

PART 1: Advancing Procedural Equity in Climate Adaptation

As the [introduction to this series](#) explains, climate change is a global phenomenon, touching all life on Earth. Every place will experience its effects—including its impacts on human health—but not in the same way or to the same degree, as worldwide trends manifest through local weather patterns and environmental changes. Where a person lives will, in large part, drive her experience of climate change. Even within a single place, individuals and communities may experience climate change in starkly different ways. Some people are more vulnerable to the health impacts than others—that is, they are more susceptible to and less able to cope with its impacts. Therefore, it is essential that in the United States, officials at every level of government and other stakeholders act with urgency and persistence to adapt (and mitigate its intensity, although mitigation is not the focus of this series)—and to do so equitably.

The selection of cases in this series was informed in part by the Georgetown Climate Center's [Equitable Adaptation Legal & Policy Toolkit](#), which was released in 2020 and contains a more expansive scan of exemplars. Trust for America's Health (TFAH) selected cases based on several factors, including replicability and diversity of geography, objective, and intervention type.

The cases examined in **Part 1** differ in numerous ways, but they share a central and critical element: each adaptation effort is explicitly intended and designed to advance procedural equity—that is, the process undertaken to conceptualize, design, and administer adaptive policies and programs. Procedural equity is achieved when a wide range of stakeholders, particularly those who stand to be most harmed by climate-related hazards, have a genuine voice and decision-making role at each stage, rather than perfunctory inclusion after options have been narrowed or decisions have been effectively made. Equitable

processes are informed throughout by the insights, priorities, and needs of people who have firsthand lived experience navigating relevant threats, and support those ideas with technical expertise.

Part 2 of the series covers adaptation efforts that reflect distributional equity—the extent to which adaptive actions result in a fair allocation of benefits and burdens across a host of interrelated sectors. In some cases, procedural equity can be a prerequisite of or a contributor to distributional equity.

This series follows a December 2020 report, [Climate Change & Health: Assessing State Preparedness](#), authored by TFAH and the Johns Hopkins Bloomberg School of Public Health, that examined each state's readiness to protect residents from the health impacts of climate change in light of the nature and level of risks that they face.

Case Study 1: Capacity Building in California

Name of program: SB 1072 Regional Climate Collaborative Program

Location: California

Objective: Building the capacity of disadvantaged communities to access competitive grants that support climate-related adaptation and mitigation.

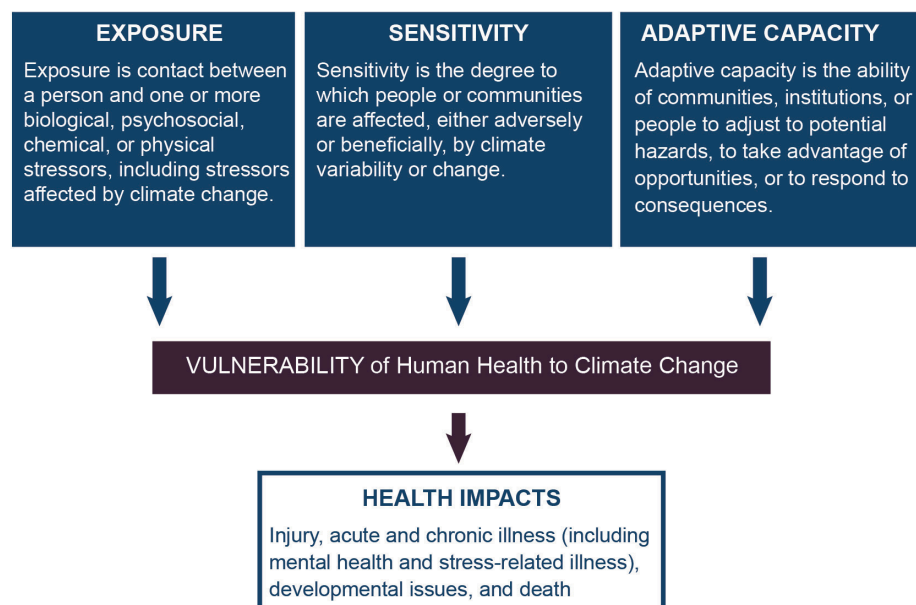
Background

Extreme heat, powerful hurricanes, vector-borne diseases—the dangers climate change will pose over the next few decades are familiar ones. Rather than manifesting in new phenomena, climate change can be understood as a threat multiplier. And as with so many preexisting risks, across a range of interrelated dimensions of well-being—health, economic, environmental—those that climate change poses are often highest in poor communities or communities that have been marginalized.¹ This occurs because these areas frequently have higher **exposure**, more **sensitivity** to climate impacts, and/or lack **adaptive**

capacity. (See Figure 1.) Vulnerability incorporates place-based exposure to climate-related impacts (e.g., proximity to a coastline), as well as demographic characteristics (e.g., age, socioeconomic status) that shape a person's sensitivity to exposures and their ability to cope.

One's exposure pertains to their level of contact with threats. Numerous factors characterize a person's exposure, including their occupation; time spent in high-risk locations (e.g., areas that experience extreme heat; flood-prone places); socioeconomic status; resilience of their local transportation, utility,

FIGURE 1. Exposure, Sensitivity, and Adaptive Capacity Determine Vulnerability



Source: U.S. Global Change Research Program¹³

medical, and communication infrastructure; and their mobility, cognitive functioning, and behavioral health.² For example, people experiencing homelessness and people who work outdoors or as first responders face greater exposure. Economic insecurity can cause people to have trouble paying for utilities, leaving them without air conditioning. And prolonged heat waves or an extremely hot day may overwhelm power grids and lead to outages or rolling blackouts, which have a disproportionate impact on people with existing health conditions who require daily medication or treatment (e.g., dialysis) or who have limited mobility.

Some aspects of vulnerability are innate (e.g., health status, age, life stage). Intrinsic biological differences shape sensitivity to exposures, making some people more likely to get sick or experience a severe course of disease. Many climate-related health effects, such as extreme heat, have a more pronounced effect on young children and older adults, who are also likely to experience reduced mobility and to require caregiving and other supports.^{3,4,5} Similarly, smoke from wildfires can be particularly harmful for people with asthma, chronic obstructive pulmonary disease, or heart disease.⁶

Finally, adaptive capacity is an intangible measure of the ability of communities and their residents to reduce their exposure and/or sensitivity and to cope with growing threats. For example, the capacity of people to weatherize their homes and supply air conditioning, or for their locality to make safe, accessible cooling centers available. The capacity of a county or state to upgrade critical infrastructure, and to access and utilize federal funding and private financing to do so. And the capacity of an area to make hospitals, surgical facilities, and ambulatory services readily accessible to all residents.⁷

Importantly, vulnerability, which encompasses exposure, sensitivity, and adaptive capacity,⁸ is not an intrinsic or static characteristic; it varies over time and place, as well as across life stages.⁹ Moreover, in many cases, it is not innate, but rather the result of past and ongoing policies and practices rooted in structural and systemic inequities or discrimination.¹⁰ So-called natural disasters are, in fact, rarely natural; rather, “it is the social, political, and economic context that makes an environmental hazard become a disaster.”¹¹ Even “geography is never an accident.”¹² Therefore, vulnerability can be reduced through strategic planning and preparation, as well as through equitable policymaking and investment.

Capacity Limitations Pose a Barrier

A cruel irony of climate-related vulnerability is that the same extrinsic factors that increase exposure and sensitivity also present an obstacle to increasing adaptive capacity. Particularly disturbing is that, even after recognizing climate-related threats and mobilizing to act, frontline communities often struggle to access available funding necessary to implement changes. This is especially true for under-resourced localities seeking to access competitive federal or state grants—a challenge that is not unique to climate-related program implementation. For the purposes of stewardship, grantmaking agencies often require applicants to submit complex applications that require significant time, technical expertise, and experience, attributes that agencies in affluent areas often supplement by contracting with private consultants. Further, in seeking to fund projects tied to extensive planning, community engagement, and public oversight that together can indicate a greater likelihood of successful implementation, grantmaking entities can find themselves disproportionately funding advantaged communities that have the resource to meet these requirements. The consequence is clear: the people who most need government aid to systematically protect them from hazardous climate impacts often cannot even access it.

One recent example is the application process for the federal Building Resilient Infrastructure and Communities (BRIC) program, which the Federal Emergency Management Agency (FEMA) administers to support state, local, tribal, and territorial efforts to mitigate disaster-related risks (e.g., flood control, utility and infrastructure protection, retrofitting homes and other buildings). The program was created in the wake of a spate of disasters in 2017—Hurricanes Harvey, Irma, and Maria; the Thomas Fire in California—to begin shifting the agency’s focus upstream toward proactive preparedness.^{14,15} Importantly, the program takes an inclusive approach by providing an enhanced match rate (90 percent of project costs, compared with 75 percent for most grantees) to “small, impoverished” communities (those with 3,000 or fewer residents and a median income up to 80 percent of the country’s).¹⁶ Also the Biden administration recently pledged to target a portion of the program’s resources to “disadvantaged communities,” with President Biden vowing to help those who are “too often overlooked.”^{17,18}

Unfortunately, despite these laudable intentions and program design elements, FEMA has struggled to reach all the places it wishes to. Places meeting the agency’s

definition of small and impoverished accounted for just under 10 percent of the applications submitted by states and localities in the program's first round of grantmaking, seeking only 3 percent of the \$3.6 billion that BRIC applicants sought.^{19,20} Mississippi, the nation's poorest state,^{21,22} was the only one with no applications,²³ despite chronically experiencing major flooding.²⁴

At the state level, California has faced the same predicament across several efforts. For example, the state's energy commission—created following 1970s-era energy crises to set energy efficiency standards for equipment and buildings and comprising commissioners who represent five perspectives: (1) law, (2) environment, (3) economics, (4) science/engineering, and (5) the public at large—recently investigated the primary barriers preventing customers with low-incomes from accessing investments related to energy efficiency, weatherization, and renewable energy. In doing so, the commission acknowledged that the benefits of the state's pursuit of the development and deployment of energy efficiency and renewable technologies had been uneven, saying, “[L]ow-income customers often are left behind as California races toward a 21st century energy paradigm.”²⁵

In its assessment of barriers, following a literature review as well as community meetings and workshops, the commission identified insufficient education and outreach about available programs as a primary one. In response, it recommended that the state, in partnership with localities, establish regional one-stop shops to provide technical assistance (TA), targeted outreach, and funding services—in multiple languages—to assist residents with upgrading the energy and water efficiency of their buildings. And it called on the state to provide funding for greater collaboration with “trusted and qualified” community-based organizations who could help make clean energy programs more “community-centric” by exchanging information with residents and small businesses.²⁶

The value of providing targeted TA as a tool for promoting equity was supported by researchers at the University of California, Davis, who evaluated an effort to cultivate more equitable use of a statewide community development initiative.²⁷ The Affordable Housing and Sustainable Communities program provides grants and loans to support affordable housing near jobs, transit, and other needs.²⁸ In its initial round of grantmaking in 2015, about 70 percent of the awards went to applicants in the Bay Area and Southern California that generally already enjoyed high-use transit

systems and walkable neighborhoods, thus undermining the program's aim of reducing greenhouse gas emissions and promoting sustainable growth in a diverse set of communities across the state. Administrators feared that a major reason for this result was that these areas benefited from having the technical capacity to prepare a strong competitive grant application.

To address this, the California Strategic Growth Council (SGC) launched a pilot effort to provide TA to certain applicants in the second round. “Disadvantaged communities” that had submitted unsuccessful applications in the first round were eligible to receive subsidized professional support and analysis from nongovernmental partners when preparing their subsequent application. The results were telling: just one of the 25 awards granted in the second round went to an applicant who had not received comprehensive TA, and disadvantaged communities who applied without receiving TA faced challenges even getting to the final application stage.

Other agencies in California have also embraced the importance of supporting TA in key communities and working with them to build their capacity. The California Air Resources Board, which, among other regulatory functions, oversees the state's cap-and-trade program—an effort to encourage the use of renewable energy sources by capping and steadily lowering the amount of greenhouse gas emissions that companies in the state may emit—and makes recommendations for how the state should invest the initiative's proceeds, said in a recent plan, “Technical assistance and capacity building help priority populations overcome challenges with accessing funds and become active participants in the transition to a low-carbon economy.”²⁹ Moreover, the board recognized that, in addition to helping communities access competitive grants, TA and capacity-building efforts make it more likely that funded projects include “desirable, community-derived benefits.”³⁰

Systematically Building Adaptive Capacity in California

As recognition spread in California over the past decade of the obstacle to equitable adaptation posed by capacity limitations at the community level—and the corresponding imperative of providing targeted support to residents, in addition to making competitive grants available for application—the state took a major step in 2018 toward leveling the playing field by enacting a law to mandate

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a more intentional approach to technical assistance and building capacity. Senate Bill 1072 (SB 1072) requires the SGC, a cabinet-level committee tasked with coordinating cross-agency activities pertaining to sustainable and healthful economic development,³¹ to develop guidelines for delivering TA and authorizes it to administer a regional climate collaborative program, supported by grants, to assist “under-resourced” communities with accessing public and other grant moneys for climate change mitigation and adaptation projects.³²

Explaining the conditions the law is intended to address, its authors wrote: “Local municipalities, nonprofits, and other eligible entities in under-resourced communities often lack the resources, staff capacity, implementation experience, and technical expertise to apply for and secure competitive statewide targeted grant funding,” defining “under-resourced communities” as those with concentrations of people with low income (i.e., 80 percent or less of the state’s median income); high levels of unemployment, rent burden, or climate sensitivity; or low levels of homeownership or educational attainment.^{33,34} Moreover, the legislature asserted that “state agencies and departments often lack the

budget, staff, or guidance to provide the technical assistance necessary to support funding applications from under-resourced communities.”³⁵

Given these apparent agency and departmental limitations, the legislature instructed the SGC to develop a program for selecting and awarding grants to regional “collaboratives” (i.e., coordinated bodies of regional stakeholders) to help build under-resourced communities’ capacity, which it defined as the “local coordination, leadership, knowledge, skills, expertise, and access to resources”³⁶ necessary to successfully compete for grants and implement projects. (Importantly, the SGC’s ability to do this depended in part on future appropriations.) Collaborative grantees were, in turn, required to conduct several activities, as necessary, including:

- Building awareness of competitive grant programs.
- Convening stakeholders to discuss relevant community needs.
- Developing plans demonstrating local needs and identifying “multiple-benefit” projects.
- Supporting partnerships between stakeholders and potential public and private funders.

- Providing policy, program, and technical advice to align projects with potential funding sources, including by facilitating connections with outside experts and other state agency TA programs.
- Training stakeholders in grant application development, project management, implementation, and monitoring.
- Assisting in the development of job training and anti-displacement programs and policies.

At the time of its enactment in September 2018, SB 1072's lead sponsor, Senator Connie M. Leyva, whose district sits about 15 miles east of Los Angeles and is mostly made up of Hispanic and Black constituents,³⁷ said that it would help the state "achieve its climate goals in every community" and "move the state forward on the road toward environmental equity and justice."³⁸ According to Emi Wang—the associate director of capacity building at the Greenlining Institute, an environmental advocacy group that works to promote racial, economic, and environmental justice and a lead community supporter of the bill—SB 1072 was supported by about 100 organizations and had no organized opposition because "we knew that our most under-resourced communities, by definition, lack the requisite skills, staffing, resources, etc. to access policy or funding opportunities or advance local climate action."^{39,40}

Since the law's enactment, the SGC has made steady progress toward putting it in motion. California's fiscal year 2020 budget included funding for the council to hire three dedicated staff people to focus on its administration by developing statewide TA guidelines, standards, and best practices; conducting outreach and analysis to identify potential community participants; and establishing program guidelines.⁴¹ And Governor Gavin Newsom included additional funding in his fiscal year 2021 budget proposal to allow the staff to complete these steps.⁴² Council staff convened a 13-agency workgroup comprising grant program and TA staff, and conducted a community stakeholder listening tour (remotely because of the COVID-19 pandemic), before releasing draft statewide TA guidelines.⁴³ In August 2020, the SGC formally adopted them and began working with other state agencies to support the initiation of new TA efforts.⁴⁴

In the meantime, the SGC has also been working on related initiatives. It has begun working with applicants from under-resourced communities through its California Climate

Investments Technical Assistance Program to help facilitate their access to proceeds from the state's cap-and-trade program, which funds projects supporting affordable housing, renewable energy, public transportation, zero-emission vehicles, environmental restoration, sustainable agriculture, recycling, and more.^{45,46} And it contracted with five nongovernmental organizations to launch the Partners Advancing Climate Equity program, a yearlong paid program (with Spanish translation available) with about 20 frontline community leaders from across the state who spent the first six months working through a tailored curriculum of virtual workshops and supplemental activities and developing individual community needs assessments. At the conclusion of the first phase, some moved onto Phase 2 to receive help with advancing priorities identified in their needs assessments, such as providing trainings for their networks and pre-application project development.^{47,48,49}

One advantage that California has in implementing an effort like the one SB 1072 calls for—and perhaps a necessary precursor for other states looking to follow suit—is that the state already enjoys an active network of regional collaboratives. For example, the Alliance of Regional Collaboratives for Climate Adaptation (ARCCA) is a network of seven collaboratives from around the state that work in their areas—and together—to "advance adaptation statewide and increase local capacity to build community resilience."⁵⁰ The Bay Area Climate Adaptation Network, for instance, established an Equity Work Group, which helps members (e.g., local governments, nonprofit organizations, consulting firms) "embed equity within their own adaptation work, as well as ... collaboratively determine how to further advance equity as a network and a region."⁵¹ One tangible contribution it made included publishing an equitable adaptation resource guide comprising a compendium of other guidebooks, best practices for various phases of equitable adaptation work (e.g., leadership and power-shifting, funding equity, plan drafting, and identifying solutions), and notable case studies from the region.⁵² Other collaboratives that represent more disadvantaged areas of the state, including the Los Angeles Regional Collaborative for Climate Action and Sustainability and the North Coast Resource Partnership, are also engaging in similar work. While ARCCA's members offer a helpful head start and potential partners for SGC's Regional Climate Collaborative program, the Council expects to also work with other existing and new collaboratives throughout the state.⁵³

CASE STUDY 2: Louisiana's LA SAFE Program

Name of program: Louisiana's Strategic Adaptations for Future Environments (LA SAFE)

Location: Louisiana

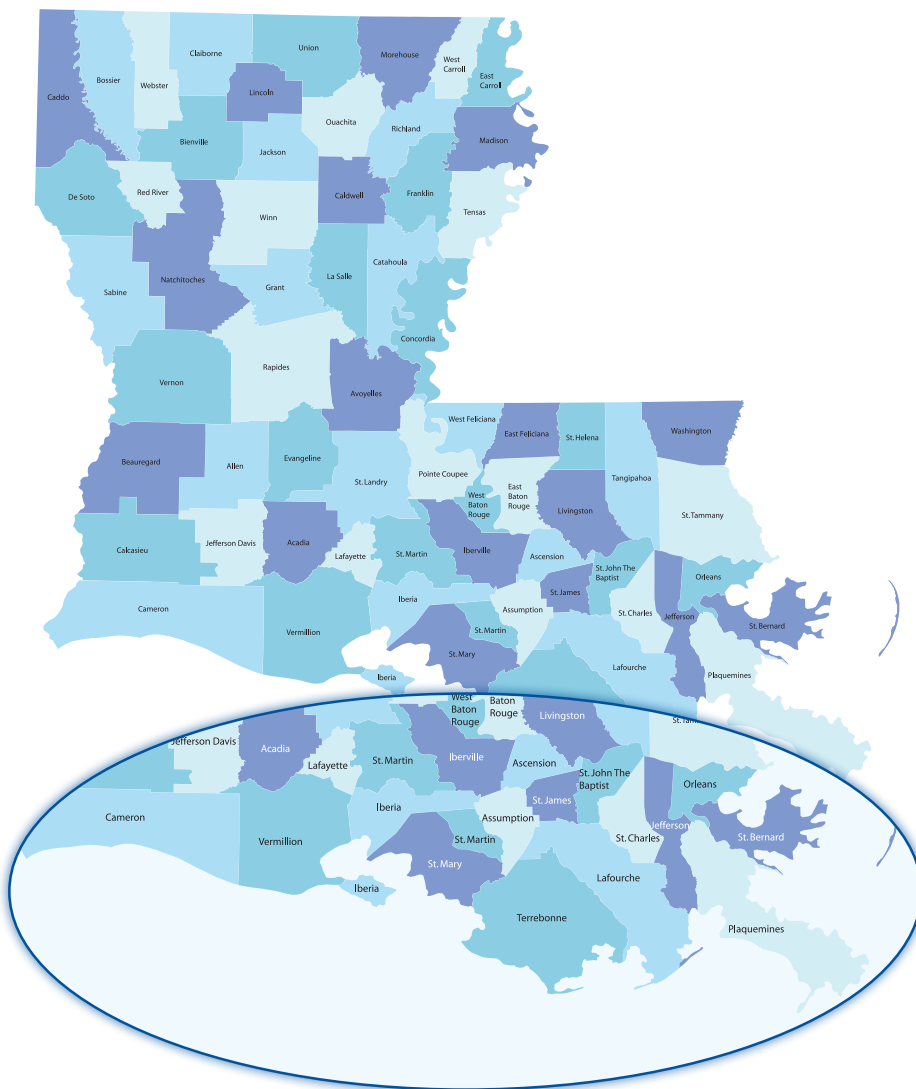
Objective: Increasing the resilience and economic prosperity of coastal communities.

Background

Every year, fewer parts of the state of Louisiana are above water than the year before. Since the 1930s, encroaching waters have overtaken roughly 2,000 square miles of the state—an area about the size of Delaware.⁵⁴ Intensive hurricanes, fueled in part by climate change, have accelerated the loss. Louisiana's barrier islands, which act as a buffer to the wetlands along the coast, are disappearing into the sea at a rate as high as 20 meters per year. Some are expected to disappear altogether by the end of this century.⁵⁵ Every 100 minutes, it is said, a parcel of land the size of a football field is lost to water.⁵⁶

As the land has been submerged, its people have retreated. New Orleans, from which more than half of residents fled immediately before or after Hurricane Katrina in 2005, has rebuilt, though it is still about 90,000 residents shy of its pre-Katrina population level.^{57,58} But perhaps nowhere are the impacts on local populations more palpable than in Louisiana's rural parishes, especially those fronting the Gulf coast. St. Bernard Parish, home to 65,000 people before Katrina, saw all but 15,500 of them leave in the months after the hurricane.^{59,60} Its population today is still below 50,000.⁶¹ In Terrebonne Parish, Isle de Jean Charles, which once stretched 22,000 acres along the Gulf coast, has been reduced to just 320 acres, motivating the relocation of its American Indian population of more than 20 families.⁶² (See Figure 2.)

FIGURE 2. Louisiana's Rural, Coastal Parishes Face Rapid Sea-Level Rise



Source: [iStockphoto.com/hagencd](https://www.istockphoto.com/hagencd)⁶³

In response to this existential crisis, Louisiana lawmakers approved a 50-year, \$50 billion master plan in 2007 aimed at the restoration and protection of critically endangered coastal areas. The master plan, updated most recently in 2017, maps out the grim realities of climate change and its attendant severe weather events: projected annual damages to the coast of \$2.7 billion. With no intervention, annual damages were projected to reach at least \$6.7 billion in 50 years and potentially as high as \$19.9 billion. The master plan incorporates massive engineering projects to combat the effects of climate change, including “restoration projects like barrier islands, hydrologic restoration projects, and oyster reefs and structural protections like earthen levees, concrete walls, floodgates, and pumps.”⁶⁴ A smaller component of the master plan called for nonstructural adjustments—incorporating community adaptation and resilience measures.

LA SAFE (Louisiana’s Strategic Adaptations for Future Environments), launched in 2017, complements portions of the master plan. “A few of our most vulnerable coastal communities will need to contemplate resettlement over the next 50 years, while others are likely to experience population and economic contraction as a result of ongoing land loss and sea-level rise,” said Louisiana Governor John Bel Edwards in announcing LA SAFE. “We are in a race against time in Louisiana. [LA SAFE will] address community growth, contraction, and resettlement through a community-led process outlining how conditions have changed in the past and how to anticipate how they’ll change going into the future.”⁶⁵

LA SAFE is funded through the National Disaster Resilience Competition, a \$1 billion initiative overseen by the federal U.S. Department of Housing and Urban Development designed to provide funding for resilient housing and infrastructure projects to states and communities that were impacted by major disasters between 2011 and 2013.⁶⁶ (During the application process, the Rockefeller Foundation provided TA to certain applicants and supported a stakeholder-driven process.⁶⁷) The city of New Orleans received \$141 million to build a “resilience district” in the Gentilly neighborhood,⁶⁸ while the state of Louisiana received \$92.6 million, nearly \$40 million of which went to LA SAFE. The philosophy behind the program was holistic, integrating risk planning with planning for stormwater management, housing, transportation, economic development, education, recreation, and culture.⁶⁹ Essentially, it was about helping people prepare for inexorable changes to communities that have been home to some of them for generations.

LA SAFE focused on six parishes deemed especially vulnerable to flooding and land loss, parishes that had been especially impacted by Hurricane Isaac in 2012—Jefferson, Lafourche, Plaquemines, St. John the Baptist, St. Tammany, and Terrebonne.⁷⁰ The program had four primary goals:⁷¹

1. Generating parish-wide, community-driven adaptation strategies over 10, 25, and 50 years.
2. Implementing a catalytic project in each parish that demonstrates development practices that mitigate flood risk.
3. Identifying and supporting resilience-building projects and practices that can serve as models.
4. Creating a statewide adaptation model that enhances long-term sustainability and resilience.

To the degree that LA SAFE has met and will continue to meet its goals, its organizers say, is due directly to its intentionality in putting residents first in the process in an authentic and practicable way. “If there’s \$40 million to invest in projects that are going to expand and improve disaster resilience, we wanted to center the people in those six coastal communities who are not only close to the problem, but close to the answers,” said Flozell Daniels Jr., the president and CEO of the Foundation for Louisiana. “Because they’re the ones who would ultimately do the actual work. It was very much a procedural and strategic shift” from how such projects are traditionally approached.⁷²

The Foundation for Louisiana was founded in 2005, in the wake of hurricanes Katrina and Rita. Beyond focusing on physical rebuilding, the foundation’s mission stresses equity and inclusion, in part by developing relationships with community-facing organizations in affected parishes throughout the state. By the time of LA SAFE, the foundation had built up a network, as well as a reservoir of goodwill and credibility, that made it an ideal partner for Louisiana’s Office of Community Development.

As Daniels explained, the relationship between the state and the Foundation for Louisiana already existed, so the notion of a collaboration on LA SAFE was in some ways an obvious one. For the state, the partnership with the foundation lent LA SAFE instant credibility. It also made sense financially: the federal awards did not include a “community engagement” portion, so the foundation agreed to allocate some of its own funds—about \$800,000, ultimately—to hold a series of what became 71 meetings throughout the six parishes. The additional money went toward hiring local nonprofits to spread the word about the meetings, removing barriers to meeting attendance by paying for food and childcare, and hiring musicians to provide entertainment.

“We budgeted to pay all organizations to attract residents to the conversation. We paid them for their time. We gave them grants,” said Daniels. “If you’re going to ask folks to help, you’ve got to give them a few dollars to cover their costs. Every major public investment should have this type of engagement, and it should be baked into the budget.”⁷³

Over the course of 2017, LA SAFE hosted five rounds of community meetings in each of the six parishes. In some places, two or three meetings took place for each round.⁷⁴ In Plaquemines Parish and LaFourche Parish, for example, LA SAFE hosted parallel meetings for native Vietnamese and Khmer (the official language of Cambodia) speakers.^{75,76}

The frequency of five rounds of meetings in six different parishes over one year was deliberate. Organizers arranged each meeting around a set of deliverables, put the voices of the residents at the fore, and emerged with project ideas specific to each community. State and foundation officials led the meetings, but in many cases, some of those project leads were also themselves natives of Louisiana’s coastal communities. During each meeting, project leads took detailed notes on what was said, and in subsequent meetings those were reflected back at participants.^{77,78}

As Daniels put it: “The hard work was what happened between the meetings—making sure there was fidelity between what people said and how we were documenting it. We wanted people to see the fingerprints of the work at the next meeting. That was really important to us.”⁷⁹

Round 1 involved walking through the grim realities. Project leaders presented all the environmental, social, economic, and demographic information that the team compiled. Project leads gave participants maps that depicted current and projected land loss, as well as population shifts over time.⁸⁰ In the second activity, residents were asked to consider parish strengths and future opportunities across three dimensions: (1) “community & culture,” (2) “economy & jobs,” and (3) “environment & sustainability.” At round tables, groups of six to eight residents reflected on the changes to the parish they have witnessed over their lifetimes, critical parish assets to protect, and goals for the future.⁸¹

Project leaders described Round 1 as the most crucial—not only to persuade participants of the project’s intentions, but to collectively confront the urgency. Mathew Sanders, the Louisiana state planner responsible for the federal application that became LA SAFE, was the principal lead on the project. “For a lot of people, if you say, ‘Well, you’re

“We wanted to center the people in those six coastal communities who are not only close to the problem, but close to the answers.”

Flozell Daniels Jr.

President and CEO of the Foundation for Louisiana.

going to have to move and your way of life is going to disappear,’ people reflexively balk at that,” Sanders said.

“The way we framed the conversation was, ‘What do you want for your kids?’ Nobody wanted their kids to have the same struggles. When people started talking about their kids, the conversation turned out to be more candid.”⁸²

And so emotion and deep feeling coursed through the meetings. “It was exciting to us to give people the space to dream a bit and face down their fears, which were all legitimate,” Daniels said. “They were commiserating over a loss of a way of life.”

But the candor, especially on the part of the organizers, was not lost on the participants. As Sanders said, “The greatest compliment I’ve received was when people would come up to me and say, ‘You’re the first person I’ve met from the government who I feel is telling me the truth about what is happening in my community.’”

At Round 1 meetings, participants were also asked to suggest locations for the subsequent rounds. In Plaquemines and LaFourche parishes, leaders chose locations in part based on languages spoken by residents, including Vietnamese and Khmer.

Round 2 participants studied maps displaying land loss and flood risk over time, from 50 years past to 50 years into the future. With those realities in sight, residents chose one topic that they deemed the most relevant to the future of their community. Project leads then asked participants to indicate areas or locations on their map where current issues exist and to propose solutions in 10-, 25-, and 50-year timeframes.

In this series of meetings, residents pinpointed challenges, proposed solutions, and collectively described a future across different types of environments and different levels of risk. LA SAFE combined residents’ ideas and mapped proposed strategies. The community recommendations formed the basis for the projects, programs, and policies that LA SAFE pursued.⁸³

This was also the stage where parishes' distinct concerns and priorities began to emerge. For instance, in Jefferson Parish, which encompasses New Orleans suburbs to the west and southwest, priorities included denser, walkable, mixed-use development, as well as a strong cultural center.⁸⁴ In the more rural (and more sparsely populated) Plaquemines Parish, residents paid particular attention to the fishing industry.⁸⁵

During **Round 3**, the meetings became more specific to each parish. Residents participated in a survey, ranking their preferences regarding potential projects and programs.⁸⁶ Meetings were divided into three components. The first was a snap-polling exercise, in which LA SAFE posed multiple-choice questions, asking participants whether they agreed or disagreed with certain ideas, as well as their preferences for certain projects. Questions centered on stormwater management strategies, types of housing, transportation expansion ideas, and the National Flood Insurance Program. In the second component, LA SAFE reviewed the vision developed by participants and LA SAFE in previous meetings. After project leads discussed each element of the vision, participants voted on their level of agreement. The third part of the meeting focused on potential projects, programs, and policies. Residents evaluated ideas organized according to planning category and risk level. On table sheets, meeting attendees placed green dots next to ideas they liked, and red dots on those they did not.⁸⁷

In Plaquemines Parish, the majority of attendees said transportation was very important. They cited jobs and job training as the best strategies to retain youth in the parish. Residents most wanted to expand established communities on high ground. They also expressed the need to expand

healthcare.⁸⁸ In Terrebonne Parish, the most selected strategy across all categories was a summer camp restoration program to help educate local youth to be proactive about preserving the coast.^{89,90} These ideas reflect the broad scope of factors and features among people and communities that make up resilience.

Round 4 meetings were designed to introduce and collect input on draft project proposals that were developed based on previous community input. Responses to these materials were then used to refine the multitude of recommendations from Round 3 meetings into six final project proposals that would be presented and evaluated in Round 5.⁹¹

For instance, in Jefferson Parish, roundtables focused on stormwater management, subsidence (gradual settling or sudden sinking of an area of land), and resilient development. Residents were most concerned about jobs, businesses, and transportation. Some residents suggested investing more in the fishing industry, local businesses, and ports to generate more taxable income for Jefferson Parish.⁹²

The central purpose of **Round 5** meetings was for residents to evaluate and rank six projects that were developed in response to input collected during the previous four rounds of meetings. "At the meeting, residents were given six tokens: two gold tokens worth two points each, two green tokens worth one point each, and two blue tokens worth no points. Residents were instructed to place one token in each of six tubes representing the six projects. At the end of the night, paper covers were removed from the tubes, revealing their contents. The color composition of each tube indicated the relative popularity of each of the projects, with gold being most popular and blue least popular. After the reveal, all points were counted."⁹³

In Plaquemines Parish, for example, residents weighed in on the following six proposed projects:⁹⁴

1. Plaquemines Harbor of Refuge, a low-cost option for commercial fishers to shelter their vessels.
2. Belle Chase Wetland Park, a 180-acre wetland park designed to capture overflow during heavy rain events.
3. Emerging Industry Business Incubator, a local office to support new small businesses in alternative energy, coastal restoration, ecotourism, and other local sectors.
4. Fisher & Farmer Loan Program, a low-interest loan fund for those in the fishing and agriculture industries who do not have sufficient access to traditional lines of credit.
5. Behavioral health program dedicated to providing services to help disadvantaged populations work through emotional impacts of past disaster events and future increased flood risk. Solastalgia, for example, is the distressing sense of loss that people experience from unwanted environmental changes (e.g., fires, floods, and storm surges; thawing permafrost and coastal erosion; weakening air or water quality, emerging disease vectors, and changing food sources).
6. Red Star Yeast building redevelopment, an effort to renovate an existing Belle Chasse building into a mixed-use development with commercial and retail space on the ground floor and housing units above.

Following the Round 5 meetings, a **selection committee**, comprised of state officials and with technical assistance from the LA SAFE team, reviewed each of the projects and used a point system

to rank their potential for funding and implementation, taking into account public preferences, leveraged funds available, low- and middle-income benefits, public benefits (quantitative and qualitative), and the Community Rating System score (a FEMA-administered point system that can lead to lower insurance rates).⁹⁵

Ultimately, 10 projects were approved across six parishes, seven of which were ranked first or second by residents. At least one of residents' top-ranked projects was selected in each parish.⁹⁶ Viewed together, they appear disparate, but each is specific to the priorities voiced during the series of community engagements over the course of 2017. For instance, one of Plaquemines Parish's two projects was a mental health and substance misuse program. This resulted from discussions that stretched back to Round 1 meetings, when Plaquemines residents revealed their anxiety over flood risks and how it could impact their homes. Moreover, in subsequent meetings, residents expressed the need for more mental health and substance use disorder aid. Notably, the behavioral health program did not rank at the top of the final voting among residents during Round 5. However, it did have strong support from local legislators, as well as a potential provider within the community eager to expand mental health service capacity.⁹⁷

Plaquemines was one of the parishes with two approved projects; the other project will create a harbor of refuge for vessels to shelter in place during disaster events. The parish-operated harbor will incorporate marina amenities, wet- and dry-docking facilities, and green infrastructure to help manage stormwater. Residents ranked this project number one during Round 5.⁹⁸

Case Study 3: Philadelphia's Beat the Heat Initiative

Name of program: Beat the Heat Initiative

Location: Philadelphia, Pennsylvania

Objective: Increasing residents' capacity to cope with extreme heat safely and comfortably, and reducing its intensity.

Background

Heat is a killer. Extreme heat causes more deaths annually than any other weather-related hazard, including tornadoes, hurricanes, and floods. Every year, more than 65,000 U.S. residents, on average, go to hospital emergency departments to seek treatment for acute heat illness.⁹⁹

As average temperatures climb around the globe, few areas are feeling the impact as much as densely populated urban areas, where tree canopy can be uneven and greenspaces have been replaced by heat-absorbing and radiating construction and asphalt. Within cities themselves, there can be vast differences in temperatures across neighborhoods. Wealthier neighborhoods tend to enjoy denser tree coverage, while housing stock—designed more energy efficiently and with cooling in mind—is newer. Meanwhile, lower-income neighborhoods, and especially neighborhoods of color, exhibit the long-term consequences of generational disinvestment. Exclusionary practices such as redlining—which discouraged loans within the boundaries of certain neighborhoods, usually populated by people of color—exacerbated this and other environmental injustices, such as residential proximity to industry and factories. Discriminatory housing policies and practices that advantaged white people and restricted where

people of color could live continue to define exposure and sensitivity in cities across the United States, and restrictive lending practices have prevented disadvantaged homeowners from securing loans for retrofitting.¹⁰⁰

Researchers at Virginia Commonwealth University and Portland State University found in 2020 that years of segregationist housing policies left some neighborhoods dangerously hot. Analyzing more than 100 urban areas throughout the United States, they determined that in virtually all of them formerly redlined neighborhoods experienced patterns of elevated land surface temperatures—typically between 5 degrees Fahrenheit to 12 degrees Fahrenheit, on average—compared with advantaged neighborhoods across town.¹⁰¹ (See Figure 3.) People in these hotter neighborhoods tend to be Black or Hispanic and have below-average incomes. These areas tend to have fewer trees and parks and more paved surfaces. Indeed, a study led by the U.S. Forest Service found that formerly redlined neighborhoods in dozens of cities around the country have about half as many trees today as predominantly white neighborhoods in their area.¹⁰²

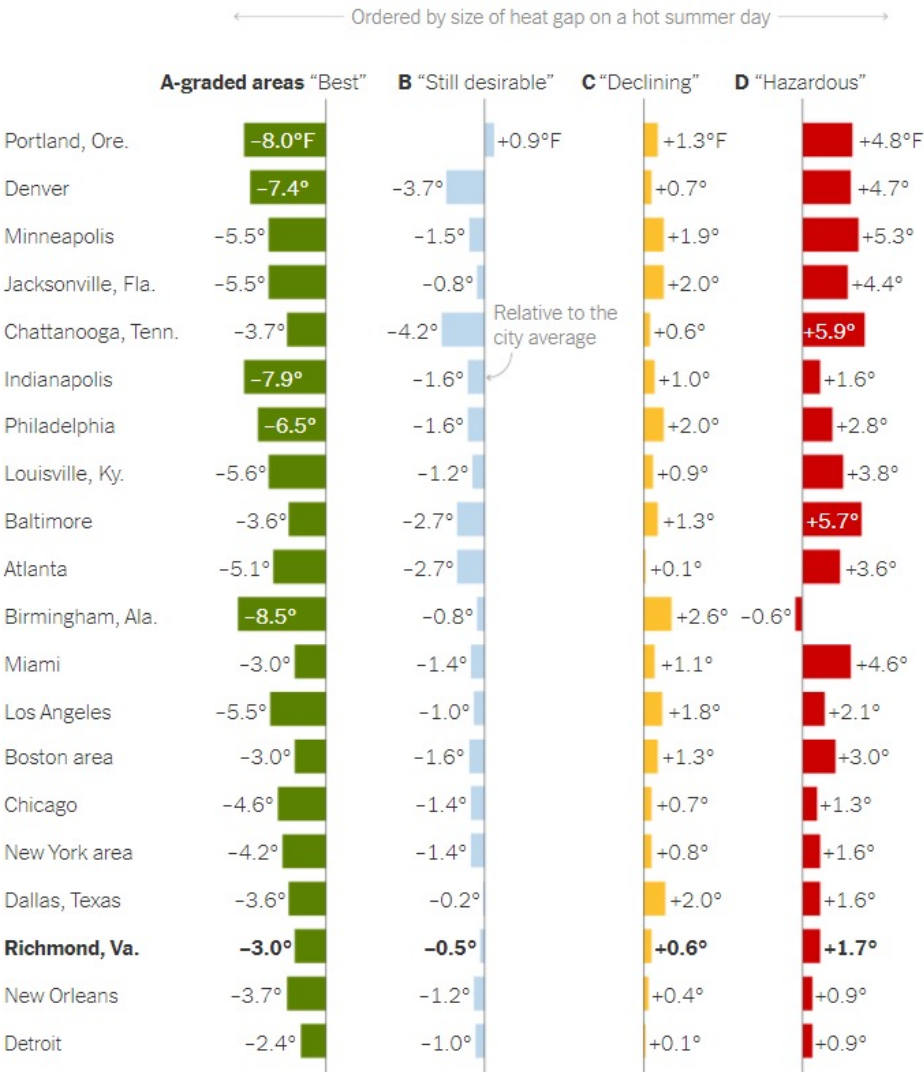
Other social and demographic factors also contribute to people's exposure and sensitivity to heat. For example, people experiencing homelessness and people who work outdoors or as first responders face

greater exposure. Young children and older adults tend to be most sensitive to weather extremes. Economic insecurity can cause people to have trouble paying for utilities, leaving them without air conditioning. And prolonged heat waves or an extremely hot day may overwhelm power grids and lead to outages or rolling blackouts, which have a disproportionate impact on people with existing health conditions who require daily medication or treatment (e.g., dialysis) or who have limited mobility. Many medications and life-saving medical devices require a stable supply of electricity. People who lack reliable transportation or financial resources may find it more difficult to access services elsewhere in the event of a disruption.

Every degree matters for health and other aspects of well-being. During a hot spell, the population-wide risk of dying increases by 2.5 percent with every 1 degree Fahrenheit raise in temperature.¹⁰⁵ Extreme heat can make it difficult for people’s bodies to regulate temperature, causing the heart to work harder and making it challenging to breathe. Heat waves tend to come with higher rates of hospitalization for cardiac arrest¹⁰⁶ and asthma,¹⁰⁷ as well as adverse birth outcomes (e.g., low birth weight, stillbirth).¹⁰⁸ Moreover, chronically elevated temperatures affect people’s short-term cognitive performance, working memory, and stamina, making it harder to learn and build skills.^{109,110}

Greenspaces, on the other hand, offer numerous benefits to well-being. Trees—and other vegetation—cool areas by shading surfaces, shielding residents from the sun and reducing the storage and later release of heat

FIGURE 3. Formerly Redlined Neighborhoods are Consistently Hotter



Note: The New York and Boston values reflect graded neighborhoods in the broader area, including some suburbs.

Sources: Hoffman, Shandas, and Pendleton, and The New York Times^{103,104}

by impervious materials. Trees also give off water vapor, which increases latent heat storage and prevents some of the sun’s energy from increasing air temperature.¹¹¹ This can help lower utility costs and the risk of illness. Trees also purify the air,¹¹² can reduce stress levels,¹¹³ help prevent contamination from stormwater management,¹¹⁴ and assist in flood control.¹¹⁵

Protecting Philadelphians from Extreme Heat

In late-20th-century Philadelphia, the city saw an average of four days annually with temperatures above 95 degrees Fahrenheit; according to some projections, it could see as many as 52 such days by 2100.¹¹⁶

Residents, however, do not experience high temperatures equally across the city. In the study by Virginia Commonwealth University and Portland State University that connected neighborhood heat disparities to redlining, researchers found that Philadelphia had one of the widest gaps—about 9 degrees Fahrenheit, on average—between areas that had been classified in the 1930s as “best” versus “hazardous.”¹¹⁷

In Philadelphia, 13 percent of residents are ages 65 or older, and 7 percent are younger than 5—a younger age profile than the country as a whole.¹¹⁸ About a quarter of city residents experience poverty, much higher than the national level (11 percent), as is true for most large cities. About a quarter of children in Philadelphia County, which encompasses the city, were estimated to have asthma in 2010, making them more susceptible to respiratory distress.¹¹⁹

Mortality data bear out the disparate impacts of extreme heat in Philadelphia. A comparison of 48 zip codes found that areawide mortality increased on days following heat waves when mid-evening temperatures remained over 93 degrees Fahrenheit, but that 10 of the 48, primarily located in the west-central portion of the county, experienced significantly worse effects, owing to several factors: a higher percentage of residents who were older and/or of low socioeconomic status, more high-density zoning, higher local surface temperatures, and more recreationally zoned areas.^{120,121}

In response to this growing threat, the city of Philadelphia in 2009 launched “Greenworks: A Vision for a Sustainable Philadelphia.” The strategy, last updated in 2016, “aims to make Philadelphia a sustainable city for all by reaching ambitious visions on the topics of food and water, air, energy, climate, natural resources, transportation, waste, and civic engagement.” One of eight priority visions of Greenworks is that “all Philadelphians are prepared for climate change.”¹²²

As a starting point in meeting this vision, the city’s Office of Sustainability, charged with implementing Greenworks, convened the Climate Adaptation Working Group, composed of 10 agencies and departments.¹²³ That group,

in turn, commissioned an analysis of how Philadelphia’s climate was projected to change in the coming decades. The analysis found that, as mentioned above, the city could experience more than 50 days annually with temperatures above 95 degrees Fahrenheit by the end of the century, with “extremely hot” days persisting for longer stretches at a time.¹²⁴ (The analysis also predicted milder winters, which may reduce cold-related deaths.)

With this analysis in hand, the working group created a comprehensive adaptation plan that laid out the evolving threats and identified vulnerabilities, existing efforts, and “highly effective, low barrier” adaptation opportunities for city departments.¹²⁵ To target heat-related vulnerabilities, the city relied on three mapping analyses. The first used granular data provided directly to the city by an Arizona State University environmental scientist, David Hondula, to measure heat disparities, showing that some blocks were as much as 22 degrees Fahrenheit hotter than others.^{126,127} Building on this, the city created an interactive Heat Vulnerability Index, which mapped block-level heat exposure (using Hondula’s data) and layered on top of it measures of sensitivity (e.g., demographic, socioeconomic, health status) and community assets (e.g., pools and “spraygrounds,” schools, health centers, and cooling centers), classifying areas into priority levels of vulnerability.¹²⁸ A third map showed “hot spots”: areas that were not located near a cooling center and that had high concentrations of people who were very young, older, or experiencing poverty.¹²⁹

In 2018, based on years of adaptation analysis and planning, and with financial support from the Knight Foundation and Partners for Places, the city’s Office of Sustainability launched the Beat the Heat Initiative in the Hunting Park neighborhood. The neighborhood was selected as the location for the pilot because it was an area with high levels of heat exposure and sensitivity, as well as a strong existing network of community organizations that prioritized heat relief.¹³⁰ The city aimed for the initiative to be a “community-driven, equity focused approach to community climate planning.” City officials sought to “work in one of Philadelphia’s hottest and most heat-vulnerable neighborhoods ... to identify and acknowledge causes for heat disparities, while also supporting community-driven decision-making about how to reduce these inequities.”¹³¹

PRACTICING INCLUSIVE CLIMATE PLANNING IN PHILADELPHIA

As it works to center principles of equity, the Philadelphia Office of Sustainability is guided by the following questions:

- **Voicing Needs:** How are [office staff] creating space for all participants to express their needs? How are different communication and learning styles acknowledged and encouraged?
- **Acknowledging Community History & Identity:** In the process of understanding the changes that community members would like to see, how are [office staff] also respecting the existing neighborhood history, identity, and strengths?
- **Shifting Power:** How does power show-up in the spaces that [office staff] hold? How are [office staff] acknowledging [their]

own privilege and power as an individual—based on [their] organizational position as well as [their] social identities—and working to shift this power so that community members and people with marginalized identities are able to lead? How are those with marginalized identities within the community already showing up and how are [office staff] backing their leadership?

- **Storytelling as Data:** Are there places and opportunities for people to share their stories and experiences and are these stories valued as data?

- **Relationship Building:** How does the planning process strengthen connections, relationships, and trust?

Source: Philadelphia Office of Sustainability¹³²

Hunting Park is a 1.7-square-mile section of north Philadelphia.¹³³ (See Figure 4.) Its 30,000 residents are demographically diverse: 56 percent are Hispanic (47 percent of the neighborhood is Spanish-speaking); 46 percent are Black; and four-in-10 residents are under age 18.¹³⁴ The neighborhood is susceptible to heat extremes: more than 75 percent of its land cover comprises buildings, roads, and other paved surfaces, compared with roughly half of the city at large. Hunting Park's tree canopy is especially anemic, covering just 9 percent of the neighborhood, compared with a 19 percent citywide aggregate and 48 percent in the wealthier Chestnut Hill neighborhood about five miles to the northwest.^{135,136} And Hunting Park is within a zip code with one of the highest asthma hospitalization rates in the city.¹³⁷

The neighborhood also has an impressive recent history of pushing for environmental justice. Since 2009, its residents have successfully prevented the expansion of toxic industry,

FIGURE 4.

TEMPERATURE DIFFERENCE FROM AVERAGE

HOTTER THAN AVERAGE BLOCKS

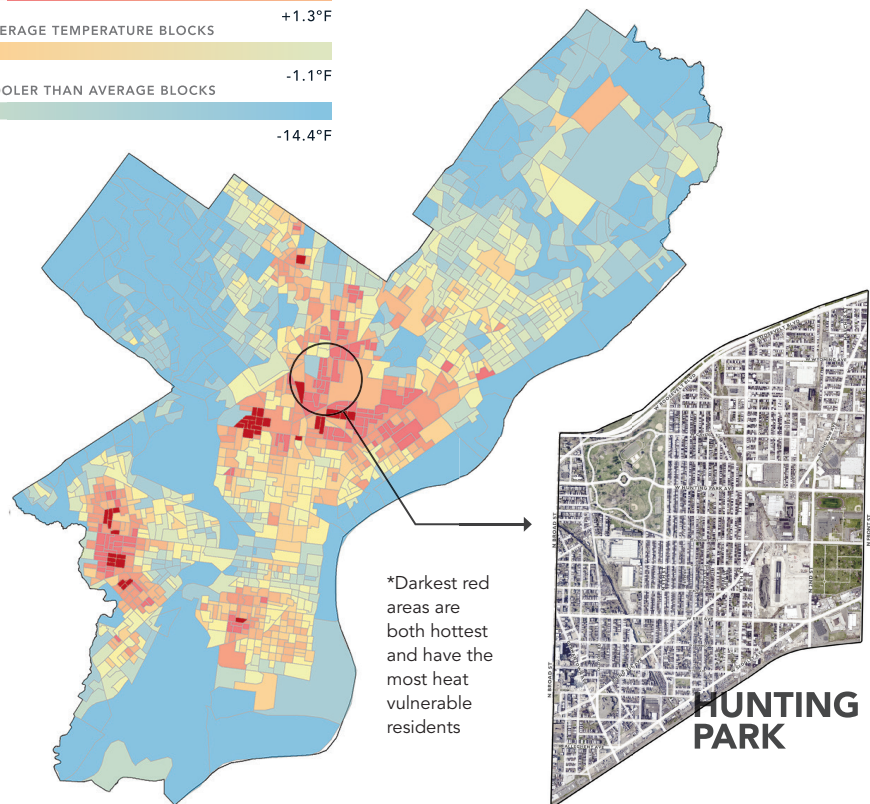
AVERAGE TEMPERATURE BLOCKS

COOLER THAN AVERAGE BLOCKS

+1.3°F

-1.1°F

-14.4°F



Source: Philadelphia Office of Sustainability¹³⁸

spearheaded a multimillion-dollar park revitalization effort, established community gardens and a farmer's market, facilitated a block-beautifying grant program, planted more than 800 trees, transformed abandoned industrial sites into greenspace, and organized regular block cleanup days.¹³⁹

To put residents' and other community stakeholders' insights at the forefront of decision-making, the city began by forming a Heat Team with more than 30 representatives of city agencies, community organizations, and residents. (To recruit a team, officials from the Office of Sustainability recommend targeting partner government agencies; community development corporations; registered community organizations; block leaders; colleges, universities, or schools; hospitals or health institutions; and faith-based organizations.¹⁴⁰)

The team, meeting biweekly throughout summer 2018, took several actions to gather input and share information, including:¹⁴¹

- Two large **kickoff parties**, hosted by community organizations, with music, dancing, art activities, water ice, and, critically, cooling resources.
- A **neighborhood survey** developed by the Heat Team and behavioral scientists at the University of Pennsylvania, asking residents "how [they] cope with heat, what tools they need to thrive, and what changes they would like to see in their community to make it cooler." The survey—available in English and Spanish—was administered by four trained program ambassadors, who distributed and collected them at block cleanup events, cold-water distribution exercises, community events, mailings to block leaders, and public workshops. Ambassadors collected more than 500 surveys.
- In-depth **stakeholder interviews**, covering questions like "What information about yourself and your neighborhood would you like others to know?" and "Where do you go if you leave your house to go somewhere to stay cool in your neighborhood?"¹⁴²
- A **heat relief network** of faith leaders organized to map existing cooling assets and resources that could be brought to bear.
- **Design workshops** in which more than 40 residents worked together and with city facilitators to select prime locations for cooling interventions such as tree plantings, cool roofs (a roof painted white or another light color to help reflect the sun and lower building temperatures), cooling spaces, and bus shelters.

According to Saleem Chapman, chief resilience officer at the Office of Sustainability, key to the program's success was building authentic relationships with residents and community leaders, achieved in large part by embedding a staff person in the neighborhood for 18 months.¹⁴³ "We improve resilience by lifting up community well-being," he said. That requires, he has found, meeting people where they are, including by explicitly addressing and confronting historic injustices.

Incorporating the information it gathered, the Heat Team developed recommendations that focused on three objectives: (1) staying cool and safe at home; (2) staying cool and safe in public spaces; and (3) improved greening throughout the neighborhood.¹⁴⁴

Talking about past and ongoing efforts to partner with neighborhood residents, Jodi Reynhout, vice president of strategic initiatives at Esperanza, a faith-based social-service organization in Hunting Park and a community leader behind heat-mitigation efforts, noted that typical conventions of community engagement are outmoded. Through the Beat the Heat initiative and companion efforts, she and her colleagues "work alongside residents, seeking to learn from their experiences and expertise, and being of service to a collective mission."¹⁴⁵

It is clear that residents' insights and experiences informed the recommendations, which were presented for consideration at community meetings and workshops. For example, 40 percent of respondents cited the cost of electricity as a barrier to running their air conditioners when necessary; of these residents, just 4 percent had heard of utility assistance programs. Seventy-seven percent of respondents reported feeling too hot inside their homes and agreed that better access to air conditioning and fans would help. In response, the Heat Team recommended that the city:¹⁴⁶

- Improve access to efficient air conditioning units and appliances, as well as to home energy repairs and weatherization.
- Offer cool roof coatings and insulation.
- Better promote existing utility assistance programs, including by advertising on trains and buses.
- Work with the state to make assistance from the Low Income Home Energy Assistance Program available in the winter *and* summer.

Despite the underutilization of residential air conditioning, few residents reported that they regularly leave home on extremely hot days to cool down in public spaces. Key barriers mentioned included limited hours and overcrowding at the neighborhood pool, and a difficult walk or bus ride to the pool, Hunting Park, or cooling centers. To reduce these barriers, the Heat Team recommended:

- Working with a newly organized heat relief network to add cooling centers—which can also connect residents to other resources—and develop bilingual outreach and communication strategies.
- Improving access to air conditioning at public facilities (e.g., schools, libraries, recreation centers).
- Offering free bus fare on routes to major cooling centers.
- Extending pool hours.

Less than one in four respondents reported regularly using Hunting Park as a place to stay comfortable, despite it being the coolest outdoor space in the neighborhood. In addition to transportation challenges, residents also cited poor lighting at night. Moreover, 60 percent said they wanted to see more trees throughout the area. As part of its recommendations, the Heat Team included better lighting in Hunting Park; establishing more community gardens and parks on vacant residential lots; building a broader strategy around tree planting and care; and the creation of a “greencorps” of young adults who could assist with these activities, as well as with heat outreach and neighborhood cleanup days (where the city would provide cold water, shade structures, and misting fans and tents).¹⁴⁷

Looking Ahead

The city has worked to implement the plan over the past three summers, but, of course, the COVID-19 pandemic forced adjustments in summer 2020. Fortunately, the Heat Team was able to reapply the intelligence and social

capital built over the previous two years. As the pandemic caused temporary closures of cooling centers and public pools, volunteers distributed box fans and air conditioning units to older residents.¹⁴⁸ And a team of Drexel University researchers partnered with the William Penn Foundation to hire community members to help design and build cooling structures, including sprinklers and planter-benches with attached shade umbrellas. Early data indicated that the interventions were a success; remote temperature monitors showed a 32 degree difference between exposed surfaces and those nearby that were shaded and/or dampened. “With this project, we hoped to not only provide respite from extreme heat events, but also to develop a replicable model for how to engage, and indeed even employ, urban residents in the implementation of neighborhood resilience strategies,” said Dr. Franco Montalto, a professor in Drexel’s College of Engineering.^{149,150}

The Office of Sustainability plans to redeploy the model it developed in Hunting Park to other neighborhoods, though Chapman noted that most of the city’s neighborhoods confronting similar heat disparities do not have the same history of environmental activism or such a high level of preexisting social cohesion. This will present a challenge in Philadelphia and other localities that seek to replicate the model.

To help spread the knowledge gained through the Beat the Heat pilot and assist similar efforts in other Philadelphia neighborhoods and elsewhere, the Office of Sustainability developed a helpful [toolkit](#), which walks step by step through the process it employed and links to useful resources, such as the Heat Team’s workplan (see “Appendix A. City of Philadelphia Beat the Heat Toolkit: Heat Team Workplan”), the Hunting Park neighborhood survey, and a guide for facilitating intervention design workshops.¹⁵¹ The office also wrote at length about the program, including the toolkit, in its [Community Heat Relief](#) plan.¹⁵²

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Appendix A. City of Philadelphia Beat the Heat Toolkit: Heat Team Workplan

HEAT EQUITY PILOT SUMMER WORK PLAN					
Goals + Key Tasks	Task Lead	Team Members	Month	Progress	Outcomes
1. EQUITY ANALYSIS					
Increase understanding of municipal systems, practices, and policies that contribute to urban heat inequity in Hunting Park and other communities of color and low-income communities in Philadelphia					
Task A: Conduct analysis of Hunting Park Neighborhood					Report/Presentation
Task B: Research history of Hunting Park					Report/Presentation to inform policy scan
Task C: Review and evaluate municipal policies and practices in Hunting Park					Policy evaluation tool, report with policy recommendations, GSI Analysis, Urban Forestry Equity Analysis
2. EDUCATION + COMMUNICATIONS					
Increase access to info about potential health impacts of extreme heat, what to do in case of heat emergency, and existing resources to help residents cope with heat in Hunting Park and citywide					
Task A: Announce the Pilot					Press release, social media blast, blog post
Task B: Compile heat outreach materials and giveaways					All materials translated, ordered and gathered in one place
Task C: Create a Comprehensive “Beat the Heat” website with page for Hunting Park pilot					phila.gov/heat
Task D: Coordinating a communications and social media strategy for Hunting Park pilot					Heat toolkit for social media; inventory of community outreach partners, social media influencers, and accounts in Hunting Park
Task E: Identify resources, programs, and trainings available to help residents cope with heat					Inventory of resources/trainings/programs available in Philadelphia and Hunting Park
Task G: Create heat buddy system or phone tree					Phone tree and/or buddy system setup and used this summer
3. COMMUNITY ENGAGEMENT					
Collaborate with Hunting Park residents to understand how they currently cope w. heat and develop context-sensitive heat adaptation and mitigation strategies. Build capacity of City of Philadelphia staff members and residents to share decision-making power.					
Task A: Review peer city heat interventions					Inventory/report of peer city heat interventions and strategies for engagement
Task B: Identify key stakeholders					Stakeholder map and analysis
Task C: Develop project one-pager and slide deck					One-pager/slide deck
Task D: Create schedule for resident & stakeholder engagement					Schedule with all engagement events this summer, activities to facilitate, and roles
Task G: Design and administer community heat survey & focus groups					Survey tool, focus group questions, survey distribution strategy, focus groups identified and held; preferred heat interventions identified
Task E: Identify, develop, and implement engagement activities--integrate resources, programs, and trainings into summer engagement in Hunting Park					Trainings/activities/community meetings identified and facilitated; preferred heat interventions identified
Task F: Develop network of cooling centers in Hunting Park					Potential cooling centers identified; cooling center training held; resources for cooling centers identified, gathered, and distributed; communication strategy for cooling center network created (social media, outreach team, phone tree/buddy system?)

EQUITY ANALYSIS TASK LIST			
Tasks & Activities	Lead	Team Members	Complete?
Task A: Conduct analysis of Hunting Park Neighborhood			
What are the geographical boundaries			
What is the age, type and characteristics of housing stock			
Health information in Hunting Park			
What city assets or programs/projects exist?			
Inventory City departments with relationships or programs in area			
What schools are in the neighborhood?			
What organizations exists, such as churches, RCOs, CDCs, BIDs?			
What is the litter index for the areas?			
What issues are reported to 311 from the community?			
Map of community assets & projects			
Map of community resources for seniors			
Map of community heat resources—cooling centers, potential cooling centers, pool, senior centers, etc			
Task B: Coordinate Research on History of Hunting Park			
What is the history of land use and development (including presence of industry, railroad tracks/infrastructure) in Hunting Park?			
What is the history of population movements in Hunting Park?			
What is the history of City policies (e.g. redlining, etc) that may have shaped the development of Hunting park?			
Have there been any major events that have taken place in the neighborhood that have shaped the culture or identity?			
Speak to residents about the policies + practices that have shaped their environment. Understand how their neighborhoods have changed			
Task C: Review and evaluate municipal policies and practices in Hunting Park			
Ask residents and community partners about policy barriers/problems they have experienced			
Develop a policy evaluation tool/checklist			
GSI Analysis in Urban Heat Island Priority areas			
Complete TreePhilly Urban Forestry Equity Analysis			
Develop policy recommendations to reduce barriers			

EDUCATION + COMMUNICATIONS TASK LIST			
Tasks & Activities	Lead	Team Members	Complete?
Task A: Announce the Pilot			
Develop press release			
Develop social media messaging			
Task B: Compile and order heat outreach materials and giveaways			
Collect existing materials from OEM, PDPH, PWD, TreePhilly, PECO, ECA			
Look into watershed ice partnership			
Create targeted materials for age/ethnicity			
Translate heat brochure and distribute			
Translate summer health bulletin			
Design and order fans, thermometers, water bottles			
Build partnership for larger give aways—box fans, ac units, gift cards			
Task C: Create a Comprehensive “Beat the Heat” website with page for Hunting Park pilot			
Compile content from OEM, PDPH, and OOS			
Work with OIT to design website			
Task D: Coordinate communications and social media strategy for Hunting Park pilot			
Identify community outreach partners, social media influencers, and accounts in Hunting Park			
Develop social media toolkit for heat to also share with partners			
All partners share and coordinate a social media strategy			
Task E: Identify resources, programs, and trainings available to help residents cope with heat			
Health care resources			
Senior resources			
Home energy and repair assistance			
Utility bill assistance			
Trainings			
Green infrastructure			

COMMUNITY ENGAGEMENT TASK LIST			
Tasks & Activities	Lead	Team Members	Complete?
Task A: Review peer city heat interventions			
Create list w/ descriptions of heat mitigation + adaptation strategies			
Task B: Identify key stakeholders			
Create list of stakeholders for project and map them by level/type of engagement			
Develop plan to engage hospitals and health service providers			
Develop plan to engage utility companies			
Task C: Develop project one-pager and slide deck			
One-pager			
Slide deck			
Task D: Create schedule for resident & stakeholder engagement—integrate resources, programs, and trainings into summer engagement in Hunting Park			
Community meetings to attend/present at			
Heat Pilot Community Meetings in July and September with Lenfest + Esperanza			
Facilitate focus groups: potential cooling centers, community organizations, Hunting Park United, Hunting Park Collaborative, older adults, young people, service providers			
Events for Tabling—community events, pool days, farmers market			
Days for block-by-block water bar/water ice outreach			
Hunting Park resident leaders receive training on extreme heat and then host trainings for others			
Community yard tree giveaway			
Raincheck workshop			
Ready Philadelphia			
Block clean-ups			
Task E: Design and administer community heat survey & focus groups			
Design survey and focus group questions in partnership with other City Departments and community organizations			
Send draft survey to UPenn partners for design help			
Translate survey into Spanish			
Develop distribution strategy w. Hunting Park NAC, Lenfest Center, Esperanza:			
Community events			
Trainings and workshops			
Community meetings			
Door-to-Door			
Task F: Identify, develop, and implement engagement activities			
Age specific engagement activities			
Beat the Heat logo design			
Hand fan and other art projects			
CUSP heat kit			
PWD water bar/water ice			
Work with young people to conduct oral interviews with their elders			
Community heat ambassadors program			
Task G: Develop network of cooling centers in Hunting Park			
Identify potential cooling centers in neighborhood			
Identify successful methods to get people to cooling center			
Create a one-pager with guidelines for becoming cooling center			
Host an informational session/training for interested centers			
Compile materials, giveaways, and resources for cooling centers to have on deck			
Develop programming that can be quickly organized/administered			
Create communications strategy to let people know they are open during heat emergencies			

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