Shepard	Sonoran Institute
Dr. Jeff Smith	Balsz School District #31
Anna Spiegel	Latin Focus Solutions
Mia Stier	Sonoran Institute
Marissa Theisen	Arizona Grantmakers Forum
Suzanne Tveit	Citizens Climate Lobby
Laurie Vesco	Arizona Community Foundation
Victor Vidales	Re/Max Realty
Summer Waters	Sonoran Institute
Keva Womble	Arizona Community Foundation

## About Sonoran Institute

The Sonoran Institute's mission is to inspire and enable community decisions and public policies that respect the land and people of western North America. Facing rapid change, communities in the West value their natural and cultural resources, which support resilient environmental and economic systems.

Founded in 1990, the Sonoran Institute helps communities conserve and restore those resources and manage growth and change through collaboration, civil dialogue, sound information, practical solutions and big-picture thinking.

Our passion is to help shape the future of the West with:

- Healthy Landscapes that support native plants and wildlife, diverse habitat, open spaces, clean energy and water, and fresh air.
- Livable communities where people embrace conservation to protect quality of life today and in the future.
- Vibrant economies that support prosperous communities, diverse opportunities for residents, productive working landscapes and stewardship of the natural world.

The Sonoran Institute is a nonprofit organization with offices in Tucson and Phoenix, Arizona; Bozeman, Montana; Glenwood Springs, Colorado and Mexicali, Baja California, Mexico. For more information, visit [www.sonoraninstitute.org](http://www.sonoraninstitute.org).

Sonoran Institute, Shaping the Future of the West

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