



Heat Response

REPORT

October 2022

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INTRODUCTION

Temperatures across many Philadelphia neighborhoods are up to ten degrees hotter than those surrounding them. These neighborhoods are home to predominantly Black, Latino/a/x/e, and immigrant populations with low socioeconomic status. They have less tree canopy, poor infrastructure, and fewer greenspaces. These trends did not occur by chance; they are the result of historic redlining and disenfranchising urban development. Trust for Public Land (TPL) and acclaimed artist Eve Mosher focused on this environmental justice issue through a project centered on Philadelphia's urban heat: "Heat Response: Creative action for Philly's rising temperatures."

Heat Response, funded by The Pew Center for Arts & Heritage, aimed to elevate the stories of Philadelphia communities impacted by urban heat. The project leveraged art to answer: "Why should we care about urban heat, and what can we do about it?" The project outlined three goals to answer this question:

1. Finding creative ways and means to capture narratives about climate change and its impact on people
2. Proposing unique, arts-based solutions in and around parks that speak to the urgency and gravity of climate change
3. Sharing this work with peer neighborhoods and leaders across the city

Heat Response centered three Philadelphia neighborhoods that disproportionately feel the effects of urban heat: Fairhill, Grays Ferry, and Southeast Philadelphia. These neighborhoods, with which TPL previously worked, have rich cultural history and offered many opportunities for creative engagement. The project invited three local artists to focus on each neighborhood:

- Fairhill: Amber Art and Design (Linda Fernandez and Keir Johnston)
- Grays Ferry: Jenna Robb
- Southeast Philadelphia: José Ortiz-Pagán

TPL conceived of Heat Response in 2019. It was just gathering the project team in March 2020, when the COVID-19 pandemic radically changed the work of engaging with communities. Yet, the project team decided to move forward. The project concluded in June 2022, with numerous delays, layers of adaptation, and moments of beauty along the way.

PROJECT DESCRIPTION

Project structure

Heat Response gathered artists, community leads, and an advisory committee to form the project team (see Figure 1). The TPL team included the Pennsylvania state director; Abi Mlo, who received an FAO Schwarz Fellowship to work on the project; and a DC-based marketing liaison. Other TPL Pennsylvania office staffers supported the project in initial project planning, grants management and citywide events like webinars. As the lead artist, Mosher helped to conceptualize the project with TPL and collaborated on the grant proposal. As the lead project artist, she sought to weave the work happening in the different neighborhoods into citywide projects. At the beginning, Mosher was based in New York City and was planning to come to Philadelphia on a monthly basis. Mosher's in-person presence was reduced due to the pandemic and a family relocation to Scotland in late 2020. Joshua Reaves worked under Mosher as engagement coordinator, providing support across the project.

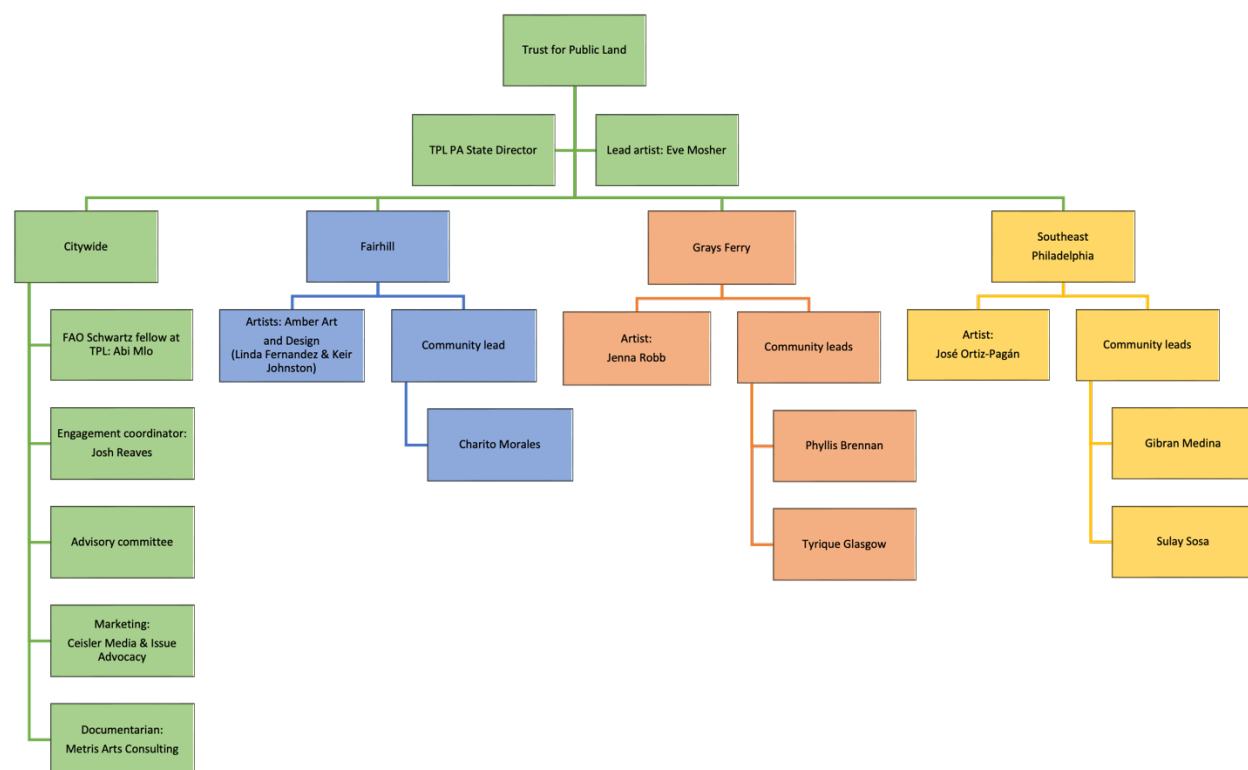


Figure 1: Heat Response project team

Using its [Climate Smart Cities decision-support tool](#), TPL selected the three project neighborhoods using three criteria: higher than average temperatures than the rest of the city, socioeconomic equity factors like number of households in poverty and racial and ethnic demographics, and neighborhoods where TPL had recently completed park development projects and had relationships related to these projects. Then, TPL selected these anchor sites for the Heat Response project:

Cramp Elementary's schoolyard and Collazo Playground in Fairhill, Lanier Playground in Grays Ferry, and Southwark School's yard in Southeast Philadelphia. TPL recruited community leads based on the strength of their relationships to these sites and neighborhoods. Finally, TPL issued an RFP for artists to lead the work in each neighborhood, with the support of community leads and the citywide team. As the project developed, each neighborhood team explored and formed partnerships and collaborations with community-based organizations that fit the needs of each project and neighborhood.

TPL also gathered support for the project across the neighborhood teams. Each team had access to an advisory committee who contributed expertise from a range of sectors and disciplines (for names and affiliations, see Acknowledgements). In addition, Heat Response formed a collaboration with Community Arts Practices at the Tyler School of Art and Architecture at Temple University (Tyler CAP). The project artists attended class sessions to talk about urban heat and to explain their work on Heat Response. Tyler CAP students participated in activities at each site and citywide. They provided the project with extra design and engagement capacity. The Pennsylvania Horticultural Society also joined Heat Response as a presenting partner, lending support with citywide programs. TPL also hired Ceisler Media & Issue Advocacy to support the project's citywide marketing efforts.

In April 2021, TPL engaged Metris Arts Consulting affiliate consultants Susannah Laramee Kidd and Abygail Mangar to serve as project documentarians. Laramee Kidd had already been serving on the advisory committee, in an independent capacity, enabling Metris to get up to speed fairly quickly. Metris developed a documentation plan and tools (events tracking spreadsheet, event documentation template, heat interview protocol) and attended project team meetings throughout the remainder of the project. Metris conducted reflection meetings and interviews at key points in the project, and Laramee Kidd provided direct documentation of select events and activities in each neighborhood. In addition to producing this report and supporting the production of the ArcGIS StoryMaps website, Metris reviewed all of the artifacts from the engagement activities to generate [key takeaways](#) from participant insights.

At the conclusion of the project, Laramee Kidd conducted a reflection and sensemaking process with project team members using [participatory narrative inquiry](#). She collected stories from team members about their experiences during the project using interviews and group storytelling exercises. She collected sixty-five stories about the project. Then, she invited project team members and collaborators to a bilingual (English-Spanish) participatory sensemaking workshop to develop project takeaways. Nine participants gathered in FDR Park to read thirty-six collected stories, share additional stories about the project, and participate in sensemaking exercises. We note the insights generated by workshop participants throughout this report.

Fairhill

- ⇒ Anchor sites: Jose Manuel Collazo Park & William Cramp Elementary School
- ⇒ Residents within a ten-minute walk: ~14,701
- ⇒ Heat index: 4.4 degrees hotter than city average
- ⇒ Artists: Linda Fernandez and Keir Johnston, Amber Art and Design
- ⇒ Community lead: Charito Morales

Amber Art and Design began their work in summer 2020. They held conversations with community leads and other community members about their experiences of urban heat and to explore programming possibilities. While Collazo Park is heavily used, it lacks regular programming with which Fernandez and Johnston could align. The School District of Philadelphia was still operating fully remotely, so Cramp Elementary School was also unavailable as a programming site. Fernandez and Johnston decided to tap into team members' existing relationships. They held workshops at César Andreú Iglesias Community Garden, just south of Fairhill in the Norris Square neighborhood, and with high school students through Concilio, a Latino family services and cultural organization located just north of Fairhill. Reaves, the engagement coordinator, was connected to Iglesias Garden, a community organizing project of Philly Socialists focused on reclaiming unused land as a community garden and cultural gathering space. Community Lead Charito Morales was running Concilio's after-school program and was already incorporating STEAM and environmental stewardship activities into that program.

With Iglesias Garden, Amber Art and Design hosted a *Día de los Muertos* celebration and poetry workshop. Neighborhood resident and artist David Acosta and poet Natalia Villarán Quiñones led the poetry workshop. Participants imagined themselves as beings with superpowers, trying to save their neighborhood from heat and climate change. Participants of all ages wrote poems and drew pictures featuring their superpowers.

With Concilio high school students, Fernandez and Johnston conducted two virtual workshops focused on urban heat as an environmental justice issue. In one workshop, students brainstormed what they would write to their city councilperson about how heat impacts them and their communities and their ideas for cooling spaces in

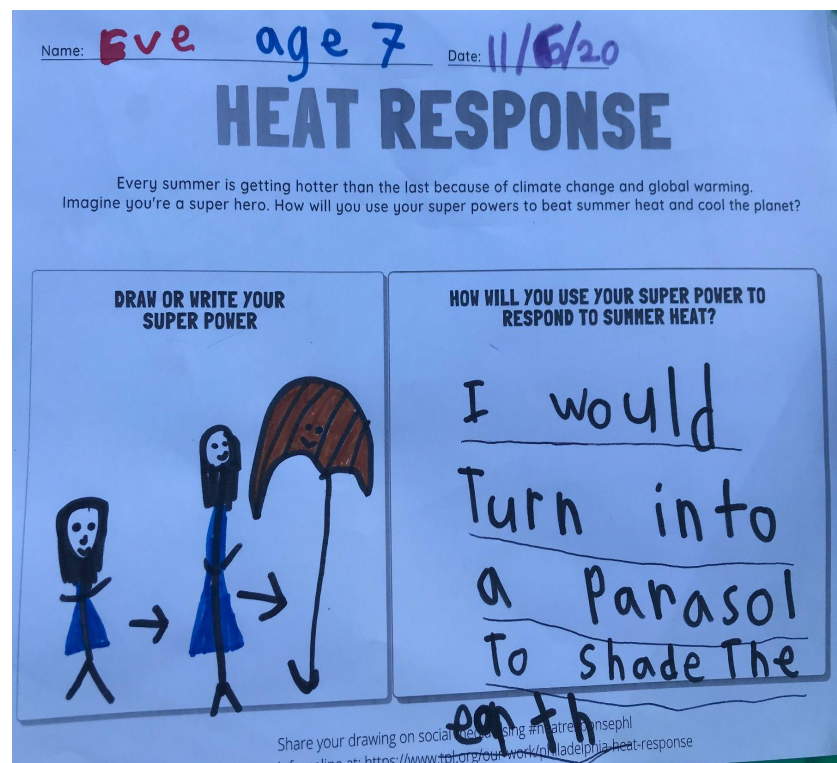


Figure 2: Poetry workshop "superpower" response, 2020. Photo courtesy of Linda Fernandez.

their neighborhood. In the second workshop, students thought about their superpower, imagined how it might be useful to fight urban heat, and wrote poems about urban heat. Amber Art and Design also addressed urban heat through its independent work with Summer Search high school students.

At the same time as these engagements, Fernandez and Johnston were exploring urban heat as an environmental justice issue with Tyler CAP students. Students came to community workshops and helped Amber Art and Design reflect on the ideas gathered during them. The group decided to collaborate on a coloring book inspired by these workshops—Kenza Bousselob took the lead on the text, and Holly Hazell did the illustrations. While the group was putting the final touches on the coloring book, the Fairhill Heat Response team held a community clean-up day on the streets surrounding the Concilio building, as clean ups were happening in the other two project neighborhoods as well. Youth from Concilio and CAP students got to meet in person and make an immediate impact on the neighborhood.

[“SEEDLINGS: Fighting the Dangers of Heat”](#) is a coloring book that features a story, in English and Spanish, about a superhero tree who grew up in Fairhill. Seedlings includes imaginative activities for urban heat adaptation and advocacy. Once completed, Amber Art and Design facilitated another series of workshops to kick off the coloring book distribution, often alongside their CAP collaborators. They used the activities in Seedlings as a starting point for a series of four workshops with Concilio youth, including painting flower pots and rain barrels. Iglesias Garden hosted an art class for kids where Fernandez and Johnston led coloring activities while having conversations with participants and gave out popsicles. CAP students also organized an event in partnership with Temple’s Office of Sustainability in the Tyler School of Art’s main lobby. The event featured poster-sized prints of Seedlings pages. Art therapy students offered conversations and activities about climate grief.

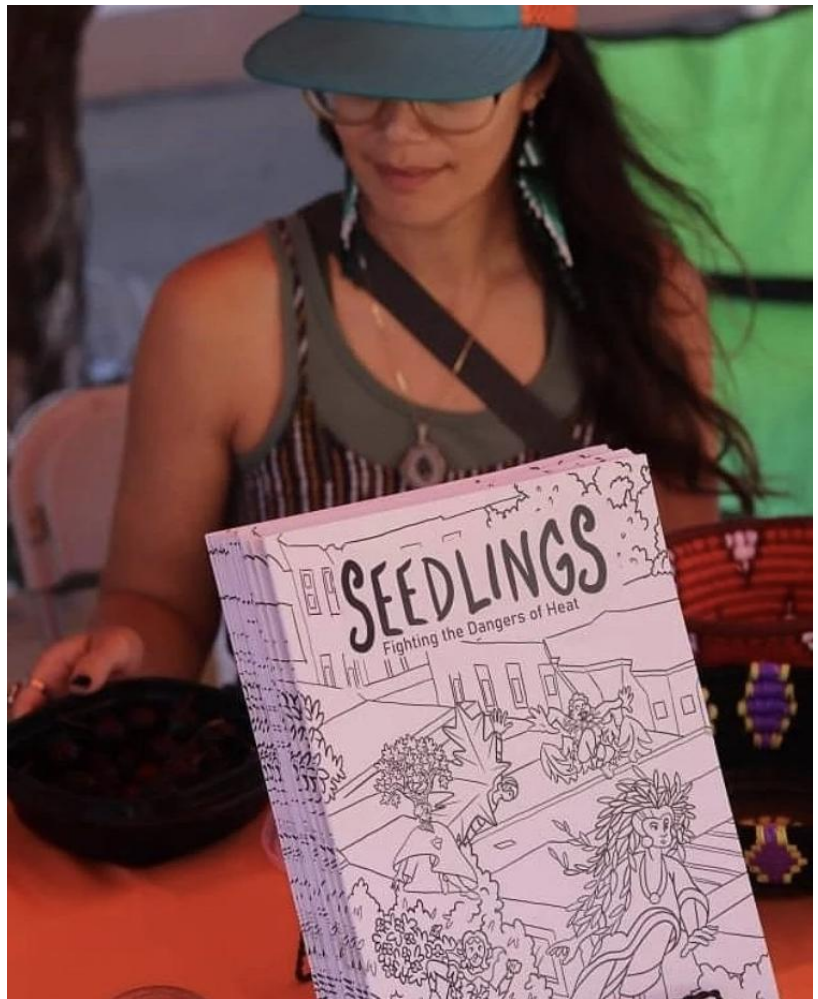


Figure 3: Coloring book distribution, Feria del Barrio, 2021. Photo courtesy of Snap Shot Anderson.

Amber Art and Design also found opportunities to distribute Seedlings at other community events in Fairhill and throughout the city. At Taller Puertorriqueño, a Latinx cultural center in Fairhill, Fernandez and Johnston had a coloring table during Feria del Barrio—a community event and block party that has been happening for decades. The Fairhill team also distributed coloring books and had conversations at a “Playstreet” in Harrowgate, east of Fairhill. The Playstreets program, run by Philadelphia Parks & Recreation, closes streets to traffic and provides lunch and play equipment for kids during the summer months. Parks & Recreation also printed and distributed coloring books to other Playstreets.

Amber Art & Design had tables at the Tookany/Tacony-Frankford Watershed block party, a Mural Arts block party in Logan Square, and a Hispanic Heritage Month celebration at the Navy Yard. Fernandez and Johnston also took Seedlings to activities for their other projects, including a presentation for a mural that eventually will be at the Rivera Recreation and Mann Older Adult Center in Fairhill and paint days for another mural. Although the team was unable to distribute coloring books through Cramp Elementary (an anticipated anchor site) or other schools, Fernandez was able to give books to The Attic Youth Center to use in their summer program. Common Field, a national network of independent arts organizations and organizers, mailed Seedlings to registrants for their 2021 virtual convening, Sustaining Futures.

Grays Ferry

- ⇒ Anchor site: Lanier Park
- ⇒ Residents within a ten-minute walk: ~12,250
- ⇒ Heat index: 1.7 degrees hotter than city average
- ⇒ Artist: Jenna Robb
- ⇒ Community leads: Tyrique Glasgow and Phyllis Brennan

Artist Jenna Robb began engaging with community members in fall 2020 by experimenting with distanced ways to exchange experiences. She designed postcards that contained prompts for people to write about their summertime experiences and memories. Robb installed “mailboxes” on the Lanier Park fence for people to submit filled out postcards. However, without an aggressive distribution and marketing campaign, the postcards did not elicit many responses. Robb had more success personally distributing and collecting them in the context of workshops and events throughout the project. Her project evolved into three overlapping waves of engagement: an intergenerational exchange around urban heat, discussions about ways to enhance Lanier Park, and a gardening and mural club that led to a mural at the Growing Together Garden.

In fall 2020, Robb began a process of intergenerational engagement around the topic of urban heat. She facilitated a series of workshops in Lanier Park, during which children made drawings and found-object sculptures of magical cooling structures for the park. Around the same time, Robb dropped off postcards with a social worker at the nearby senior apartments at St. John Neumann Place. The elders’ postcards and the drawings and photos of the sculptures dreamed up by the youth served as the material for an asynchronous intergenerational exchange. Robb created an individualized journal for four elders that included their filled out postcard and drawings by one or two children accompanied by a series of questions prompting the elders to provide their feedback on the children’s ideas.

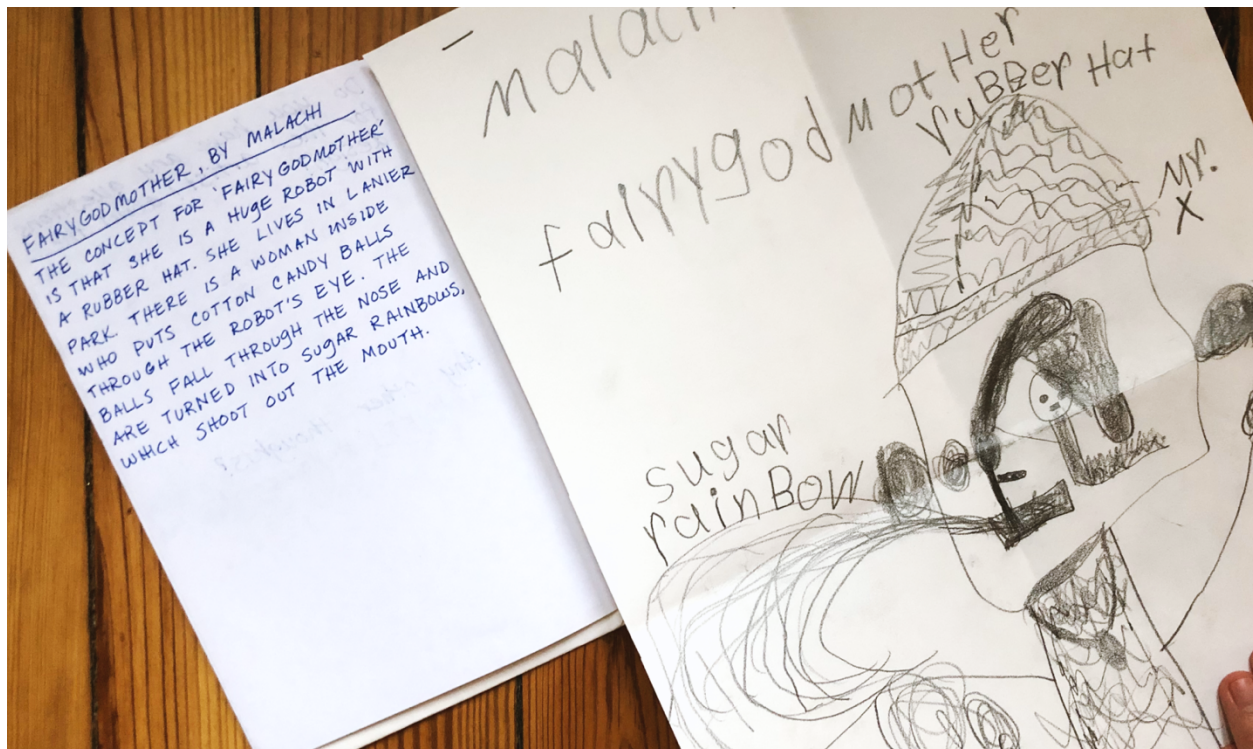


Figure 4: Child's drawing in elder journal, 2021. Photo courtesy of Jenna Robb.

In spring 2021, Robb also conducted a series of community meetings in Lanier Park and at St. John Neumann Place to discuss opportunities and needs in Grays Ferry that might be addressed through Heat Response. Attendees were a mix of people who had been involved in the recently disbanded Friends of Lanier Park and others who got connected to the project through flyers or other outreach. Attendees stressed the importance of having more activities for kids in the park, so Robb continued offering drop in art activities at the park that summer. The group generated many ideas, like a shade structure over the playground area or a community fridge protected by a lattice with growing vines. Ultimately, the intervention that felt like the highest need that matched the budget available was to install two more benches in the park. The St. John Neumann Place residents were eager to have more social activities at their site. In summer 2021, the Grays Ferry team was able to host an “ice cream social” with live music and popsicles in their courtyard. The live music turned into an open mic session and the team collected postcards and had conversations with attendees around their experiences of urban heat. With all the necessary logistics and COVID delays, the benches were finally installed in Lanier Park in spring 2022.

In summer 2021, Robb developed a partnership with a group from [215 People's Alliance](#) (215PA) who garden at the Church of the Redeemer Baptist's Growing Together Garden, a few blocks away from Lanier Park. 215PA, an independent, multiracial collaborative dedicated to fighting for equity and justice in Philadelphia, was interested in providing more activities for families and children at the garden. For Robb, they offered an existing network of people to tap into, as well as a project lead and financial resources for supplies. Together, they developed a weekly gardening and mural club at the garden where kids helped to tend to plants and made drawings of what they observed in the garden. The group decided to design a mural for the side of a shipping container used for gardening supply storage. In spring 2022, with the help of a Tyler CAP intern, Robb hosted a series of bilingual (Spanish-English) workshops in her studio. During these workshops, a group of parents and their children completed observation and drawing exercises. Ultimately, they collaboratively generated the design for the mural from their drawings and then painted the mural together over a series of paint days in June 2022.



Figure 5: "Growing Together/Creciendo Juntos," 215 People's Alliance People's Growing Project with Jenna Robb and Jason Killinger, 2021. Photo courtesy of Jenna Robb.

Southeast Philadelphia

- ⇒ Anchor site: Southwark School
- ⇒ Residents within a ten-minute walk: ~21,247
- ⇒ Heat index: 1.6 degrees hotter than city average
- ⇒ Artist: José Ortiz-Pagán
- ⇒ Community leads: Gibran Medina and Sulay Sosa

Artist José Ortiz-Pagán began his work on this project by conducting individual conversations to understand how the different sectors in Southeast Philadelphia are affected by extreme heat. He learned about experiences in schools and among youth and those of gardeners, small business owners, and restaurant and construction workers. In addition, Ortiz-Pagán spoke to advisory committee members to understand what work organizations are doing citywide to mitigate extreme heat. In fall 2020, Ortiz-Pagán hosted two virtual town hall meetings where he asked people from these different sectors to share anecdotes about how heat is affecting them. In order to feel more connected in this virtual format, Ortiz-Pagán delivered mullein tea, which is used to cool body temperatures, to each participant. To make sure that youth voices were included in the project, Ortiz-Pagán and Tyler CAP students held two virtual participatory design workshops with youth from Puentes de Salud, Juntos, and Fleisher Art Memorial's Teen Lounge program in the spring of 2021. Participants used their imaginations to tweak Southeast Philadelphia rowhomes and other aspects of their neighborhoods to better address issues related to urban heat. Also in spring 2021, the Southeast Philadelphia team organized a clean-up day on Community Lead Sulay Sosa's block near Southwark School.



Figure 6: Youth workshop whiteboard, 2021. Photo courtesy of Abi Mlo.

As a result of all of these conversations and experiences, Ortiz-Pagán came up with the idea to create a prototype planter structure that would increase vegetation and potentially green canopy while also addressing the challenges of growing in small spaces or paved areas. Given that Southeast Philadelphia is largely an immigrant community with large shares of renters, this planter structure could be dismantled and moved with you wherever you go. Ortiz-Pagán invited Nicky Uy and Omar Buenaventura of [Bahay215](#), who had also participated in the virtual town halls, along with Community Leads Sulay Sosa and Gibran Medina to participate in a co-design process for the planter. Bahay215 is a Philadelphia-based collective that is focused on adapting Filipinx traditions in Lenapehoking, creating “kapwa” or unity between self and others with seeds and plants. Bahay215 had already created a planter that was hosted by the Asian Arts Initiative and had been connecting with other people around growing plants from their native cultures. The team also developed a relationship with Solarize Philly to incorporate solar power into the structure.

The team also envisioned the planter as a platform for sharing strategies for what kinds of plants could grow in the planter and the knowledge of how to grow them. To this end, the team conducted interviews with immigrant gardeners, in Spanish and in English, about their experiences adapting to growing in the Philadelphia context. Tyler CAP student Allyson Whisler set the audio of these interviews to multilingual animations. To share these interviews more broadly, Ortiz-Pagán did pop-up projections of these videos at Fleisher Art Memorial, South Street Community Garden, and Southwark School in April 2022.



Figure 8: “La Sombrilla” by José Ortiz-Pagán and Omar Buenaventura, Southwark School, 2022. Photo courtesy of Ceisler Media & Issue Advocacy.

After months of Ortiz-Pagán and Buenaventura passing the design back and forth in an “exquisite corpse” design process, and then building the planter structure at the NextFab maker space, “La Sombrilla” debuted at a block party in the Southwark School yard on May 21, 2022. La Sombrilla is a sculpture that creates a social oasis and a space for plants to grow in a seasonal shade canopy. The design uses rainwater and solar power to provide lighting, cell phone charging, and a spray station for cooling off. The block party was coordinated to follow a “Rolling Rodeo” event with Southwark School and Families and Neighbors of Southwark. Many immigrant-based organizations like Puentes de Salud and Juntos were invited to participate. There was food, popsicles, music, art activities, and an Indonesian dance-performance blessing. Bahay215 invited participants to write about their connection to the earth on cloth flags, which were then festooned on the top of La Sombrilla. It was an extremely hot day with a heat advisory, which emphasized the need to talk about extreme heat, but everyone persevered and enjoyed the opportunity to gather.

Citywide

- ⇒ Artist: Eve Mosher
- ⇒ FAO Schwarz fellow at TPL: Abi Mlo
- ⇒ Engagement coordinator: Joshua Reaves

As the lead artist, Mosher supported all of the site teams by directing the production of an engagement kit that could be used at neighborhood events. The kit included “Popcycle”—a cargo tricycle painted with Heat Response graphics that sometimes carried a tree or shade umbrella, custom popsicles provided by Philabundance, and a packet of materials. The packets came in a colorful envelope printed with a message about urban heat in four languages (English, Spanish, Vietnamese, and Khmer). Inside the envelope were mullein seeds, a recipe for the cooling mullein tea that Ortiz-Pagán had shared with his town hall participants, instructions to turn the envelope into a paper pot, one of the postcards designed by Robb, and (eventually) a copy of the Seedlings coloring book. Teams handed out packets at multiple events throughout the project, including at April 2022 Earth Day events—one hosted by Philadelphia’s Office of Sustainability at the Cherry Street Pier and another hosted by the Da Vinci Art Alliance in South Philadelphia.

In addition to these materials, Mosher and TPL conducted a number of efforts to get the word out about urban heat to a wider Philadelphia audience. In June 2021, the entire team, including multiple TPL staffers and all of the artists, pulled together to present at the Pennsylvania Horticultural Society’s Philadelphia Flower Show. The event was being held outdoors in FDR Park for the first time, as a result of the COVID-19 pandemic. Robb took the lead on designing and painting a portable mural that described the issue of urban heat in the three project neighborhoods. The mural included a chalkboard area to entice children to engage with the installation. The Popcycle also had its debut carrying a live oak tree. While the team had many conversations with event attendees, they also realized many attendees are not from Philadelphia and may not be as personally affected by the issue of urban heat.

The team also produced two webinars to promote the project, citywide. In September 2020, as the project was kicking off, one webinar featured Morales, a Heat Response community lead, and Philadelphia City Councilmember Katherine Gilmore Richardson. In March 2022, a second webinar hosted by The Pew Center for Arts & Heritage included presentations by the Pennsylvania Horticultural Society, UC Green, Heat Response’s Fernandez, and TPL’s Owen Franklin. This webinar focused on how creative strategies can support greener and more connected communities. With the help of Ceisler Media & Issue Advocacy, the project team also shared information about urban heat and the project on social media and successfully earned media coverage about the issue and the project in local press.



Figure 9: “Popcycle” by Eve Mosher, Iglesias Community Garden, 2021. Photo courtesy of Holly Hazell.



Figure 10: "Future Philly-Green City," Eve Mosher, 2022. Photo courtesy of Eve Mosher.

The Heat Response team also sought to document and amplify residents' perspectives, weaving their voices with others involved in the project. Through audio, Mosher, Mlo, and Tyler CAP students captured residents' reflections on their lived experience with heat and their imagined future Philadelphia. Artists Nate Dorr, Gina Furnari, and Mosher then used these interviews as inspiration to create short "[Future Philly](#)" videos. In August 2022, Scribe Video screened the Future Philly videos at Church of the Advocate in North Philly as part of their Street Movies! series. Hopefully, these videos can be screened throughout Philadelphia to spark conversations about mitigating urban heat and other effects of climate change. Mosher also developed an inspirational sketchbook called [Notes on Creative Engagement](#) to share with others the "how and why" of the creative engagement tools and tactics used throughout the Heat Response. Generated from reflections on the project with the Heat Response artists and communities, the sketchbook provides a usable and useful tool for continued engagement.

ENGAGEMENT TAKEAWAYS

In its documentarian capacity, Metris reviewed all of the artifacts from Heat Responses' numerous public engagement activities. Below, we synthesize and share key takeaways from participants' comments and creative outputs.

Participants' experiences of extreme heat

→ *Extreme heat is a health danger—causing exhaustion, lethargy, dehydration, even increased risk of fatalities.*

Participants frequently called out extreme heat's health risks. They noted that it poses additional risk to those who suffer from asthma, since heat contributes to air quality concerns. Extreme heat "baking" garbage compounds health risks, with pandemic-caused garbage pickup delays sparking lots of participant comments.

→ *Extreme heat disrupts daily life and routines.* Participants shared the insights that people go outside and walk around less. They make choices where they can stay indoors in air-conditioning and wait for the temperature to go down. Extreme heat can make it unsafe to travel and make public transportation and walking less desirable. Participants struggled to sleep at night, in extreme heat, and maintain regular healthy routines. They noted that there aren't enjoyable activities to participate in during hot weather without ways to stay cool. They found that sometimes the heat is so bad that even water recreation becomes unattractive.

Feels like you're baking inside of the oven. Really hard to, you know, keep the energy up and get things done.

—Lauren Troop, Iglesias Garden workshop participant

→ *Participants' experience of heat has shifted over time and place.* They have noticed the shift in weather patterns, but find them difficult to predict and are uncertain about what is now normal. To them, heat feels more unbearable now than when they were children. Participants compared heat in Philadelphia to other places they have known: surrounding areas, Miami, places outside the United States, and tropical regions. They stated that Philadelphia seems hotter than these places, because of lack of trees and vegetation. Yet, some did not perceive Philadelphia as a climate-vulnerable place, since we are not as susceptible to hurricanes and flooding as some other regions.

→ *Warmer temperatures and climate change are complicated topics to navigate emotionally and personally.* Some people felt that summer heat and warmer winter weather should be enjoyed. Others had mixed feelings; they enjoy the heat and warmer winter weather, but recognize the environmental concerns it raises, such as more severe winter storms, flooding, and other harmful health impacts. Several people expressed feelings of dread about climate change that affect their mental health. Others emphasized how everyday actions, such as using less plastic, helps them feel like they are doing their part. One participant even stated that they had chosen not to have children because of the carbon footprint of bringing additional humans into the world.

→*Urban heat is intertwined in many other aspects of urban life and puts pressure on systems also stressed by inequity.* Participants noted numerous interconnections between urban heat, daily life, and infrastructure. Heat causes challenges for urban food production in community gardens. Infrastructure like power can be stressed because of high air-conditioner use. There can be economic impacts when cultural programming is disrupted or businesses close because of unsafe working conditions. Those who rely on older cars to get to work struggle, if heat causes the car to break down. Older school buildings do not have adequate HVAC systems, creating difficult learning environments. Litter and trash are ongoing issues in Philadelphia, so it was no surprise that they came up as a regular concern for participants, especially during the early phases of engagement in 2020. In the summer of 2020, Philadelphia struggled with trash collection, causing household trash to be baking at the curb for days at a time, adding to significant litter and dumping issues in many neighborhoods.

→*Extreme heat creates unsafe working conditions.* Participants talked about how people who work indoors (such as restaurant kitchens) and outdoors (such as farm, construction, and sanitation workers) are most affected by heat in their working environment. During the pandemic, the need to wear masks was an added stress in extreme heat conditions.

→*How the current built environment perpetuates urban heat causes concern.* Participants noted how new, large-scale residential development increases cement and reduces greenspace, which make residential neighborhoods hotter. Parents also expressed serious concern about the inadequacy of school buildings to withstand extreme heat, endangering children's health.

Gardening's many community benefits

→*Youth development:* Participants said that gardens can be a safe space for children and youth to connect to nature, unplug from technology, contribute to their community, and learn about food production and environmental stewardship.

→*Connections to nature:* Everyone benefits from the connections to the land and nature that gardening nurtures.

→*Wellness:* Participants called out the wellness benefits that gardening provides, including relaxation, peace, stress reduction, and combating isolation.

→*Cultural heritage:* Gardening can have a special meaning for immigrants who maintain connections to their cultures, as they adapt to gardening in new contexts.

→*Community:* Community gardens provide a way to gather with others in the neighborhood, make friends, and give back.

→*Knowledge Sharing:* Gardeners share expertise with each other about growing particular plants and are stewards of neighborhood histories.

Ideas for cooling ourselves & our neighborhoods

→*Urban heat and climate change education is important for people of all ages, especially youth.* Participants emphasized that climate education should include gardening, learning about trees, the importance of urban greenspace, and environmental stewardship. They noted that parents can be reached through teaching their children. Adults had questions about what makes some neighborhoods cooler than others and what kinds of climate disasters are likely in Philadelphia. Climate education should be culturally relevant, since several participants shared how unprepared they were for urban heat, in particular, when they arrived from different climates. One idea was tiny free libraries curated around climate.

→*More human-centered cooling infrastructure would include more water recreation, shade structures, and seating.* Participants voiced a need to shift in priorities in our built environment and our workplaces to center joy, health, and respect. Participants talked about swimming in pools, playing in “spraygrounds,” and going to the beach as ways to cool off, but noted that they are not always nearby. They commented on the scarcity of shaded areas for play and to rest, like gazebos, tables with umbrellas, or seating for guardians near playground equipment.

[This involves] rethinking of how we build, how we expand, how we make places where people live, not only beautiful, but healthy places and places where people are happy. Where I see children playing and creating lots of water parks and other little places where kids can play and be cool in the summer.

—David Acosta, artist and Fairhill resident

→*Increase the built environment’s climate resiliency by incorporating trees, gardens, and green infrastructure.* Participants envisioned more integration of greenery throughout the city. They noted that trees and plants also support our well-being. Beyond open spaces, participants said that green infrastructure, such as green walls and roofs, can be cooling infrastructure. Participants frequently spoke about the benefits of trees: providing cooling shade (especially for outdoor workers) and doing double duty as a food source (fruit trees).

→*Neighborhood greenspaces (parks, community gardens) are crucial for cooling and could be so much more.* Participants recognized that parks are places to catch a breeze and do other enjoyable activities, but could use lots of improvements including: bikes to use for free, bike racks, increased ADA accessibility, public restrooms, more seating, and lighting that comes on earlier in the evening. Participants identified community gardens as spaces to go and cool off, but noted that gathering space does reduce available growing space. Participants also noted the potential for vacant lots to be greened, planted with trees, or used for solar panels.

→*Outdoor spaces can be places for community members to come together to provide neighborhood care.* Participants noted that clean up days on streets and in parks are great ways to engage people of all ages in stewardship of public space and create opportunities for connection. Participants identified

opportunities for more connections between existing efforts, including incorporating community gardens into Love Your Park programming.

→ *Water, refreshing snacks, and food are vital for dealing with extreme heat.* Participants commented on the importance of safe water access, especially to avoid dehydration during outdoor activities in the heat. Refreshing treats like fruit, cooling drinks, ice cream, and snacks filled their memories of summertime and always make beating the heat more enjoyable. Participants suggested water stations throughout the neighborhood and a community fridge to provide cold drinks, produce, and healthy food options.

→ *Art and creativity can be tools to address urban heat and climate change.* Participants shared numerous insights about how art and creativity can help communities become more resilient. Creative practices can help us access our imagination and come together to generate new ideas. Art activities often involve observation and can connect us to the world around us. Participants noted that caring about people and the natural world is a precondition for caring about climate change. Art can bring people together and help them access joy or share fears around climate change. Art can make public spaces more attractive and enjoyable.

→ *Air-conditioning and fans are complicated necessities.* Participants spoke to the critical need to escape extreme heat with air-conditioning; summer can be challenging and unenjoyable without it. They also noted that we go outside and walk less, because of the need to stay in air-conditioning. Participants recognized that air-conditioning is a bit of a catch-22—the energy we use on air-conditioning contributes to climate change and its exhaust can even make the outdoors hotter. They also pointed out that not everyone has means to afford air-conditioning and were concerned for unhoused people and other vulnerable populations. Some participants shared ideas to make cooling centers better gathering spaces, since home-based air-conditioning is isolating and not accessible to everyone.

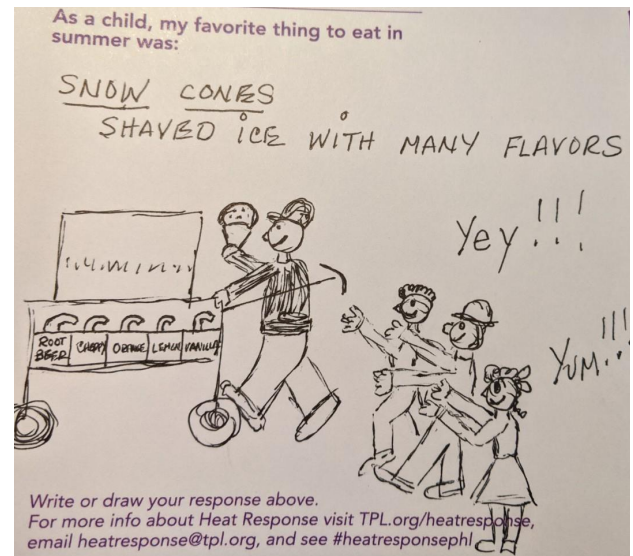


Figure 11: Postcard collected at ice cream social, 2021. Photo courtesy of Susannah Laramée Kidd.

PROJECT ASSESSMENT

What factors contributed to Heat Responses' successes and challenges? This section explores the project mode, programming, and activities. We provide reflection points for TPL and others who may embark on similar future projects.

Completing this project was hard. Heat Response launched in March 2020, as the World Health Organization declared COVID-19 a global pandemic. The team, who had envisioned a high degree of collaboration and community engagement, was forced to pivot to virtual and distanced engagement. Urban heat descended on the list of urgent priorities as the uncertainties rose with an airborne virus, job income loss, closed childcare, fear of eviction, and more. A mere few months later, the murder of George Floyd sparked global racial unrest and protests against brutality and discrimination against Black people. The COVID-19 pandemic and racial unrest influenced the project team's and community's mental, emotional, and physical capacity and desire to participate in the project. This set a tone for the project's two-year duration. Schools moving to fully remote learning put stress on families and made it impossible to engage at school anchor sites.

Nonetheless, Heat Response seemed timely. The project came about when people needed hope and opportunities to connect during isolation. Multiple heat waves and heat-health emergencies occurred over the summers during this project. Hurricane Ida caused historic flooding in September 2021, making climate change devastatingly real and its discussion pressing.

What worked well

Heat Response's artists and leadership team continuously adapted to ensure arts activities brought healing and creative opportunities during a unique, challenging time. Below, we highlight key achievements in the project process and outcomes.

Leaning into partnerships & collaboration

Heat Response teams developed several partnerships that opened up possibilities for everyone involved. The Tyler CAP program students provided extra energy to all of the activities, working the most closely with Amber Art & Design to produce the Seedlings coloring book. A CAP program professor, Billy Yalowitz, noted how Heat Response gave CAP students the opportunity to work directly on a real project in ways they hadn't been able to before. Bahay215 was integral to the construction of La Sombrilla; this project also helped them to continue to develop relationships with individual gardeners. 215PA brought organizing power and financial resources to the mural design project; Robb, in turn, helped 215PA offer creative family programming at the Growing Together Garden.

Relationships with community leads particularly bore fruit when they had a lot of time to give or could bring institutional relationships to the project. Morales, for example, proved instrumental in developing the relationship with Concilio that led to Heat Response workshops within their youth programs. Brennan, a long-time Grays Ferry resident, was an enthusiastic thought partner and program participant.

Artists also characterized the opportunity to collaborate and interact with other artists as unique and a project bright spot. They collaborated during recurring meetings, which shifted from bi-weekly to monthly over the project's duration. Attendees included project staff (Mlo and Reaves), the artists

(Mosher, Fernandez, Johnston, Robb, and Ortiz-Pagán), and Metris Arts (Laramée Kidd and Mangar). Artists discussed challenges and sought advice from each other and other call attendees during these check-ins.

Providing targeted engagement opportunities for youth, families & elders

Participants were thrilled that Heat Response offered targeted programming for people of all ages. Fernandez and Johnston conducted workshops with high schoolers at Concilio. Ortiz-Pagán did workshops with youth from multiple organizations. In Grays Ferry community meetings, community members asked for kids programming at Lanier Park, particularly during the summer months. Robb and Fernandez both found that providing children's activities in public space was a good way to engage their parents and guardians in conversation. The La Sombrilla Block Party also invited residents of all ages to enjoy food, music, performances, and art activities at the Southwark School Playground; the team marketed it as a family-friendly event in coordination with the school parents' group. Seniors expressed enthusiasm about the ice cream social at St. John Neumann Place and expressed a desire for more onsite social events.

Both adults and children found the mural design workshops conducted by Robb and 215PA notably meaningful. Two of the parents shared moving stories about how they were able to express themselves in the design process. One talked about how the exercise to express themselves through drawing lines helped them to express their sadness at not being able to visit their native country in many years. Another woman explained that her drawing, which was included in the mural, was about her commitment to unity and how she felt that in the design process. These same women also talked about how important it was to them to have art opportunities for their children. One noted during the sensemaking workshop that she really valued that there was no age restriction in the mural club, so that both of her children could participate.

Working with community gardens & amplifying the practice of gardening

Neighborhood residents already shape their local environments through community gardening, with community gardens tending to be sites where people are highly engaged and organized. These dynamics made community gardens prime sites to engage people in the topic of urban heat.

All of the Heat Response neighborhood projects relied on community gardens for engagement and topically emphasized gardening. The Fairhill team, for instance, facilitated two events hosted by Iglesias Garden. Robb and 215PA collaborated to produce a mural at the Growing Together Garden. Together they facilitated workshops through a gardening and mural club, and gardeners affiliated with 215PA contributed to the mural making process. Ortiz-Pagán's engagement focused on speaking with Asian and Latino/a/x/e gardeners who are immigrants to Philadelphia. They had conversations focused on what gardening represented to them, how it connected to climate change/heat, and why gardening mattered to them personally. These conversations emphasized how gardening represented a connection to gardeners' native countries and how they adapted for the limited space for gardening in Philadelphia (e.g., non-traditional spaces for gardens, such as balconies and small backyards). Both of these elements factored into La Sombrilla's design.

Creating opportunities for immigrant & bilingual participation

Heat Response's engagement activities and deliverables frequently incorporated Spanish interpreters or bilingual English-Spanish materials. A Spanish-speaking participant, for instance, served as the interpreter for the gardening workshops and conversations hosted by Robb. This enabled gardeners

who spoke only Spanish to fully participate in the mural design process. Ortiz-Pagán, a Spanish speaker himself, or other bilingual participants would at times translate during events he hosted. Metris translated all of the stories used in the sensemaking workshop into Spanish and hired an interpreter for the workshop. Morales celebrated how the Seedlings coloring book also incorporated English-Spanish bilingual representation. Still, a sensemaking workshop participant noted that having more information available in multiple languages is an ongoing need, so more resources could have been put into language accessibility.

Southeast Philadelphia has been an immigrant community since the nineteenth century and continues to include residents who are recent arrivals. The Southeast Philadelphia team intentionally engaged with many Asian and Latino/a/x/e immigrants. Many of the gardeners they engaged emigrated from communities with agricultural practices, so that the gardeners had learned stewardship of the land and gardening in childhood. The La Sombrilla Block Party also saw noteworthy participation by recent immigrant arrivals to the United States.

Organizing & participating in clean-up events

Heat Response's community leads drove the clean-up events that occurred in each neighborhood. Project team members described these events as high impact because of their immediate beneficial outcomes. Green streetscapes, parks, and public spaces often represent solutions to alleviate urban heat, but these spaces must feel welcoming and safe for residents to visit them. The clean-up events highlighted how stewardship can promote residents' health, safety, and well-being in the communities by opening doors for functional, welcoming public spaces. Moreover, they illustrated why immediate interventions matter for communities enduring urban heat and disenfranchisement challenges.

Challenges

Heat Response was TPL Pennsylvania's first venture into an issue-based initiative rooted in creative, grassroots engagement. The pandemic created an even steeper learning curve and put pressure on numerous elements of the project structure.

Supporting a complex project across multiple neighborhoods

Heat Response adopted a grassroots model focused on three neighborhoods across the city. This resulted in tensions between achieving local level goals and TPL's bureaucratic limitations, as a national nonprofit organization. Fostering neighborhood trust and empowerment opportunities frequently required immediate responses or support to address urgent issues, especially during the pandemic, but TPL regularly needed numerous approvals or check-ins for action. Working concurrently in multiple neighborhoods also meant spreading out logistical support and financial resources for project activities across three sets of needs. Reaves, for example, traveled to three neighborhoods in one day for the three-site clean-up day. Reaves found transporting the Popcycle to events especially strenuous, given the distance between the sites and added challenge of urban heat.

Stretching the budget

Some of Heat Response's goals were too ambitious for the budget allocated to them. The artists' fees, for instance, did not match the deep, long-term engagement necessary to realize neighborhood projects, especially during a pandemic. One artist estimated that their labor compensation ended up being only ten dollars per hour, given high time commitment. More money also could have been

allocated to the realization of art projects. During engagement activities, residents generated great ideas and community leads expressed a strong desire to see more tangible community projects, but the project budget constrained the ability to realize them. Heat Response planners also had hoped that these projects could endure. Given the minimal stewardship budget for this grant-funded project of limited duration, this proved unrealistic. Some team members also questioned whether marketing funds, an expenditure required by the funder, might have been better spent on other project activities. The marketing team's efforts garnered local media coverage, but some wondered whether that coverage resulted in benefits to the communities.

Providing staff with the right capacity in the right roles

Everyone involved in Heat Response felt stretched; pandemic stressors contributed to this, but were not solely responsible. Given its complexity, Heat Response would have benefited from a TPL project manager to oversee all aspects of the project. The TPL team included an additional staff member in the planning phase, but when she left the organization, her departure left a gap in the project manager role. One sensemaking workshop participant noted the lack of someone to coordinate partnership relationships and information sharing. Different people filled in the gaps throughout, but no one person had visibility on all aspects of the project; at times, details and relationships fell through the cracks. As the lead artist working citywide, Mosher provided some of this oversight, but her inability to be on the ground limited her capacity to fill this role. In hindsight, a TPL project manager with the authorization to make budgeting and marketing decisions, and answer related team member questions, but whose role was still focused on direct implementation would have been ideal.

Community leads and advisory committee members' roles needed more clarity and could have been revisited given the context of the pandemic. Initially, TPL envisioned that community leads would promote the project and connect the artists and TPL with people through their existing networks and work in the community. The pandemic created new needs and expectations for this connecting role, and their compensation probably should have been increased to reflect this expansion. TPL also recruited the community leads prior to the pandemic, so some with families or full-time jobs, had to reduce their availability. The advisory committee also lacked specificity on parameters and expectations of their roles. Consequently, they played a minimal role in the project. Artists sometimes found it challenging to know how or when to engage with them. Neither community leads nor advisors were able to provide the partnership and support that the local artists often needed.

Building neighborhood-level community relationships & partners

Heat Response struggled to access and maintain the connections and relationships required for neighborhood-level work. TPL selected neighborhoods where they had existing organizational relationships from its previous work developing park spaces. TPL, however, does not directly provide neighborhood programs and does not have direct relationships with residents. This meant that artists often served as "the face of the project." At times this put artists in the awkward position of seemingly acting as TPL representatives, when they were not TPL staff.

Community leads could not always fulfill their envisioned roles as neighborhood connectors, even though TPL identified them through its prior relationships and selected them because of their neighborhood knowledge and connections. Medina and Sosa, for instance, had been part of a very active Southwark School parents' network, prior to the pandemic. The pandemic prevented them from engaging with other parents in the same ways. Perhaps if community leads had represented

organizations with more formal Heat Response project partnerships, the pressures of the pandemic would not have put so much stress on their informal networks. The artists had more success collaborating with community organizations that offered stable, ongoing connections and ties to participants for project activities.

The anchor sites, unfortunately, also did not end up being the envisioned fruitful spaces for programming and connections. The pandemic resulted in the two school anchor sites closing for in-person gatherings, and school staff were too stretched and stressed to engage. Eventually, Southwark School was able to host the La Sombrilla Block Party, suggesting that the school could still be a generative space for organizing in the future. The two park anchor sites also involved challenges; these parks do not have on-site recreation staff or much formal programming. Lanier Park did have Friends of Lanier Park, a group that disbanded and re-formed during the project; Robb did hold many successful events oriented towards children there. Yet, it makes sense that Growing Together Garden, with their 215PA-organized group of gardeners, and Iglesias Garden, with their mission to be a gathering space and provide cultural programming, were both very conducive to hosting programming.

Aligning citywide marketing & neighborhood outreach

Heat Response contained different and sometimes competing priorities when it came to marketing/communications. The citywide team members sought a wide audience to amplify neighborhood residents' experiences and increase visibility for urban heat as an environmental justice issue. However, the approaches needed to reach neighborhood residents differ completely from the approaches to reach a citywide audience. As a national institution, TPL has more of a national audience for its website and social media presence. TPL did not have much flexibility in how these tools could be used or how often they could be updated. The project team would have liked to create a social media account specific to the Heat Response project or even to a particular neighborhood site in the project, but that was not possible. The marketing consultant hired for the project did not have much to offer the neighborhood teams, who needed more direct communication approaches like flyering and getting the word to specific groups of people through trusted intermediaries.

The citywide marketing efforts could have used more focus on a clear audience or specific impact goal, since communicating at this scale requires a lot of effort. Although Heat Response probably reached its widest audience at the Flower Show, TPL questioned the level of effort required and whether the audience was the right one, so decided not to repeat it. The "Art in Action for Greener, Connected Communities" webinar felt successful in terms of a well-attended, smooth event, but its intended audience also lacked specificity. Without clearer impact goals, TPL defaulted to using Heat Response marketing efforts to forward TPL's larger mission and fundraising, rather than the project's specific goals.

Discussing urban heat as a topic

The project team found it difficult to initiate discussion about urban heat, and the weather itself was often a barrier to engaging residents. People were not used to reflecting on their experiences of heat and connecting them to environmental justice. Participants were more ready to talk about nature, the environment, and climate change in general. During times of high heat, residents wanted to go outside infrequently, which made it difficult to receive substantial turnout at project activities. On especially hot days, heat advisories forced activity cancellations. Conversely, during colder seasons, drawing connections to urban heat also proved difficult, making the topic seem irrelevant. Many

project team members also lacked experience with the topic. Artists struggled to balance learning about urban heat while communicating broadly to residents on the topic; they felt pressured to fill in the gap of an urban heat expert. Nonetheless, artists and others on the project team acknowledged having a new awareness about urban heat and its inequitable effects after experiencing this project.

What will live on

The Heat Response project generated a multitude of relationships, individual and organizational learning, and tangible benefits for the project team and residents. In this section, we highlight Heat Response's enduring outcomes, as well as remaining questions to consider for similar future endeavors.

Deeper knowledge of urban heat's unequal effects

Several project team members shared that their understanding of urban heat as an environmental justice issue had deepened through Heat Response. While they found it challenging to learn about urban heat while simultaneously engaging communities on the topic, the artists also credited the project as a deep dive into learning about how urban heat impacts communities disproportionately. One artist shared that they did not know that urban heat was an environmental justice issue until participating in this project.

New tools & public space improvements

Heat Response generated several “lasting” communications tools to support the continuation of this work and others doing similar projects. These include the [Seedlings](#) coloring book, interviews with gardeners set to animation, three [Future Philly](#) videos, and the [Notes on Creative Engagement](#) sketchbook. The [StoryMap](#) website tells the story of this project and hosts these tools. The project also generated improvements in Grays Ferry public spaces: new benches at Lanier Park and the mural at the Growing Together Garden. La Sombrilla will hopefully be able to be installed in and be an oasis for more liminal public spaces.

Ongoing relationships & avenues of work

Many of the relationships formed in this project will continue, and all of the artists are exploring ways for the artworks and ideas generated to live on. Robb plans to continue collaborating with 215PA at the Growing Together Garden. Ortiz-Pagán and Bahay215 have had a lot of interest from groups who would like to host La Sombrilla; they are working on a framework to bring La Sombrilla to more communities. Amber Art and Design continues to work with individuals they met through Tyler CAP. They also plan on creating more coloring books related to environmental justice, with goals of the next one focusing on food justice. Mosher is collaborating with TPL to find additional venues to showcase the Future Philly videos.

Remaining questions

Despite numerous challenges and barriers, Heat Response still managed to produce joy and beautiful artworks inspired by and co-created with community members. Even as we celebrate the perseverance and achievements of everyone involved, questions remain about how this and similar projects move forward.

Heat Response started a conversation about urban heat and how we can invest in communities disproportionately affected by climate change. But, the project comes to an end when momentum is building, because funding has run out; this mirrors the typical dynamics of grant-funded projects. In the sensemaking workshop, one participant was mystified by this dynamic, asking “Why would you do this for three years and then just stop?” Another tentatively shared a more critical view:

Sometimes it feels like when these projects stop that it’s kind of like the people in power don’t really want us to take it to the logical conclusion, because that would mean that the people will wake up and that it’s real and that we have to do something about it. And so the end of these projects sometimes feels just kind of like on purpose, right? Stop the movement, stop the energy, so that the folks who are in power stay in power and the systems that are there stay there.

In the short term, TPL still needs to identify the next steps for maintaining these relationships and keeping the conversation going. Sensemaking workshop participants emphasized the opportunities to continue the relationships and strengthen the partnerships formed during this project. They also noted the opportunity to tell the story of the new mural at the Growing Together Garden, perhaps even by putting it on a postcard. One of the other ideas that surfaced was to produce a quarterly newsletter about urban heat (shared in multiple languages, of course!). Sensemaking workshop participants also highlighted the opportunity to venture into similar projects that would address other community issues. They also voiced strong interest in more activities suitable for families with children of a range of ages and mural projects in schools. One participant, who had seen the Future Philly videos, emphasized the opportunity to screen the videos in schools.

Longer term questions also remain... Will TPL be able to incorporate the lessons that emerged through Heat Response into its overall mission and specific strategic efforts? How can TPL identify and allocate resources to sustain Heat Response and/or embark on new, similar projects (particularly since this mode is outside of TPL’s usual avenues of work)? Others considering continuing the work Heat Response started or embarking on similar projects should carefully consider their project’s theory of change and intended outcomes. How can initiators of community-based projects better integrate long-term planning and steward relationships and energy built along the way?

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