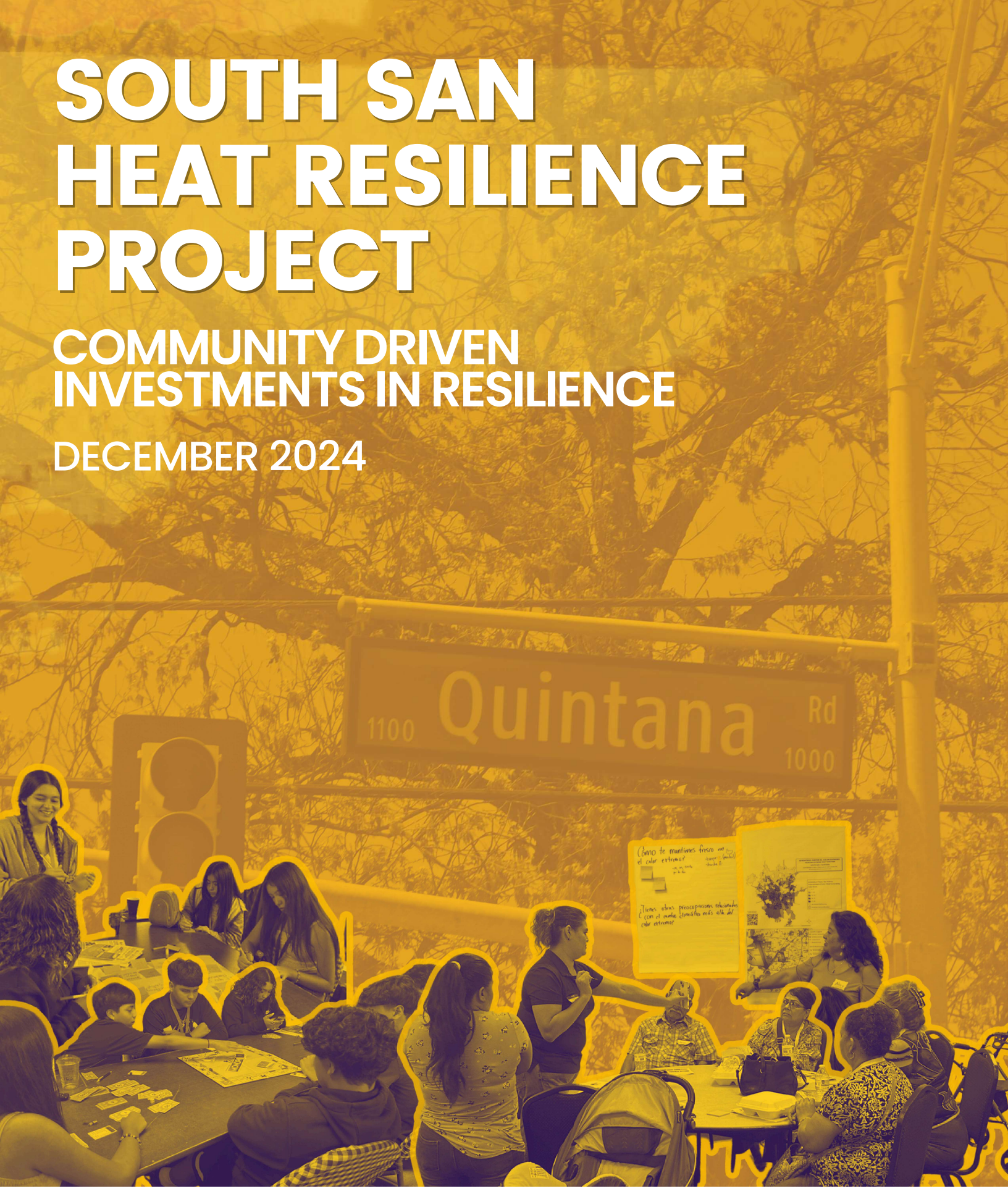
SOUTH SAN HEAT RESILIENCE PROJECT

COMMUNITY DRIVEN INVESTMENTS IN RESILIENCE

DECEMBER 2024



CITY OF SAN ANTONIO TEXAS SUSTAINABILITY

FUERZA UNIDA

adaptation international

Executive Summary

Fuerza Unida, in partnership with the City of San Antonio's Office of Sustainability, and Adaptation International, is addressing extreme heat in South San through the South San Heat Resilience Project. The pilot focuses on developing community driven neighborhood cooling solutions, while empowering leadership in climate resilience. The project aims to create long-term, equitable solutions for climate adaptation in South San and beyond.

Key findings and recommendations

This initiative engages residents to identify climate vulnerabilities and develop sustainable cooling strategies, promoting environmental justice. A suite of investments in the following areas would truly benefit the residents of the South San neighborhoods.

Social Infrastructure Investments

1. South San Steering Committee for Cooling
2. Enhance Accessibility for City and Partner Agency Programs
3. Investment in After-School, Workforce Readiness, and Community Science Programs

Physical Infrastructure Investments

1. Residential Weatherization and Cooling Programs
2. Enhancing Outdoor Spaces
3. Community-Based Resilience Hubs

Acknowledgements

The South San Heat Resilience Project was a collaborative effort that leveraged expertise from various organizations and community members. The project team expresses gratitude to the individuals and organizations that contributed to this endeavor, especially acknowledging the leadership and support from **South San residents, Fuerza Unida, Keep South San Proud, Public Citizen, New Life Ministry, Project Quest, Southwest Workers Union and the University of Texas at San Antonio.** Their insights, knowledge, and assistance were invaluable throughout the project's development. The team is thankful for the time and expertise of each contributor.

Collaborating Partners

Fuerza Unida
City of San Antonio's Office of Sustainability
Adaptation International

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1. Project Overview

Overview of Collaboration

Fuerza Unida, in partnership with the City of San Antonio's Office of Sustainability, Adaptation International, and other collaborators, is addressing extreme heat in historically excluded neighborhoods through the Low-Income Community Resilience Pilot Program. This initiative works directly with residents, particularly in the South San Neighborhood, to identify climate vulnerabilities and develop sustainable cooling strategies that enhance resilience. By integrating climate science with local knowledge, the project advances environmental justice and empowers communities to shape solutions through storytelling, research, and collaborative planning.

Key efforts include project design assistance, community engagement, and partnership development, ensuring neighborhood investments align with residents' priorities. This approach leverages local insights and targeted funding to address extreme heat and foster long-term resilience.

City of San Antonio Office of Sustainability (city partner and collaborator): In October 2019, the City of San Antonio's City Council adopted the SA Climate Ready Climate Action and Adaptation Plan, the City's pathway to carbon neutrality and a more climate resilient community. To ensure progress on climate commitments, the Office of Sustainability provides leadership and support to City departments, residents, the business community, and other public and private agencies on sustainability and climate initiatives, and tracks and reports metrics to ensure progress and accountability. Areas of concern include municipal sustainability, energy decarbonization, air quality, water and food security, extreme heat, weather-related disaster preparedness and recovery, climate equity, and carbon-free mobility options.

Fuerza Unida (neighborhood lead): Fuerza Unida is a women-led organization formed in 1990 when over 1,000 San Antonio textile workers were left jobless due to Levi's Jeans closing their Texas factories and relocating to Costa Rica. Fuerza Unida's mission is to empower workers, and their families to achieve social, economic, and environmental justice through education, organizing and =advocacy. They have built strong connections with community members, including seniors, working families, and those facing housing and food insecurity, positioning them as an essential partner in this climate resilience project.

Adaptation International (technical assistance and project support): Adaptation International, a woman-owned consulting firm founded in 2010, partners with communities nationwide to build climate resilience through tailored, collaborative solutions. Based in Austin, TX, with a distributed team, they have worked with Tribal and western communities on climate adaptation and emergency management, supported the development of San Antonio's SA Climate Ready plan, and led a stormwater vulnerability assessment across the Gulf South. Their work integrates climate

preparedness and equity, providing tools like the Equity Resilience Builder toolkit to support decision-makers and community leaders.

Project Phases / Objectives

Phase I - Neighborhood Assessment & Review (April-May): This phase involved creating a comprehensive Neighborhood Snapshot with input from Adaptation International, Fuerza Unida, and the City of San Antonio, followed by initial outreach through a monthly community meeting. Together, AI and Fuerza Unida developed a Neighborhood Outreach Plan, identified key stakeholders, and refined the Neighborhood Snapshot.

Phase II - Neighborhood Engagement (May-Jun): The Neighborhood Engagement Plan was rolled out through the youth leadership program and monthly community meetings, supported by stipends for community members, community liaisons, and a videographer. Engagement activities include a workshop focused on heat mitigation actions and collecting community feedback via surveys. Fuerza Unida and residents of the South San community have identified extreme heat as their top priority in this phase, recognizing its significant health risks, especially for elders, youth, and people with disabilities. This focus responds to the growing challenges posed by rising temperatures, outdated and neglected infrastructure, and limited access to city programs. Addressing extreme heat will require a targeted approach to improve heat resilience through infrastructure upgrades, enhanced community resources, and strategies designed to reduce exposure and mitigate the impact of high temperatures on residents.

Phase III - Priority UHI Mitigation/Resilience Project Selection (Jun-Sept): AI and Fuerza Unida hosted a workshop to identify priority projects for urban heat island (UHI) mitigation and resilience. The recommended projects described later in this document.

Phase IV - Lessons from Pilot (Sep-October): The final phase compiles a summary of the pilot project and identifies templates for future neighborhood engagement. The Project team then summarized lessons from the pilot project to support replication in other neighborhoods.

2. Neighborhood Snapshot

Utilizing data from the University of Texas San Antonio and public health sources, the project overlaid heat and health data, industrial site proximity, and other nationally available datasets to better understand existing vulnerabilities and risks for the neighborhood. This data-driven approach will inform outreach and storytelling, aiming to humanize the impacts on marginalized communities, including those with asthma or experiencing health issues like high blood pressure.

The South San Neighborhood

The South San neighborhood, situated in southwest San Antonio next to Joint Base San Antonio – Kelly Air Force Base, is a primarily residential area bordered by Port San Antonio's East Kelly Railport

and various industrial sites (see map below). This neighborhood features a population of approximately 12,167 residents, with 96% identifying as Hispanic/Latino. The community has a significant youth and elderly populations, with 26% of residents under 18 and 15% over 65. Additionally, 24% experience some form of physical or mental disability.

Housing and Socioeconomic Challenges: The neighborhood contains 4,544 single-family homes, with 63% built before 1960. Many of these homes were likely built using outdated materials, and don't have enough weatherization or insulation, contributing to high utility costs. While 69% of residents own their homes, 31% are renters, with rental rates particularly high along Quintana Rd. and New Laredo Highway. An estimated 30% of households face significant financial burdens related to housing costs, limiting their ability to afford critical home improvements for energy efficiency, heating, ventilation, cooling, or other infrastructure upgrades needed to adapt to rising extreme temperatures or survive extreme cold snaps such as Winter Storm Uri in 2021 and extended power outages.

Community Assets and Support Systems: Despite economic challenges, South San has valuable community assets. Residents have access to 32 local restaurants and several markets, and community support organizations, such as Fuerza Unida, Keep South San Proud, Project QUEST, local churches, and two City of San Antonio Places to Stay, provide essential services. The neighborhood also features four public parks, though tree cover is limited and confined to residential zones, contributing to heightened urban heat exposure.

Visit bit.ly/snapshot24 to view the complete Neighborhood Snapshot

Key Challenges: Heat Island Effect and Environmental Pollution

South San experiences intense heat island effects caused by limited tree canopy and extensive dark surfaces, which elevate temperatures above citywide averages. Adding to this burden are legacy industrial challenges from Kelly Air Force Base, including abandoned and active industrial sites, environmental pollution, poor air quality, and hazardous materials that require remediation. These physical conditions exacerbate existing social determinants of health, such as elevated cooling costs, limited food access, and vulnerability among elders and low-income households. Compounding these issues are higher rates of diabetes, obesity, high blood pressure, heart disease, and limited mobility compared to the rest of San Antonio, as reported by the Centers for Disease Control and Prevention. This convergence of environmental and health challenges underscores the urgent need for equitable, targeted interventions.

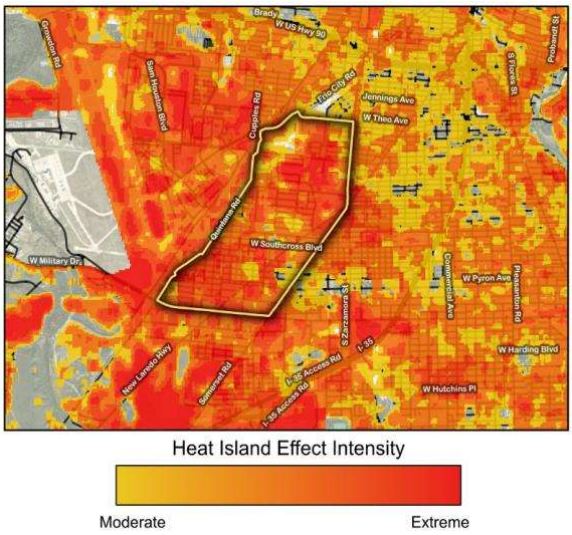


Figure 1. Heat Island Effect Intensity for 2023, provided by the Trust for Public Land and Heat.gov. Much of the southwest quadrant of San Antonio faces extreme heat island effects due to low rates of reflective land cover (like tree canopy and green spaces) and high rates of land surface area with strong heat absorbing qualities, such as roads, parking lots, and dark colored roofing. Visit https://arcg.is/0SWSu40 for more information and nationwide maps.

The lack of medical facilities within the neighborhood compounds these health risks, making access to healthcare challenging, particularly for residents with limited mobility. Low household incomes, high poverty rates, and limited access to transportation reduce the neighborhood's ability to prepare for and adapt to extreme weather events. Many residents face language barriers that further restrict engagement with available resources. As a Justice40 disadvantaged community, South San meets federal criteria for prioritized climate and environmental investments. According to the Bexar County average from the Climate Mapping for Resilience and Adaptation, climate projections indicate that the neighborhood will likely see increased annual temperatures and up to 110 days per year with high temperatures above 95°F by the 2050s, heightening heat vulnerability and drought risks

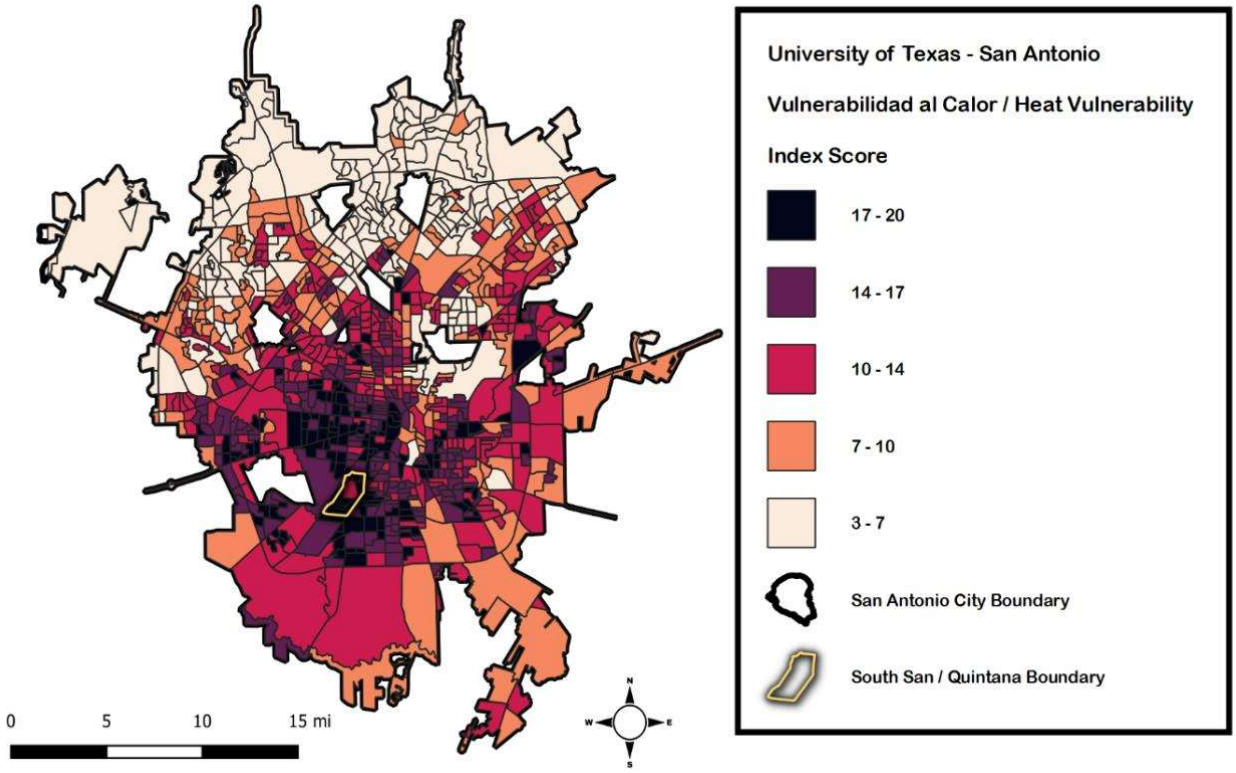


Figure 2. This map displays the heat vulnerability index scores for various neighborhoods in San Antonio, as assessed by the University of Texas at San Antonio's Sustainable, Pervasive Urban Resilience (SPUR) Center. Areas with higher vulnerability (represented in darker shades) indicate neighborhoods that are most susceptible to extreme heat, while lighter areas represent lower vulnerability. The study, commissioned by the City's Office of Sustainability and funded by the Office of Innovation Research and Development, highlights critical regions that may require focused attention for heat resilience planning and interventions. For a full understanding, refer to the study: An Assessment of Urban Heat Vulnerability in San Antonio, TX.

3. Neighborhood Engagement

Communication Strategy

The need to understand how residents are affected by these issues and to raise awareness and funds is ongoing, particularly for elders who need additional support. Fuerza Unida has become a central advocate in addressing these pressing issues, organizing door-to-door outreach, hosting community events at Project Quest, and collaborating with groups like Public Citizen, Keep South San Proud,

Southwest Workers Union, New Life Ministry, and local institutions. These efforts focus on reducing energy burden through air conditioning grants, installing heat pumps, tracking pollution levels, and enhancing awareness of the area's toxic history. They also support initiatives to improve recycling codes, water quality, and air quality monitoring. Through its sustained advocacy, Fuerza Unida fosters deeper engagement and resilience across the community, underscoring its role as a vital conduit for change in the face of ongoing environmental and health challenges.

As a neighborhood lead, Fuerza Unida leverages over 30 years of trust and goodwill, engaging with more than 150 families through monthly meetings and providing essential resources to historically under-resourced and marginalized communities. As an established stakeholder, Fuerza Unida is ideally positioned to involve residents in this initiative, acting as a crucial channel for information and data to Adaptation International and supporting efforts to address heat-related challenges in the community. Outreach and engagement channels that were utilized in the pilot project are highlighted below.

Community Membership: Fuerza Unida's membership spans all ages, genders, and abilities, offering access to monthly meetings, a food distribution program, a community garden, and various engagement activities. These gatherings facilitate project overviews, discussion of community challenges, and refinement of outreach plans.

Summer Youth Leadership Program: Fuerza Unida's summer youth leadership program, running since 2000, encourages youth activism and community involvement. This intensive eight-week program for teens aged 13-17 focuses on leadership skills and empowers participants to advocate for social, political, economic, and environmental justice.

Through these channels, Fuerza Unida has conducted outreach with residents, encouraging participation in data collection on health concerns and heat-related issues while advocating for the community's needs.

Engagement and Data Collection Efforts

Using oral histories and focus groups, the project team collected personal stories and local insights from neighborhood residents and community partners. Data collection included monitoring temperatures homes, gathering health data through a questionnaire to assess the impact of extreme heat on community health. The following data collection efforts are highlighted:

1. **Community Snapshot:** The project utilized tools such as the Community Snapshot Data, CoSA Equity Atlas, CDC's Social Vulnerability Index (SVI), and the Climate and Economic Justice Screening Tool, along with Census and neighborhood-specific data on environmental risks. Mapping efforts were adjusted by integrating this data with community input which helped inform the development of targeted interventions.
2. **Community Health Survey:** Residents shared health concerns, utility costs, heat-related issues, and cooling strategies they currently use to make it through extreme heat events. The

questionnaire aimed to get a better understanding of resident needs, exploring funding for sustainable air conditioning solutions, and informed the planning workshops on extreme heat impacts.

3. **Community Workshops:** Residents participated in facilitated workshops on extreme heat and community resilience, where they had the opportunity to review and refine priority actions, identify key implementation steps, and assess the necessary resources.
4. **Heat Monitoring Pilot**: Fifty households monitored in-home temperatures with digital thermometers over a 10-week period, receiving a $50 stipend every 30 days.
5. **Interviews:** Residents participated in interviews to express community concerns related to extreme heat.

Equity Considerations: The project addressed existing power dynamics and structural inequities in land use, community health, and social disenfranchisement. Fuerza Unida works to ensure that language accessibility, age, gender, and diverse cultural perspectives are respected, centering the effort on community knowledge and priorities in their organizing efforts. The City of San Antonio provided Spanish translation services for all workshops and project flyers, posters, and worksheets were provided in both English and Spanish. The workshops were also conducted at Project Quest, a familiar place of gathering for residents in the neighborhood.

Workshop Goals and Outcomes

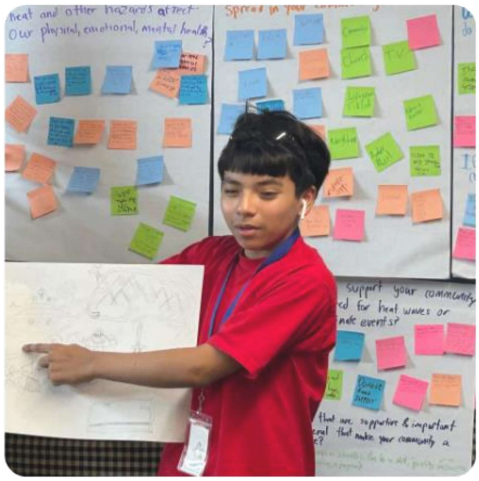
Several workshops and gatherings were conducted during the Summer of 2024. A summary of key discussion points from each community workshop, site visit, and gathering are detailed below.

Mitigation and Action Workshop, June 26th 6:00-8:00pm: Covering topics like extreme heat, health, environmental justice, and clean energy, this workshop informed and engaged community members on essential climate-related subjects.

- The workshop focused on key challenges related to home infrastructure, environmental barriers, and community resource limitations in addressing extreme heat. Residents face issues such as old, inefficient A/C units, high utility costs, lack of shade, and inadequate support for elderly and disabled populations. Flooding and drainage issues also affect certain areas, adding to their vulnerabilities.
- To stay cool, participants discussed strategies such as reducing or conserving energy use, staying cool with fans, keeping doors shut, using A/C in specific rooms, and visiting community centers.
- Participants identified desired improvements including enhancing cooling and recreational facilities, upgrading infrastructure with ore trees and shade areas, expanding transportation to make it accessible to a broader range of residents, and enhancing youth and senior programs. Participants also voiced a strong need for more city-supported resources and bilingual communication to aid in heat resilience.

Youth Leadership Program Environmental Justice (EJ) Workshop, July 9th 9:00am–4:00pm: A one-day EJ workshop was facilitated by Adaptation International Climate Resilience Specialists with youth participants in Fuerza Unida's Summer Youth Leadership program. Activities included environmental justice history overview in San Antonio, with a specific focus of community activism and advocacy efforts in South San. The students also played a monopoly game to explore climate change challenges and responses to social, environmental, and economic challenges. A poster-board activity allowed the youth to identify several climate-related hazards, including extreme heat, flooding, hurricanes, heavy rain, freezing temperatures, and poor air quality that are affecting the South San neighborhood.

- The youth participants emphasized the negative impacts of these hazards on health and mental well-being, including feeling more anger, fatigue, and stress, as well as physical risks like heat strokes and skin cancer.
- To address these climate and sustainability issues, they suggested solutions such as cleaning up litter, planting more trees, creating shady resting areas, and donating resources like water and fans to neighborhood residents or communities experiencing homelessness.
- The youth have also expressed the need to improve community assets, such as temporary housing shelters, community gardens, and educational programs.
- They noted that information about these concerns is typically shared through social media, community organizations, and direct communication.



Heat Monitoring Pilot, July 8th to September 14th: Fuerza Unida conducted an in-home heat monitoring pilot over the summer, recruiting 47 residents to track temperatures in their homes twice a week for ten weeks. Participants were given a digital desk thermometer and each week, participants recorded multiple data points, including indoor temperature, the date and time of each reading, and the location of the measurement (e.g., "Bedroom, no A/C"). This project enhanced resident engagement around heat issues. These findings can inform future monitoring initiatives, support community planning for heat management, and improve our understanding of how temperature fluctuations impact living conditions. The dataset also enables further analysis, such as correlating temperature readings with specific weather events, humidity levels, or even energy usage, offering deeper insights into the environmental factors that affect human comfort and behavior. The key findings are summarized below:

- **Insulation's Role in Temperature Management:** Homes without insulation tend to have higher indoor temperatures, underscoring the importance of insulation in reducing heat build-up and maintaining comfortable indoor environments. The highest temperature recorded for homes without an A/C was 107°F.
- **Older Homes and Temperature Vulnerabilities:** Older homes (especially those built before 1950) show higher average temperatures, likely due to outdated construction materials and poor insulation, suggesting a need for modernization to improve energy efficiency and comfort.

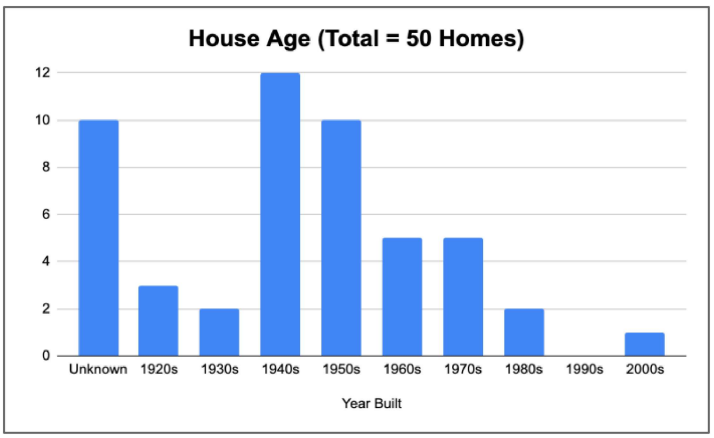


Figure 3. The figure displays the distribution of houses ages on the year they were built, with a total of 50 homes participating in the Heat Monitoring Pilot. The chart highlights the largest concentration of homes built in the 1940s and 1950s.

- **Cooling Solutions and Effectiveness:** Central air conditioning systems were found to be the most effective in maintaining lower indoor temperatures. In contrast, homes with window units or no air conditioning at all experienced higher average temperatures, indicating a gap in effective cooling solutions for some households.

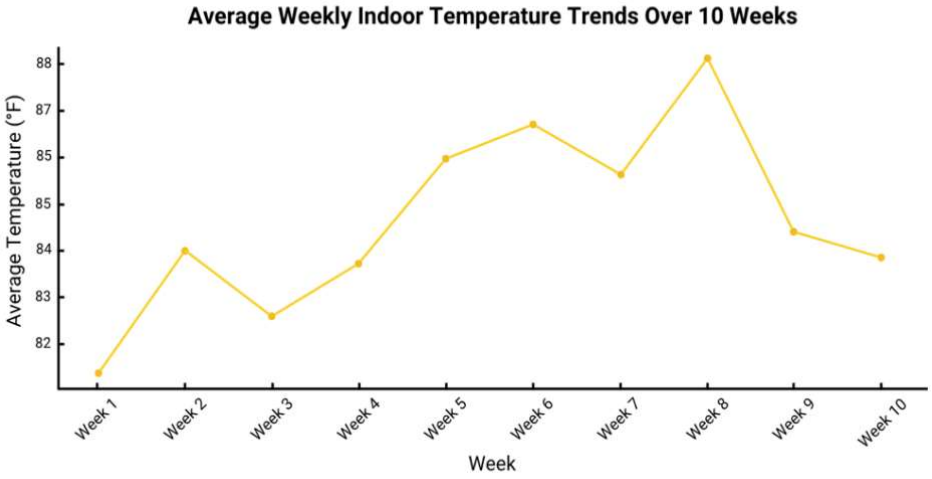


Figure 4. The figure illustrates the average weekly indoor temperature trends over a 10-week period. The temperatures start at around 82°F in Week 1 and show a gradual increase over the following weeks, peaking in Week 7. Afterward, there is a slight decline in temperature, reaching a low in Week 9 before stabilizing in Week 10.

South San Site Visit, Sept. 5th 9:00am – 12:30pm: Neighborhood leaders, the City of San Antonio, and Adaptation International used the input from community workshops to identify locations and opportunities to invest in extreme heat resilience. The group carried out site visits to gather information. The cards below provide an overview of key community spaces in the South San area of San Antonio, highlighting both assets and areas for improvement. From Athens Elementary School to local parks and trails, each location presents unique challenges—such as limited resources, environmental contamination, and infrastructure needs—alongside proposed interventions to enhance community resilience, accessibility, and engagement.

Parks and Trails

San Antonio Port Park - Quintana & Dunton Streets

Site Ownership: San Antonio Port

Assets: Potential for a low-cost park, with opportunities for environmental restoration, educational programs, and community events.

Issues: Environmental contamination, underutilized.

Desired Interventions: Develop a community park, address stormwater management issues, and foster partnerships with businesses for infrastructure improvements. Educational programs should target environmental challenges.

Park Trail - Kelsey Ave & New Laredo Hwy

Site Ownership: Community managed / City of San Antonio

Assets: Features 23 donated trees, exercise equipment, and serves as a hub for community events.

Issues: Lack of public facilities and dependence on community donations and volunteerism. Missing shade structures.

Desired Interventions: Secure funding for landscaping, community gardens, and facilities like picnic tables, water fountains, and shade structures. Collaborate with local schools and churches to increase community engagement. Consider sustainable interventions like water catchment systems or solar-powered lighting. Coral Studios could assist in park design.

Other Points of Interest

Pollution & Contamination Issues

Business District South Cross on Quintana

VFW Post

Residential structures & indoor cooling

Community Centers

Athens Elementary School - 2707 W. Gerald Ave

Ownership: South San ISD

Assets: Amenities like Wi-Fi, libraries, green spaces, and recreational facilities.

Issues: Concerns about potential demolition which would be a huge loss of community resources. The neighborhood currently lacks sufficient public spaces and access to services like education, mental health, and recreation.

Desired Interventions: Convert the school into a community center offering educational, recreational, and mental health services. Leverage health disparity funds and the 2027 Bond for long-term sustainability. Consider renting spaces to organizations at affordable rates to ensure community benefit.

Normoyle Community Center - 700 Culberson Ave

Ownership: Managed by multiple agencies, including Parks and Recreation, Human Services, and the Office of Emergency Management.

Assets: Primarily serves seniors and activates as a resilience hub during emergencies.

Issues: Restricted access (limited to only seniors before 7pm), lack of signage, minimal public awareness, and limited transportation access. It lacks critical facilities like showers and is not fully equipped as an emergency shelter.

Desired Interventions: Expand access, improve transportation, add signage and shade structures. Policy changes are needed to activate the center as a shelter during extreme heat.

South San Community Center - 2031 Quintana Rd

Ownership: Managed by Parks and Recreation

Assets: Functional indoor spaces, classrooms, a gym, an outdoor playground, and a basketball court.

Issues: Absent youth programming due to limited funding, missing shade structures for outdoor amenities, and the inability to rent meeting rooms for free, a critical need for community development.

Desired Interventions: Add shade structures, and revive youth programs through public-private partnerships. Shade structures are planned for 2026 by PARD.

Final Project Prioritization Workshop, September 23rd 6:00pm – 8:00pm: Participants reviewed and refined priority actions and helped identify important implementation steps for top actions. This discussion estimated timelines for project development and implementation, responsible entities, monitoring and evaluation strategies, and connections with potential funding sources. Findings for each site are evaluated in the next section.

4. Identified Project Ideas

The identified project ideas are designed to tackle critical environmental and health issues for South San residents through Urban Heat Island (UHI) Mitigation, Air Quality Improvement, and Mobility Enhancement, The potential projects are grouped as either investments in social or physical infrastructure and designed to enhance resilience, economic growth, and environmental justice. Equitably and effectively implementing these community-driven solutions will require ongoing collaboration. Together, these efforts underscore the need for a comprehensive suite of cooling solutions, residential weatherization, and collaborative and neighborhood led implementation. Over time, the suggested projects will:

- Build community leadership and engagement, ensure that cooling efforts align with neighborhood priorities, and provide sustained guidance to the City for long-term resilience planning.
- Increase community participation in City and Partner Agency programs, reduce barriers for low-income and vulnerable residents, and ensure that more residents can access resources for home improvements, such as weatherization, cooling, or solar panels.
- Empower the next generation to contribute to local resilience efforts, build job skills for emerging green industries, and strengthen community ties through youth engagement in science and sustainability.
- Serve as a model for resilience planning in other neighborhoods, demonstrating the effectiveness of community-based climate adaptation.

Figure 5. This map highlights the priority action sites identified in the South San area for targeted interventions related to community resilience and environmental justice. Key sites include community centers, industrial lots, and areas impacted by contamination. The map also shows the South San neighborhood boundary, public parks, and transportation routes.

Social Infrastructure Investments

PROJECT	LEAD & SUPPORTING ENTITIES	DESCRIPTION	KEY STEPS	INVESTMENTS
South San Steering Committee for Cooling **Near - term < 1 year**	Lead: Office of Sustainability Supporting: Neighborhood Housing and Planning Department, CPS Energy	Establish a dedicated steering committee composed of residents, community leaders, environmental justice advocates, City staff, and research partners to guide cooling initiatives over a three-year period, expanding on existing pilot programs and identifying new opportunities.	✪ Committee will regularly review and assess local cooling needs. ✪ Develop a strategic plan for implementing cooling solutions. ✪ Advise the City on selecting and prioritizing projects, drawing on community input to ensure ongoing alignment with local needs and preferences. ✪ Identify local, State, Federal, and Private funding opportunities for the City or community-based organizations.	$$ Hire a community-based organization or liaison to organize and lead quarterly meetings $$ Consider Open Table model (in development with Impact Guild and theopentable.org) $ Meeting space rentals, administrative support, community outreach materials, and potential technical consultant fees for strategic planning $ Community participant stipends
Enhance Accessibility for City and Partner Agency Programs **Near - term < 1 year**	Lead: Office of Sustainability Supporting: Neighborhood Housing and Planning Department, CPS Energy, SAWS	Improve resident and Small, Minority, and Women Owned Business Enterprise access to City and Partner Agency programs by offering dedicated support for application processes and ensuring program eligibility information is clear and accessible in multiple languages.	✪ Create a support unit within an existing organization, such as a community center or CBO, that assists residents and small Minority/Women-owned Business Enterprises in applying for City programs related to energy efficiency, weatherization, and cooling. ✪ Offer bilingual assistance and workshops on program benefits, eligibility requirements, and application processes to ensure programs reach under-resourced residents.	$$ Identify the appropriate host organization(s). $ Bilingual Staffing, setting up the support unit, training, and materials. $$ Cover Program Expenses: Workshop Materials and Outreach, Space Rental or Partner Fees, Technology and Administrative Costs
Investment in After-School, Workforce Readiness, and Community Science Programs **Medium – term: 3-5 years**	Lead: Community partners to be determined Supporting: to be determined	Engage youth in resilience-building efforts through after-school programs focused on workforce readiness, community science, and environmental stewardship.	✪ Develop after-school programming that provides hands-on learning in fields such as environmental science, climate resilience, and sustainable urban planning. ✪ Create pathways to careers by offering paid internships and mentorship opportunities with local organizations involved in green jobs, environmental health, and community resilience. ✪ Involve youth in community science projects, such as monitoring local air quality or assisting with tree planting and urban greening efforts.	$$ Curriculum development, recruitment, partnerships, and program launch $$ Staffing (Program Coordinator and Mentors) $$ Materials and Equipment for Community Science Projects $ Stipends or Scholarships for Youth Participants $$$ Training and Workforce Readiness Initiatives $$ In-home heat monitoring partnership by FU, UTSA and South San / West side

Physical Infrastructure Investments

PROJECT	LEAD & SUPPORTING ENTITIES	DESCRIPTION	KEY STEPS	INVESTMENTS
Residential Weatherization and Cooling Programs **Medium – term: 3-5 years**	Lead: CPS Energy Supporting: Neighborhood Housing and Planning Department, Office of Sustainability, SAWS	Improve quality of life, livability, comfort, and reduce energy burden for residents by increasing access to weatherization, air conditioning, and solar and battery storage programs, particularly for low-income households in South San.	✪ Expand targeted weatherization programs to include HVAC upgrades, insulation improvements, and energy-efficient window installations, and heat pumps for low-income households. ✪ Seed funding to expand existing weatherization and AC assistance programs. ✪ Allocate funding to replicate successful pilot programs that reduce energy bills and improve indoor air quality in targeted homes. ✪ Expand Outreach and Program Support	$$$ Expand the pilot or bigger long-term investments $$$ Secure funding to expand program $$ Bilingual outreach materials, application support, coordination with utility companies.
Enhance Outdoor Spaces **Medium – term: 3-5 years**	Lead: Community partners to be determined Supporting: to be determined	Enhance local outdoor spaces to provide cooling, recreation, and green infrastructure that improve community health and resilience. Initially focus on: 1) Kelsey Ave Pocket Park 2) South San Community Center 3) Normoyle Community Center	✪ Plant native drought tolerant and climate adaptive plants, expand tree canopies, and install rain gardens for stormwater management and enhance green spaces. ✪ Install cooling water features and offer attractive recreational spaces including shade structures in parks, bus stops, and other high priority areas. ✪ Evaluate opportunities to improve community access and safe and comfortable pedestrian and bicycle linkages to outdoor spaces.	$$ Complete community led design process for each site to guide locations for planting and improvements. $$ Native plantings, shade trees, and green space enhancements $$ Install shaded seating areas, playground canopies, and walking path covers. $$ Landscaping, irrigation, and upkeep of water features.
Community-Based Resilience Hubs **Long – term: 5-10 years**	Lead: Community partners to be determined Supporting: to be determined	Identify a centralized and trusted community facility that can continue to be used on a daily or weekly basis by residents and is equipped with resources for emergency response, cooling, education, and support, helping the neighborhood better adapt to changing climate conditions and survive extreme weather events.	✪ Establish a Neighborhood Resilience Hub, such as at Athens Elementary School, equipped with cooling facilities, emergency supplies, and educational resources. ✪ Partner with local organizations and businesses to develop programming and facility use plans to ensure that it is an everyday asset for the residents. ✪ Invest in renewable energy and green infrastructure around the hub. ✪ Conduct facility upgrades (cooling systems improvements, stocking emergency supplies, battery backup, etc.) ✪ Maintain ongoing operations and staffing.	$$$ Retrofit an existing community building with cooling systems, backup power, and emergency supplies. $$$ Install solar panels, battery storage, and rainwater harvesting systems to enhance sustainability and extreme weather preparedness. $$ Develop and host workshops on emergency preparedness, climate resilience, and workforce training. $$$ Staff the hub with coordinators and facilitators, maintain cooling areas, and manage emergency resources.

5. Lessons from Pilot

Below are key lessons learned from the project, highlighting successful strategies that should be replicated and summarizing insights that can guide future applications in other neighborhoods.

Challenges, Success with Inclusivity, and Accessibility

- **Importance of trusted local partnerships.** Partnering with a well-respected local organization, like Fuerza Unida, proved essential. Their established trust within the community facilitated stronger participation and served as a reliable bridge between the neighborhood residents and the City. This approach is crucial for gaining community buy-in and should be replicated in future projects. This collaborative approach informs the overall discourse and ensures that the developed tools meet the needs of residents and community partners.
- **Value of culturally mindful and accessible communication.** Effective community engagement requires mindful communication strategies. Bilingual materials, translators, interpreters, word-of-mouth promotion, and incentives (e.g., gift cards) were particularly effective for this project, enabling broader participation. Future efforts in similar neighborhoods should incorporate these elements to ensure accessibility and inclusivity.
- **Engagement takes time, should be broad (and deep), and must be action oriented.** Collaborating with community-based organizations (CBOs) requires time, given new topics, limited time for additional projects, staff constraints, and the need to recruit community members. It is essential to incorporate time for trust-building and capacity development into any engagement process. Offering tangible ways to participate—such as workshops or temperature monitoring—enabled participants to engage with new subject matter. Multi-generational involvement, such as through youth programs and workshops, promotes a more comprehensive understanding of community needs, fostering deeper, action-oriented engagement that supports long-term collaboration.
- **Neighborhood-specific data for resonance and trust:** Focusing on neighborhood-level data and visually mapping it helps residents see themselves in the project. This builds trust, as it emphasizes the unique characteristics and needs of specific areas, rather than using city wide or aggregated data. Such localized data also supports the development of relevant, community-led initiatives that address specific issues, like extreme heat or homeowner utility costs.
- **A project coordinator and boundary organization are useful:** A project coordinator and boundary organization are valuable: Adaptation International effectively facilitated coordination between the City and the local community organization. This intermediary role helped bridge gaps, organize project tasks, and track progress, laying a strong foundation for the project. This model could benefit other neighborhoods by providing capacity-building support and fostering trust through direct connections between local voices and decision-makers.

Replicating Work to Other Neighborhoods

- **Sustaining community involvement in implementation**. Involving the neighborhood in each stage of implementation—design, community involvement, and tangible outputs—ensures equitable and relevant outcomes. This participatory approach should be replicated in future neighborhoods to promote ownership, relevance, and sustained community interest.

- **Standard templates for efficiency, financial tools and flexible support.** Developing standard tools, such as neighborhood level equity snapshots and workshop facilitation materials, can streamline future collaborations. These templates will make it easier for new neighborhoods to access and utilize project data, fostering smoother implementation, and encouraging consistent, equity-focused work across multiple neighborhoods.
- **Tracking and evaluation for accountability**. Effective tracking mechanisms are essential for measuring progress and maintaining transparency with community members. Implementing clear and accessible tracking and evaluation frameworks can help maintain accountability to stakeholders and offer valuable insights that guide future projects.
- **Value of deep, neighborhood-level engagement**. Rolling out deep, neighborhood-level engagement in new areas strengthens project relevance and effectiveness. This tailored approach allows for a more profound understanding of each neighborhood's unique needs, which is crucial for successfully replication of resilience efforts across diverse communities.

6. Resources

A comprehensive set of project materials, including maps, workshop resources, and the Community Snapshot is accessible via a Google Drive link below. These resources provide a foundation for similar initiatives in other communities. For any questions please contact The City of San Antonio's Office of Sustainability at Sustainability@sanantonio.gov or Fuerza Unida at accounting@fuerzaunida.com

To view the full report, including data and maps check out bit.ly/southsanreport24