Practice of Conservation in Cities in North America

VERSION 2.0

The Nature Conservancy

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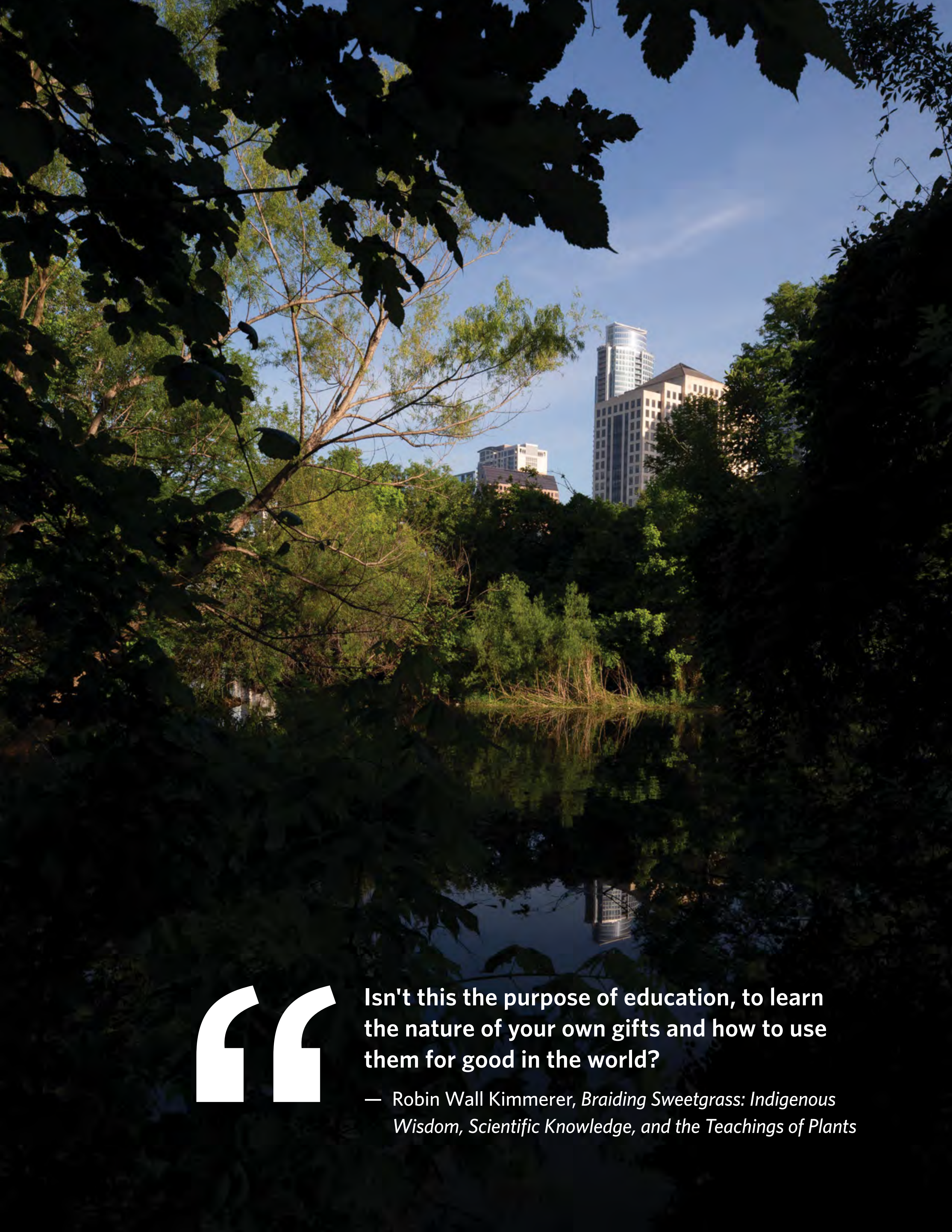
COVER Parkside neighborhood in West Philadelphia, PA. © Kendon Photography; OPPOSITE PAGE Austin, TX. © Mark Graham; INSIDE BACK COVER ASU Polytechnic Campus in Phoenix, AZ. © Rick Triana; BACK COVER Danyell Brent works with the Friends Rehabilitation Program to bring more gardens and green space into his community in Philadelphia, PA. © Marc Steiner


Isn't this the purpose of education, to learn the nature of your own gifts and how to use them for good in the world?
— Robin Wall Kimmerer, *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants*

ACKNOWLEDGMENTS

The Practice of Conservation in Cities captures the collective experience of Cities Network staff and partners from 2019 to 2021, as we cultivated a learning network to develop and scale successful conservation programs in 23 cities across the United States.

This work represents a collaborative effort that would not have been possible without the thought partnership of many brilliant conservation leaders across and beyond The Nature Conservancy. It is the result of a prolonged and complex process and has been molded by many hands.

We sincerely thank the numerous contributors for their patience, time and effort. Some of our colleagues and friends have moved on to new roles or different organizations since we launched this endeavor, and we are excited to lift up their stories and share critical learning that will assist practitioners seeking to enter this important arena.

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We extend our gratitude to The JPB Foundation for its generous support.

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Seattle, WA. © Angel Castellanos

Tree planting in Albuquerque, NM. © Roberto Rosales

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FOREWORD

CHRIS CHANDLER
Director of the North America Cities Network

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> "In one sense we are always traveling and traveling as if we did not know where we were going. In another sense we have already arrived."
> — Thomas Merton, The Seven Storey Mountain 1948

Before embarking on any journey, one is wise to consult references to gain a deeper understanding of people and place. The mark of a well-used guide is one in which its edges are frayed, and pages are worn from use—perhaps it even has a sample pressed between two pages. Guides serve as a resource to help make sense of the world around us so we can better understand our place within it.

Practice of Conservation in Cities is the companion to the original *Field Guide to Conservation in Cities* from 2017. Within these pages are stories, not prescriptions, on how the practice of community-centered conservation work has evolved to create a more durable and equitable change in cities across the United States. This resource shares evolving practices and perspectives that inform conservation approaches, ranging from the benefits of community forests to participatory grant funding to values-based storytelling, all rooted in unlocking more equitable outcomes for all city dwellers.

Cities are highly complex ecosystems worthy of our endeavor to learn, understand, and engage with people and their relationship their environment. Throughout the writing of this guide, cities endured extreme climate-driven events, social uprisings in the wake of systemic injustices, and a pandemic that tested our resolve and drove home the interconnectedness of our health and environment.

Founding leader of the Cities Network Meera Bhat was keen to say, "As the authors and editors of this document, we knew we could never get it exactly right, so we sought instead to share, to reflect on and to capture what felt important at this particular moment in time."

Wherever your conservation journey finds you and your partners, from the city center to the interconnected landscape around it, I hope the *Practice of Conservation in Cities* serves as a resource to help guide your community-centered approach to building trust and relationships toward a more equitable future for people and place.

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INTRODUCTION

Most introductions to works about conservation in cities start by describing the scope and scale of urbanization, presenting cities as sites of contamination that also hold promise, explaining how many people call cities home and so on. But this is a publication for practitioners. We trust you, the practitioner, to understand why conservation in cities is justified and, indeed, essential. For those who would like this context, we recommend reading the first chapter of *Field Guide to Conservation in Cities in North America*, the elder sibling to this publication, which defines key terms and sets the stage for the less conventional introduction you are reading now.

For those who are ready to continue, we'll start by exploring the two foundational ways that mainstream conservation practitioners have historically categorized the city landscape: by **place** and by **people**. Conservation in cities requires centering both. This dual approach invites important questions around the interaction between scales: neighborhood <-> district <-> city <-> region; and individual <-> immediate network <-> larger community. Creating and maintaining dynamic flows of energy, information, ideas and engagement among these scales is essential to achieving healthy, equitable city communities. These same flows structure cities as networks and (eco) systems in which power—and power dynamics—shape the physical and nonphysical dimensions of the landscape.

This publication's chapters dive deeper into particular practices, stories and strategies that The Nature Conservancy's (TNC's) Cities Network staff and partners see as foundational to equitable conservation in cities. So, how can we frame the values and contexts in which conservation in cities is implemented in place and with people?

Rooting conservation in cities *in place*

A telling history is embedded in the fabric of every city—in the presence, absence or degradation of natural and social systems; the location and layout of buildings, streets and neighborhoods; the ways we move within them; and the places we choose or are permitted to gather. These histories—among them ecological, social and cultural—are written across the city landscape in complex layers. Learning to read them is essential for conservation practitioners working in cities.

ECOLOGICAL HISTORY

One starting point is the ecological history of place. As with many points of origin, questions lead the way. What is the most recent ecological designation of a site (wetland, grassland, forest, etc.)? What was it decades, centuries or millennia ago? Where did water previously flow? What kinds of wildlife lived in that type of habitat? Soil maps, U.S. Geological Survey records, naturalists, biologists and oral and written histories are good sources of this information. The histories of places remind us that stasis is a myth. Places are dynamic, shifting and evolving in response to the elements, climatic changes, species migration, tectonic movements and more. By embracing

The Nature Conservancy in Washington has worked closely with many local partners to reimagine Seattle's waterfront as resilient gathering place where people and nature thrive together. © Angel Castellanos

dynamism, or the manifestation of energy, we can build our understanding of what can be sustained and provided in today's landscapes.

SOCIO-CULTURAL HISTORY

Change is also an indisputable constant of socio-cultural history. What was the ownership and pattern of land or water use over the past 10, 50, 100 or more years? Whose territories were colonized, and who invaded the territories? Who was enslaved, brought here and forced to work this land? Who now makes their home here, and how do they value it? Who holds the stories of the land and the waters? What traditional knowledge and practices sustained these places? How did settler colonization impact these practices and Indigenous cultures? How do these impacts continue today? Histories from Indigenous Nations, Google Earth, land records, interviews, local elders and oral and written stories are helpful tools for analyzing how land and water use has changed over time.

COMMUNITY ENGAGEMENT

A multi-layered process where individuals come together to organize around common issues and develop strategies for collective action to achieve long-term and sustainable outcomes through relationships, discourse decision making or implementation. To be successful, it must encompass strategies and processes that are sensitive to the community context in which it occurs.[1]

But merely understanding historic and current land and water use patterns does little to further equitable conservation. In short, there is no way to talk about or do the work of conservation in cities without first understanding, acknowledging and planning to address the enormous impact and continued influence of colonialism, slavery, systemic racism, capitalism and patriarchal privilege.

Mural in Belmont neighborhood in Philadelphia, PA. © Kendon Photography

1 https://aese.psu.edu/research/centers/cecd/engagement-toolbox/engagement/what-is-community-engagement

LAND OWNERSHIP AND MANAGEMENT TODAY

There are as many answers to the preceding questions as there are cities in the United States. Yet distinct themes emerge across geographies because land ownership, access, use, governance and management in a modern-day context inevitably translate to power, privilege and influence. In 2020, for example, TNC owned more than 2.3 million acres of conservation lands worldwide, equating to more than $2.1 billion in assets. The power this affords gives us outsized influence and leverage, as well as the ability to drive decision-making. This power dynamic is true in cities as well, even though TNC is unlikely to own property there—which makes it even more critical that we understand and honor the land's histories and current circumstances.

Fences, walls, community gardens, levees, recreational spaces and public art are all clues to how these contexts translate to perceived value. Vacant land, development that is poorly planned or lacking entirely, insufficient tree canopy, repeated flooding and highway overpasses dividing neighborhoods, for instance, can signal disinvestment. And underneath these signals lie streams, fossils, bones, artifacts, stories, memories and other clues to past lives. These clues are often incomplete and misleading, as so much of what we see is shaped by decisions made by people and institutions, some of whom hold power over cities and neighborhoods that they may never have visited.

Policy decisions at every level, from the Clean Air Act to federal housing ordinances to zoning regulations, have impacted the social, political and economic realities of frontline communities, leading to racial and socioeconomic segregation in many cities. The resulting system of land ownership and management has proven to be self-reinforcing, subject to inertia and resistant to change, leading to continued oppression, marginalization and disenfranchisement.

If done authentically, the hard work of uncovering the deeper history of a place—through research, engagement and, most importantly, listening—can demonstrate respect for a community and their vision for the future. But it's essential to engage communities in discussion and decision-making from the onset to spark relationship building, trust and healing for the land and its peoples.

Grounding conservation in cities *in relationships with people*

Cities are complex ecosystems where nothing happens in isolation. Conservation in cities is rooted in a dynamic web of interactions among individuals, broader partnerships and coalitions. Trust—an essential thread in conservation in cities—is often sown through community engagement.

BUILDING RELATIONSHIPS THROUGH COMMUNITY ENGAGEMENT

Well-facilitated community engagement is key to weaving together seemingly disparate goals, actors and efforts to create a stronger, more cohesive whole. Authentic engagement brings people together to develop a better understanding of their shared skills, networks and needs.

Relationships formed through community engagement grow best when those involved commit to being attentive to the relationship over time. Again and again, practitioners share that community-centered conservation in cities *moves at the speed of trust*. Communities want to know that practitioners are capable and dependable, that they will uphold their commitments and that they'll stick around when circumstances change. When you undertake community engagement, plan to sustain any relationships you forge for years.

Community engagement at its best begins with open-ended conversations, that are without expectation, and that are marked by active listening. Done effectively, these conversations yield not only trust but greater understanding of the potential levers to create change.

ALIGNING IN PARTNERSHIP

Personal relationships are the foundation of any informal or formal collaboration. Given this centrality, any call for partnership or network of partnerships should stem from a community engagement process that intentionally incorporates many perspectives, concerns and wishes, rather than a process that begins with an abstract goal such as "bringing people to the table." Power mapping early in a partnership can help identify existing and potential players, clarify perspectives and enable all parties to hear and share their points of view (see Cross-Cutting Practices for Partnerships chapter for more). If done correctly, thoughtful partnerships enable more human-centered, responsive programs that provide solutions, strengthen relationships and put ideals and values into practice.

MOVING TOWARD COALITION

Finding alignment in relationship and partnership opens the way for an even more complex, more collaborative and often more powerful structure: the coalition. Addressing complex social and environmental challenges in cities will require collaboration across sectors. This is an intentional way of working together, sharing information and building a coalition of actors who can align around common goals and produce uncommon results. Practitioners who contributed to this publication identified coalitions as the next frontier for this work, citing their ability to support collective impact for people and nature. Contributors also reported various levels of experience with coalition building. For that reason, coalition as a model appears throughout this publication, but not as a central pillar.

Like the land and water, these people-centered interactions—individual relationships, partnerships and coalitions—are inherently dynamic. They move and change over time.

Expectations and tips for navigating the *Practice of Conservation in Cities*

This publication is organized into two sections that contain a total of nine chapters, which together explore our cross-cutting and place-based practices. Chapters address both place and people. We suggest you start with the Cross-Cutting Practices for Partnerships chapter as core foundational guidance and move from there, using the chapter titles as signposts to forge a path that is your own.

Cross-Cutting Practices

[**kraws-**kuht-ing, **kros-**] [**prak-**tis]
adjective/noun. **cross•cut•ting•prac•tices**

Ideas, beliefs, methods or concepts that apply across multiple fields of thought or interest.

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CROSS-CUTTING PRACTICES FOR PARTNERSHIPS

Strong, authentic partnerships are bigger than a decision to work jointly on a project, affect more than the organizations that sign agreements and have an impact beyond the communities they serve. They involve respect for the diverse perspectives, skills, attitudes and networks that each person and organization brings. The most equitable and fruitful partnerships are grounded in human relationships and inspire conservation practitioners to put ideals into practice.

Create the right conditions

Partnerships should begin by establishing shared goals and addressing decision-making and power dynamics. This process should be clear and should expressly identify and acknowledge the scope and systemic nature of the problems or concerns that brought the partners together. Speak forthrightly about organizational and institutional shortcomings and biases, rather than glossing over the challenges of the work or uncomfortable dynamics. Create conditions in which all partners—including people in the community—see that their contributions and talents are taken into account and valued. Agree to revisit norms, address problems in productive ways and provide recognition and constructive feedback.

The questions to frame partnership development and the continuum of community participation set forth below provide guidance to people or organizations interested in forming robust partnerships. Note that not all partnerships require shared leadership; however, shared leadership is often an end goal for, and a natural result of, robust stakeholder participation.

> "Community engagement is a strategic conservation priority, and every department can and does play a meaningful role in building capacity for more equitable partnerships with communities. While every partnership is unique, successful collaborations share common characteristics. Trust is by far one of the most critical enabling conditions and it is essential for partners to be effective in their efforts to work together. Trust can be developed over time, and it can be lost in seconds. Truly equitable partnerships encourage authentic communication and invest time and resources to ensure the inclusion of various perspectives. They also involve shared decision making and accountability by all parties. As projects develop, flexibility, reciprocity, adaptability, and results continue to build a foundation for long-term success."
>
> — Myriam Dondzina, Deputy Cities Network Director

Questions to frame partnership development

The more questions that are asked, and the more perspectives that are incorporated, the more likely a partnership will move toward the goal of shared leadership (see Continuum of Community Participation graphic on pages 17–18). In this context, "community" includes organizations and businesses that are part of the partnership or affected by the partnership, as well as individuals whose lives or livelihoods will be impacted by the partnership.

Here are some helpful questions to ask about the community:

- What community is the partnership centering or serving?
- What is the shared goal held by the community and the partners?
- Who in the community will be most impacted by this project?
- Did the community ask for this partnership? Have the partners heard and incorporated the perspectives and goals of the community? (If the answer to either question is no, the partners should re-evaluate their intent.)
- Which individuals and organizations will represent the community in the partnership?
- How will community participation be structured so that leadership is shared?
- How will differing perspectives be balanced to most benefit the community?
- Would a power map or other modeling tool help clarify roles and responsibilities?

Questions to ask about resources:

- What support will the community need to remain involved throughout the entire process and in the long term?
- What financial and nonfinancial assets can each partner contribute to ensure the community's involvement and the project's success?

Questions to ask about relationships:

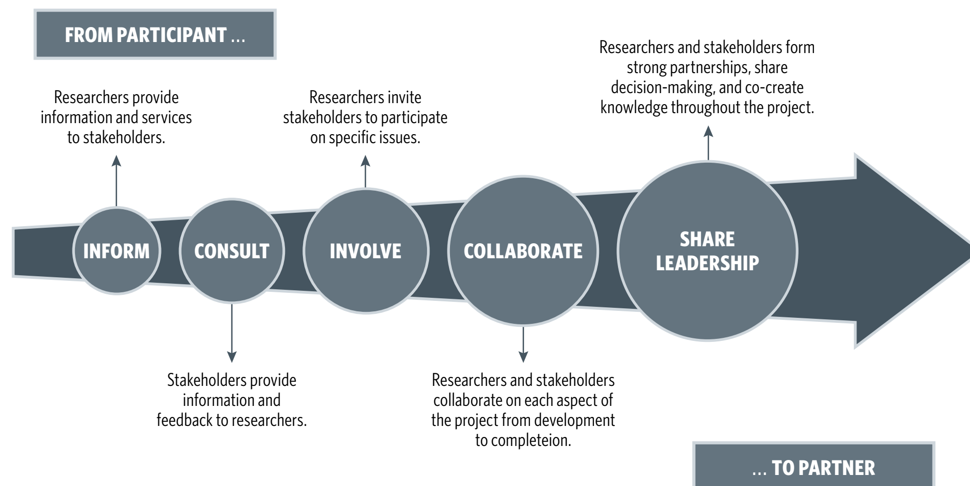
- What biases (regarding class, race, resources, etc.) affect the partnership?
- What power dynamics exist (who has more power, who has less), and how will they be addressed?

Questions to ask about challenges:

- What obstacles will the partnership potentially face?
- What leadership changes are expected within organizations or the community?
- What funding challenges are anticipated? How will that affect the partnership in the short or long term?
- What else is happening in the community—such as opening or closing of schools, availability of subsidies for redevelopment, jobs creation efforts or other initiatives—that might affect the project?

CONTINUUM OF COMMUNITY PARTICIPATION

Any call for formal or informal partnerships should come through a community engagement process, rather than from an abstract goal such as "bringing people to the table." Be prepared to identify the assets that the community brings to the relationship and to fully incorporate the community's concerns and wishes, especially if they do not completely overlap with those of the greater partnership. Power mapping can ensure that all parties hear the perspectives and goals of others and share leadership in the outcomes. See Resources for additional suggestions.



Adapted from:

Balazs, C. L., & Morello-Frosch, R. (2013). The three R's: How community based participatory research strengthens the rigor, relevance and reach of science. *Environmental Justice*, 6(1).

National Institutes of Health. (2011). *Principles of community engagement second edition*. (NIH Publication No. 11-7782).

BIGGEST CHALLENGES: TIMING AND PLANNING

The fastest way to disenfranchise or disempower a partnership—and to reinforce negative perceptions that stem from asymmetrical power dynamics—is not to allow sufficient time for decisions, discussion and practicalities.

- Allocate years to form connections in a community, rather than months.
- Give partners ample notice if their input is needed on a grant proposal or report; avoid making last-minute requests that may be disrespectful of their time.
- Remember that smaller or volunteer-led organizations may not be able to respond as quickly as larger ones.
- Take work schedules, childcare and access to public transportation into account when planning any meetings.
- Be aware of people who participate substantially and do not receive compensation; budget funds to reimburse community members or volunteer leaders for their time, transportation or other costs.

Managing power asymmetries

Partnerships can bring to light historically entrenched power dynamics that involve conscious or nonconscious influence or control stemming from privilege based on race, gender, economic or social status. Power dynamics are often asymmetrical, with one person or entity having more access to information or resources than others.

For example, a person who has only had positive interactions with elected officials may feel confident speaking to them in a public setting, but members of a community who have not been made to feel welcome and included in public processes may not feel empowered to do so. Invite community members to elevate their strengths and assets—such as cultural introspection, historical knowledge or problem solving—and ask what they would like to contribute. Listen to their concerns or fears and uncover any historic or current practices that reinforce their feelings. Be ready to respond if partners who are used to holding power feel challenged by the idea of sharing it.

Invite members of the community into conversations and do not try to explain for them or speak over them.

Asymmetries in power are present in many common scenarios and represent systemic barriers to equitable impact on communities. For example, a nonprofit, municipality and/or funder may decide on priorities and solutions first, before approaching the community. An organization might offer funds to add assets, such as parks or trees, that the community did not request. A partnership may offer paid staff to coordinate and host community meetings, but the staff are considered outsiders by the community. A project could change the community so much that it causes gentrification, making the neighborhood unaffordable or unwelcoming for the current residents.

Power dynamics come into play even when partners diligently plan for a better outcome. One way to reduce asymmetries is to begin with intent. Establish a relationship where resources are shared equitably, and privilege is used to share power. Create an understanding of each partner's strengths and goals in addition to the partnership's shared strengths and goals. Determine how partners will address race and class dynamics when deciding who gets to lead, who finalizes decisions, who controls resources, who is hired to develop or support the partnerships, who is considered an expert, etc. Record meetings so that people who cannot attend can view them. Consider who will communicate decisions, questions, disagreements or action items to the community. (See Resources for additional suggestions.)

Building trust

Trust can be strengthened in part by openly evaluating each partner's assets and identifying the monetary and nonmonetary investments that each will contribute to support the partnership. It is especially helpful to establish relationships before conversations about money begin. This discussion should also include a determination of who will be paid to maintain the partnership and whether community members can afford the trade-offs in terms of money, time or energy sacrificed. If they need financial reimbursement, determine how the partnership can support stipends for food, professional development, childcare, transportation assistance, technology or other needs.

PARTNERSHIP WORKING AGREEMENTS

Rules of behavior to which all parties adhere. Review and discuss which agreements, if adhered to, would help to reinforce trust and transparency among partners. Also, discuss and agree on how they will be operationalized in practice. Some of the rules in the Cities Network's current working agreements include:

- Respect confidentiality
- Presume good intent
- Attend to impact
- Accept and expect a lack of closure
- Ask questions and replace assumptions with information
- Make room for joy
- Explore the full potential of what is here and honor the diversity of what has come before
- Be open to feedback
- Address conflicts openly and in real time, and work toward resolution
- Hold learning at the partnership's center
- See people as equals
- Communicate failures as well as successes
- Be transparent when communicating about each organization
- Recognize and acknowledge power imbalances
- Respect different needs for effective work; be willing to stretch to meet each other's organizational culture

> "Despite the idea that money from the partnership could equate to power, control or a feeling of subordination, we approached our relationship [with TNC] on an even level. I wouldn't say it was specifically because of the grant, but rather because of our existing relationship. I think this speaks to the importance of having relationships that started before money became part of the equation."
>
> — Christina Smith, Groundwork Bridgeport and Partnership Fund recipient; see Policies and Equitable Public Funding chapter for additional details

In addition, to enhance trust and ensure that all benefit from new information and experiences, determine how learning and knowledge management will happen among partners and community members. Agree on who owns or co-owns resources created by the partnership and establish expectations for how these will be shared beyond the partnership.

Set projects up for success by creating processes and procedures to help all parties manage through inevitable conflict. Diffuse tension by addressing processes and procedures from the onset and by establishing partnership working agreements for all interactions (see sidebar on page 19). Identify which processes or tools will best support co-creation of ideas and an equitable exchange of perspectives. Decide how to identify and manage any shifts in power dynamics. Agree how to articulate, respond to and engage with disagreements. Determine how and when to communicate failures by partners or challenges among them, and how and when to recognize and communicate success.

Whole Measures for Urban Conservation, a reference produced by TNC and its partner Center for Whole Communities, provides another way to build trust, reduce tension and find alignment in objectives between partners. The approach also helps identify systemic barriers and measures that can center equity within a partnership. (See Resources for additional suggestions.)

Pop-up park, Albuquerque, NM. © Roberto Rosales

CASE STUDY

It takes the time it takes in Albuquerque, NM

TEAM MEMBER

Sarah Hurteau, Former TNC New Mexico Climate Program Director

When I started as TNC's city lead in Albuquerque, the total guidance for the program was a one-and-a-half-page document. It was exhilarating and terrifying to have so little guidance. At that moment, I didn't understand that my life experience had prepared me for this challenge.

I grew up in California, in a family with little means and sometimes not enough food. My parents battled addiction and mental health issues that left my childhood home a scary place to be at times. I often served the role of parent, even as a child, and in that way, I have always charted my own course. I learned to seek out mentors and advisors where I could find them, to find examples of what being successful meant and to connect to people whose skills and traits I admired. I emulated their behavior, constantly trying to build a better life for myself.

I had never before had a job that required me to pull from all those life lessons—to find compassion, seek advisors, adapt quickly to changing conditions and be resourceful and self-reliant. It left me reeling and having to sort through feelings and experiences from my past that I had never fully dealt with. I felt so energized and good at my job while simultaneously feeling wholly inadequate.

I was both eager for, and worried about, working in predominantly Hispanic and Indigenous communities as an Anglo. I was hyperaware of not wanting to repeat patterns found throughout the history of conservation. I frequently found myself saying, "I want to do conservation WITH people, not AT people." This statement became a mantra.

While there are lots of inspiring examples of how TNC city leads put people first in their work, the approaches I witnessed were not quite right for Albuquerque. In those early days of the Cities Network, the people-first ideas and practices were not fully developed or tended to be focused on Black people or people of color rather than Indigenous communities. Working with Indigenous communities means working with sovereign nations. Therefore, I drew examples from TNC's work with other countries, which provided me with the best examples for deep community engagement and partnership.

It was daunting to have so many ideas around empowerment, strong voices and authentic engagement. So, I just started showing up. To community meetings, events, outings, whatever. To everything. I ate at local restaurants in neighborhoods I had never visited before, because if you don't know your favorite dish in the *restaurante* everyone is talking about, you are definitely an outsider. I spent more of my personal time in these neighborhoods. I swam at the pool in the local high school. I took dance classes there. And before I knew it, it didn't matter anymore that I was Anglo, or that I didn't live in that community. I had become a trusted ally, thanks in part to being present and developing personal relationships with the people I met.

Acequia is a Spanish word adapted from Arabic, meaning water carrier. It is one of the oldest examples of green stormwater infrastructure and has been used in New Mexico for hundreds of years to manage drinking water,

Sarah Hurteau works on a pop-up park in partnership with the Albuquerque community in 2019. © Roberto Rosales

irrigation water and stormwater. Because of its history with the community, I knew that acequia culture and practice needed to be a part of TNC's urban program in Albuquerque. I reached out to CESOSS (Center for Social Sustainable Systems) in town, which reconnects people with urban waters through acequia culture, but I couldn't get their attention. Then I learned they hosted historical walks along acequias, so I showed up. It was incredibly enlightening and so I came back. On one of those trips, I met the children and husband of CESOSS' executive director Virginia Necochea; we had a wonderful walk with deep conversation about the history of the community and their place in it, the role of the acequias and why they were doing the work they did.

Within a few weeks, I was sitting down with Virginia. Over time we developed a partnership that resulted in the installation of 2,500 gallons of rainwater storage at Dolores Gonzales Elementary School. We expanded the school garden that provides fruits and veggies to families facing food insecurity and held a visioning session with teachers, which led to a large underutilized dirt area around the school being turned into green space. I had no idea this would be the focus of our work together. I showed up, I listened and I learned about the organization, the community and the people and how best TNC could catalyze and support strong conservation and community outcomes.

It takes time to build strong foundational relationships in a new place. You can't control the schedule or outcomes. It can't be rushed. The most important aspect of my work and what I am most proud of is the multitude of authentic relationships I have built.

EQUITABLE FUNDING AND GRANT-MAKING

Funding is the engine of conservation. The people making decisions related to funding command a great deal of power to decide how conservation work is done, what natural systems it impacts, where it takes place and who will benefit from the work. Funding decisions are not made only by the foundation boards, executives and program officers (and their governmental equivalents) who select strategic and geographic priorities. The decisions are also made by organizations such as community foundations and nonprofits who regrant funding, and by the fundraisers and program leads who write funding proposals that identify the scope, geography and likely impacts of proposed conservation work. In addition, funding decisions are the daily work of the executive and global leadership of large environmental organizations who set priorities, and of the finance and accounting teams who implement strategies by enforcing budgetary alignment and restrictions. Every person who works in conservation has opportunities not only to make decisions about funding, but to make funding more accessible to a wider range of people and projects.

> "It's easy for funders to underestimate the influence of their comments and decisions. Has a grantee ever deferred to your suggestion, even though they had other ideas grounded in experience and practice? Has your team ever wanted to work on a specific project but applied their ideas to a different project or in a different geography because that's where funding was available, or work was approved? Those who disagree with funding decisions should not be met with raised eyebrows or a denial of funds. As one of the privileged few in charge of funding decisions, we are responsible for changing this dynamic. Our good intentions are not enough. Instead, we need to name the barriers to equity and adopt new behaviors and practices that lead toward justice."
>
> — Emy Rodriguez, founding Cities Network Deputy Director

Access and influence

Funding for conservation is often highly restricted or attached to predetermined, funder-specified outcomes, which may not be informed by or align with an impacted community's needs and priorities. The individuals responsible for funding decisions are inherently vested with power by virtue of their access to money and exclusive influence. If equity and justice are to be centered in funding decisions, that power must be shared with the partners who receive conservation funds. The sharing of power requires a deliberate effort rather than simply good intentions.

Students from Escuela Verde visit The Nature Conservancy's Muckwonago Preserve. © Gary Porter LLC

Putting equity into action means continually finding ways to meet people where they are and trying to deliver equitable outcomes, while examining the systemic barriers that people, organizations or programs face. It is critical for an organization pursuing equitable funding to constantly examine these barriers. Organizations should also examine their policies, practices and processes for addressing unintended consequences, such as becoming gatekeepers to resourcing opportunities or creating processes that impede the distribution of funds.

This is especially true in a whole communities context, where strong collaborations should exist among funders, conservation advocates, community-based organizations (CBOs) and members of the communities and geographies they serve. Equitable funding requires the creation of conditions and processes that inspire all partners to work toward collaboration, accessibility, fair distribution of resources, proactive plans that address intersectional issues, shared decision-making power and a shift in shared expectations.

> "Early in the program's development, TNC's Puget Sound Cities team recognized that the problem wasn't a lack of organizations working to support nature in cities. Rather, several barriers prevented existing projects from moving at scale, including policy, communications, access to sustainable funding and a lack of coordination of existing efforts."
>
> — Hannah Kett, Puget Sound Cities Program Manager

Structural inequalities in funding

TNC, as a global environmental leader, is in a unique position to influence funding so that it is more equitable and better balances power and resources in conservation. Large environmental organizations, especially those that participated in historic funding practices which reflected systems of privilege and failed to equitably distribute funding, have an obligation to use their voices and resources to foster more equitably directed grant funding. TNC is in an important and influential position to do so, by using awarded funds and by influencing the wider conservation field. As both funders and intermediaries, TNC and similar organizations must ask how they can address the flaws in funding distribution and find avenues to better balance power and resources in conservation. At this moment in time, large environmental organizations are both perpetrators of inequities and dismantlers of them but are learning and changing to achieve that balance.

The answer is more complex than simply getting money out the door. It requires identifying and taking action on barriers to equitable access to resources, developing more participatory decision-making processes, prioritizing transparency and bringing more people into positions of power and influence. It also requires committing to strengthening and supporting the vision and goals of organizations and alliances who are building power in frontline communities.

Access to the connections needed to establish trusting funder relationships and the time and energy required to develop collaborative strategies with funders has been a privilege enjoyed, fairly exclusively, by relationship managers at large organizations. Organizations that operate at the scale of TNC, and that have historical cultural and programmatic alignment with communities of wealth, are more easily able to access large gifts and benefit from connections with funders than many community-based organizations. In addition, the transactional nature of what some refer to as the nonprofit industrial complex often leads large organizations to compete for money, either by fostering an "us versus them" mentality or by simply taking the majority of the dollars.

As a means of addressing systemic racism that has resulted in a preference on the part of many funders to invest in privileged and wealthy, white-led organizations, some funders have empowered large environmental organizations to serve as intermediaries for work in nonwhite, nonwealthy communities. Unless it is done with great care, that type of approach can perpetuate a legacy of pervasive, systemic racism within philanthropy and the environmental field. Just as problematic, the larger environmental organizations have often advanced strategies that are well understood and championed by white, wealthy communities and funders, creating a feedback loop of funding and project work that ultimately ends up serving the interests of only a small community of people. Indeed, communities where people have fewer financial resources are often the focus of the fundraising asks, but a substantial portion of the money raised may end up in the bank accounts of the large organizations rather than in the hands of community members.

The history of embedded racism and the legacy of privilege of white and wealthy voices unquestionably influence conservation funding decisions. The visibility of these deeply entrenched systems of privilege is slowly increasing, thanks to decades of focused advocacy work and recent, powerful social justice movements, as well as a focus on new practices such as those outlined in this guide. Ultimately, the best and most efficient way to grow the power of nonwhite, nonwealthy voices and priorities in the environmental field is to directly fund the organizations created by and led by staff from these communities and movements. The efforts must involve communities across divides whose conservation needs are being neither acknowledged nor met. (See Resources for more information.)

Notably, environmental organizations like TNC and others are increasingly calling for funding to be more equitably distributed to grassroots communities and the people who will face the first and most extreme impacts

of climate change or other environmental problems. CBOs, especially those led by representatives from within those communities, directly serve the neighborhoods and people most impacted by structural inequalities and systemic racism. Emerging movements and campaigns need funding, as do long-standing organizations that have been meeting the urgent needs of communities which were exploited and excluded from decision-making processes and access to funding to protect their lands, waters and other natural resources.

There are two clear paths forward to address these funding issues. Both are critical. The first is to reform practices within large organizations and shift the mentality to include a broader context for the impacts of action. This includes rethinking approaches across project scope, fundraising strategies, budgeting practices, hiring and retention and communities served. This requires time, resources and working through fear or discomfort. Many of the practices described in this guide, once implemented, will contribute to adoption of those different approaches.

Meanwhile, people and communities impacted by historic and present-day structural inequalities, including systemic racism, have begun creating pooled funds and regranting organizations that advance social justice and environmental justice missions. These funds give CBOs direct access to the economies of scale leveraged by organizations like TNC and the opportunities to develop their own funding and trusting relationships, as well as to direct valuable pass-through funding. The second path is for organizations like TNC not just to support and partner with emerging organizations, but to be conscious of, and most importantly to deliberately avoid competing for the same funding streams.

Day of the Dead celebration at Escuela Verde, a public charter school in Milwaukee, WI. © Gary Porter LLC

CASE STUDY

Moving beyond transactions when regranting in Puget Sound, WA

Dirt Corps is a green infrastructure training organization that works primarily with women and others who have been historically underemployed in green jobs. In 2018, Dirt Corps sought funding through TNC's Puget Sound Cities regranting program to collaborate with youth-serving organizations on tree education and giveaways.

Though Dirt Corps and TNC had partnered informally previously, this was an opportunity for the two organizations to more formally collaborate, build long-term trust and co-create future strategies.

An important initial step was to establish open lines of communication between Puget Sound Cities and Dirt Corps, ensuring that Dirt Corps had access to TNC as a resource and support throughout the project. In addition to dreaming up collaborations around communications, we started to tackle the realities of the trust gap between a global, white-led environmental organization and the place-based youth-serving groups with whom Dirt Corps sought to work. Over the course of the grant, the Puget Sound Cities team engaged in direct conversations with Dirt Corps and their partners about how TNC could be less of a barrier to groups on the ground. It was a humbling reminder that the reputation of the funder has an impact on the fund recipient as well. As TNC seeks to be an anti-racist, inclusive organization, affiliating with TNC came with both positive and negative consequences for Dirt Corps.

By maintaining a partnership and navigating these challenges together, TNC and Dirt Corps were able to expand upon this initial funding, collaborate on individual restoration days, identify opportunities to expand workforce development and training in the region and more.

Recently, Puget Sound Cities re-invested in Dirt Corps to support their ongoing training efforts. This decision took place outside a formal request for proposals (RFP) process and was based on a discussion with other partners around how to support best practices related to urban forestry and community engagement. Throughout the partnership, funding has been a tool that enables each organization to achieve its mission and think creatively about how collaboration can be leveraged to achieve even more.

Seattle Waterfront in Seattle, WA. © Angel Castellanos

Cities Network transformative funding approach

Because of its size and scope, TNC has enormous influence over funding in the conservation sector—and so it has a responsibility to model and advance transformational funding. Transformational funding practices contribute to creating an ecosystem of stable, successful and sustainable collaborations between communities, nonprofit organizations, municipal governments and for-profit organizations. This stable equilibrium allows organizations to focus on local, regional and national goals in complementary rather than competitive ways.

As part of a large, well-funded organization, TNC's Cities Network extends benefits to organizations that are local, grassroots, frontline and community-based via a series of transformational regranting mechanisms. Regranters like TNC can bring additional value, expertise and capacity to equity and justice efforts in the conservation field by financially and strategically supporting the work of CBOs and by investing in a collaborative approach that leverages the skills, knowledge and resources of TNC's conservation practitioners. It is critical for TNC to avoid replicating work being done by others. Rather than competing with partners, large environmental organizations that are both a regranter and conservation partner themselves must invest in lasting relationships and knowledge about community context in order to amplify the impact of the partnership.

> "More than any single tool or practice, a receptive approach makes transformational funding, rather than transactional funding, possible. Instead of simply bringing answers and urgency, we should bring big questions and the patience for dialogue. We can alter the expectations of all conservation partners by adopting an attitude that is open to listening to and learning from each other."
>
> — Andrea Fritsch, TNC Participatory Funding Specialist

City program leads and teams on the ground are the people who truly make TNC's regranting transformative. Team members develop and maintain relationships, build shared understanding of systems and larger context for local conservation work, and co-develop strategies and evaluation with partners. TNC local chapter leadership also

THE CITIES NETWORK FUNDING APPROACH

The Cities Network defines its funding approach in this way: The Cities Network's funding initiatives seek to shift and share power and decision-making with grantee partners. Through these funding initiatives, TNC is committed to providing financial resources and technical support to frontline and environmental justice communities and organizations in the cities where we work in order to improve community health, social conditions and ecological well-being using a whole communities approach. Deepening our commitment to cross-sectoral organizations working diligently to address community needs will create enabling conditions for increased collaboration, engagement and knowledge sharing to facilitate meaningful coalition building in our Network cities and ultimately inform our approaches and increase our impact.[2]

The Cities Network co-created four grant-making mechanisms in response to different needs articulated by Network members and partners:

1. The Strategic Small Fund
2. The Partnership Fund
3. The Storytelling Fund
4. The Strategic Relief Fund

Each mechanism was developed following an iterative design process and has been an important lever for creating accountability in centering equity across the Cities Network.

2 https://adaptationprofessionals.org/wp-content/uploads/2020/10/Strategic-Relief-Fund-RFP.pdf

creates the enabling conditions within organizational structures and budgets, as well as in the organizational culture, to transform funding work and resource sharing.

> "In St. Louis, we were fortunate that the planning team prepared a pot of very flexible funds at the onset of the launch of the Missouri Cities Program. This allowed us to make sub-awards directly to local organizations with whom we were building relationships and trust. Having this funding to share with our partners and offering it to support conservation-related projects that they were already interested in implementing yet struggling to find funding for, allowed us to demonstrate our collaborative approach and commitment to equitable partnership in St. Louis."
>
> — Rebecca Weaver, Missouri Cities Program Manager, St. Louis

Funding practices that foster equity

"For every barrier to an equitable distribution of funds, there are transformative practices that can change the dynamic," writes racial justice advocate Sarika Tandon. The environmental and philanthropic sectors have been imagining and testing new funding approaches and practices for decades. While the Cities Network and TNC still have a long way to go to perfect these, TNC Cities program staff and partners conducted a literature review and participatory design processes to identify the four practices that are essential to the development of more equitable funding approaches. (See Resources for further information.) These practices are:

1. Create and maintain trusting relationships
2. Understand the larger context of conservation efforts through collaboration
3. Co-create strategies and evaluation
4. Refine grant-making processes to support long-term sustainability of CBOs

These insights and recommendations draw heavily on unpublished internal research and findings prepared by Sarika Tandon and project manager Afia Genfi. Following these insights, we provide a list of approaches that the Cities Network regranting program has used to address these concerns. The insights are deliberately transparent about TNC's successes and productive failures.

1. CREATE AND MAINTAIN TRUSTING RELATIONSHIPS

When establishing trusting relationships with conservation partners, bear in mind that communities know their values and strengths. As a funder, the first step is to listen, learn and try to absorb and reflect on the perspective offered by partners. Provide transparency, honesty and vulnerability about each organization's values, priorities and challenges. Shift power imbalances by creating space for conservation partners to set the terms for partnership and by inviting them to outline the funding and program priorities that are important to them and the communities they serve.

Much thinking has been done in the philanthropic field around trust and creating a continuous cycle of listening, learning and accountability over the course of years. (See Resources for links to reports, tools and trainings.) Changes in leadership and staff at funding organizations can be a significant barrier to building trusting relationships, and if relationships are lost, that trust must be reestablished. To ease these transitions, staff from a

funding organization who are entering an existing relationship for the first time should ask for detailed guidance from outgoing personnel, including levels of established trust and stories that illustrate their understanding of the partner's work and priorities. Building relationships and earning trust takes time. (See Cross-Cutting Practices for Partnerships chapter.)

Students from Escuela Verde, a school in a Milwaukee neighborhood with one of the city's lowest rates of public green space. © Gary Porter

Here are some ways to embed the cycle of trust into the funding process:

- **Ensure that leadership and staff commit to an equitable funding approach.** Establish buy-in from leadership and teach staff the skills to develop and maintain meaningful, trusting relationships.
- **Establish a culture within the partnership of open and honest dialogue.** This can take significant time to develop, especially if there is a history of distrust. Be responsive to grantee-determined needs for building an authentic relationship, name any existing barriers and be ready to take action based on feedback.
- **Invest in relationship building and make time for multiple face-to-face or virtual meetings.** Keep meetings informal, let the grantee decide the agenda and location, focus on mutual learning and getting to know each other, and compensate grantees for their time.
- **Develop a Memorandum of Understanding (MOU) about how groups will work together over time.** MOUs can guide the work, help balance the roles of funder and grantee and clarify potentially problematic aspects of collaboration, such as data collection, use and sharing.
- **Commit to understanding grantees' work and experience and ask about challenges on a regular basis.** The relationship is not just about the community-based organization and their work, but also about the individuals, what they are learning, their experiences and the expertise and knowledge they bring to the table.
- **Make program staff accessible to grantees from the beginning of the application process through the life cycle of the grant.** Everyone in funding organizations should consider themselves responsible for maintaining trusting relationships with and advocating for grantees.
- **Offer support beyond the check.** Ask what resources partners need. Consider providing education, professional learning communities, convenings, trainings and technical assistance.

2. UNDERSTAND THE LARGER CONTEXT OF CONSERVATION EFFORTS THROUGH COLLABORATION

It's important to have knowledge of the complex systems and community context of conservation in cities. A collaboration should not serve as a primer for the funding organization. Instead, before working with conservation partners, funders should gain and maintain a basic competence in justice and equity issues. For example, the Cities Network recommends that all conservation practitioners entering the urban arena gain a basic knowledge of environmental justice and commit to learning what constitutes meaningful engagement, as well as fair and just treatment of others with whom they work. This awareness informs the Cities Network's approach and has a major impact on how practitioners conduct their work.

Funders who independently gain an understanding of structural racism and intersectional environmentalism help to relieve the burden of education that typically falls to conservation partners. For example, anti-racism

training, such as the Cities Network Racial Equity Leadership Lab Curriculum (see Resources), can help funders see gaps in their own understanding of racism and uncover unexamined biases.

Trust-based philanthropy (see Resources) recommends funders go a step further, stating that racial equity is a continual process involving thought, examination and conversation, along with an organizational commitment to addressing inequity throughout the culture and practices.

Self-work and organizational work are key if the equitable funding approach directs resources or services to communities that have been historically marginalized.

Practical approaches for funders include the following:

- **Present a cohesive message around diversity, equity and inclusion.** Review internal organizational practices, actions and communications around equity and equity-based approaches and ensure that funders practice the same principles they promote.
- **Engage in training.** Funders need to be willing to step out of their own reality and comfort zone and consider a wider spectrum of issues faced by frontline communities.
- **Be explicit about how justice shows up in values, impact statements and language in requests for proposals and across written materials.** Make equity and environmental justice the focus of grant work, not a secondary or add-on objective.
- **Provide a specific percentage of funds to benefit marginalized communities and community-based organizations that have Black, Indigenous and people of color represented in their leadership.** The National Committee for Responsive Philanthropy suggests 50%. Where appropriate, also set racial justice criteria for selecting grantees.
- **Honor the labor of partners and community members by compensating them for any time they dedicate to articulating strategies, designing RFPs, selecting grantees, building proposals or defining scopes of work for contracts.** Ensure that indirect funding (or Indirect Cost Recovery) adequately supports just organizational culture (see Resources).
- **Protect the rights of communities to own and control their knowledge and experiences in all program strategies, marketing and communications and Intellectual Property language.**

For the TNC Cities Program, the work of maintaining the conversation around the larger context of conservation efforts exists at two levels: in dialogue with partners in communities and across the Cities Network. As this guide describes, the Cities Program and the Cities Network were designed with equity and justice work as the highest priority. This focus helps highlight the conservation-focused outcomes for which TNC is known while centering the communities that the Cities Programs are designed to serve. The Cities Network hosts trainings, meetings, webinars, collective impact working groups and convenings to provide opportunities for the TNC Cities Program teams and partners to step away from their regular daily work and to discuss, learn and adaptively manage as they develop an understanding of systems of oppression and possible opportunities to evolve and grow. The Cities Network also recommends standardized practices across the local TNC programs, such as being explicit when the purpose of a project is justice or equity, compensating partners whenever the Cities Network requests their time, including partners early and often in strategy discussions and protecting the partners' and the communities' rights to all products and learnings from their collective knowledge.

At the onset of the COVID-19 pandemic, the Cities Network's Transformative Funding collective impact working group had an opportunity to draw on their understanding of larger context when they were tasked with designing

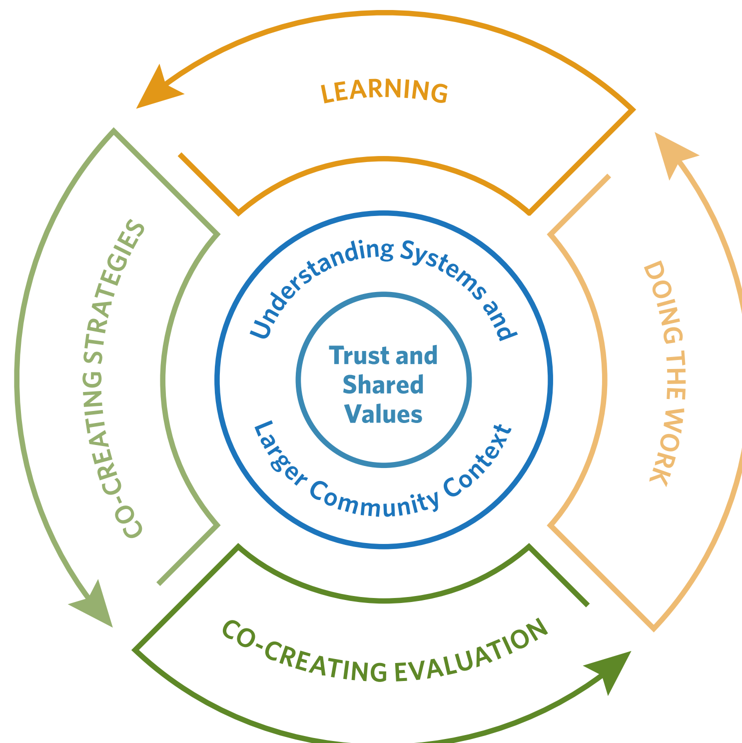
a Strategic Relief Fund. To create the Strategic Relief Fund, the Cities Network reallocated budgeted funding for in-person programming to pandemic relief services in frontline and environmental justice communities and communities that were impacted by historic and present-day structural inequalities and systemic racism. During a participatory grantee selection process, the Cities Network distributed $400,000 in awards to 15 grantees in TNC network cities. The selection jury, including TNC staff and partners, prioritized basic needs relief work. Many of the organizations that received funds were not strictly conservation organizations; they were selected because they focused on human health and well-being more broadly and provided food relief, access to vaccines, utility and rental assistance and other support services. The selection committee justified their decisions by explaining that meeting basic needs was a high priority for the communities the Network serves, and basic wellness was a prerequisite for conservation-focused projects.

3. CO-CREATE STRATEGIES AND EVALUATION

Establishing trust and a systems perspective are long-term endeavors. Funders need to become familiar with conservation partners, absorb what partners share into real understanding and reflect on practice. Only then can funders begin to truly co-define foundational values and principles and co-create strategies and evaluations to guide collaborative efforts.

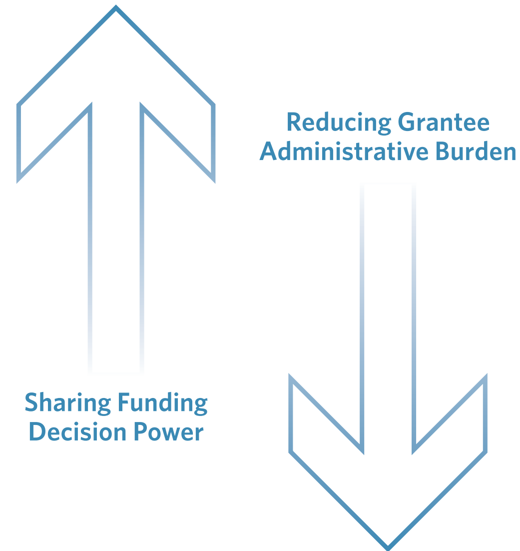
The way funding is structured—and especially its strategies and evaluation—informs who has access, what is prioritized and what success looks like. Equitable funding requires conservation partners and community representatives to share decision-making power. Informal and formal strategy and evaluation design processes are equally likely to reinforce current inequities. Meanwhile, changing who has a valued voice in design processes and who has control over the final decision can radically alter the way that systems of power are perpetuated.

Strategy design and evaluation decisions show up in multiple levels of funding structures. In grant-making, the process of co-creating strategy and evaluation is cyclical, from conception of a fund to initial granting to year-to-



year funding distribution. In order to co-create strategies and evaluation, the funding partners must maintain trusting relationships, co-define foundational values and principles and understand systems and community context.

Strategies and evaluation can begin to emerge during a dialogue to identify shared values and priorities. If the partners use developmental, or iterative, evaluation methods, the evaluation processes can adapt as strategies are tested and revised. Co-developing more informal evaluation methods, such as observation and semi-structured interviews with opinion leaders, with conservation partners can help support successful project implementation and inform strategy revisions.



Here are some co-creation strategy tips:

- **Discuss with partners the basis for collaboration**, such as shared values and goals, in detail at the beginning of a partnership.
- **Give partners the opportunity to outline priorities for programs and capacity building** within their organizations and communities, and make sure to align strategies with their tested approaches.
- **Support community-based organizations in leading and developing project strategies and evaluation models** and trust them to act responsibly and knowledgeably.
- **Be flexible with time frames and budgets and be respectful and inclusive of differing cultural norms and values.**
- **Accept and encourage leadership from grassroots groups** on strategy, messaging and resourcing to reflect community priorities.

In addition, consider the following approaches for co-creating evaluation:

- **Evaluate not only the grantee, but also the funder's ability to support the needs of the grantees and the strategy.**
- **Work collaboratively using processes, like whole measures, to design evaluation processes** that make sense and are valuable and meaningful to all conservation partners.
- **Select metrics and measures that can be linked to improvement, learning and growth** of the grantee, the funder and the community.
- **Support dialogue and increase transparency in funding by providing grantees with feedback on all proposals**, reports and budgets submitted, including feedback for those organizations that are not selected for funding.
- **Ensure that data collected during evaluation are meaningful for grantees and the community** and bring in evaluators skilled in equity and justice issues to help smaller organizations quantify meaningful outcomes.

Gowanus Canal Conservancy Partnership in New York, NY, 2019. © Jonathan Grassi

- **Allocate dedicated funding to support monitoring, data collection and analysis.** Ensure that knowledge is shared back with grantees and honors the ownership, privacy and priorities of all parties. Make information and data produced from funded projects actionable and publicly available, only if both parties agree.
- **Collaborate to create clear learning goals, establish leadership that prioritizes learning and reduce stigma around grant failures** to promote willingness to share and learn from challenges.
- **Fund learning collectives, webinars, regional meetings or conference calls** to discuss evaluation, network building, problem solving and sharing of resources and expertise.
- **Revisit evaluation methodology and metrics/measures throughout the life cycle of the grant** to ensure course correction as priorities shift and processes improve.

THE ROLE OF THE PARTNERSHIP FUND

In 2018, the Cities Network designed a $1-million-per-year Partnership Fund to expand on the project-focused collaborations supported by the Strategic Small Fund. The Partnership Fund acts as a catalyst, giving collaborators time and a framework to align their organizational goals and strategies and design a work plan that strengthens the ability of each organization to carry out its mission and advance community-driven health and well-being priorities. Using a participatory grant-making approach, the Partnership Fund strategically directs funding to strengthen collaborative partnerships between CBOs representing frontline and historically marginalized communities and TNC's local city programs. It also helps TNC Cities Programs prioritize and support the goals of the organizations and alliances that are building power in frontline communities.

The Fund draws on the practices above in an emergent process for partners to co-create strategy and contribute to evaluation design. It also incorporates another set of best practices in the fund design, application process and selection process. Using an adaptive management approach, the partners work together to ensure that the projects remain aligned with community priorities during planning and implementation.

The Partnership Fund's focus is incubating emergent strategies through collaborative discourse that identifies shared health and well-being objectives for the community. Fund participants spent time establishing the terms of their partnership at the beginning of the grant period and adaptively managed them throughout. The Fund used a work plan as a tool to help partners find shared values and objectives prior to articulating activities and expected outcomes. The Cities Network helped train and encourage TNC Cities teams to listen and learn, let partners lead by practicing "followership" and looked for opportunities to support and align with partner strategies during the strategy creation process. The Fund reporting templates requested that Fund partners collaborate to set clear learning goals. As a funder, the Cities Network strove to be flexible on time frames and budgets with the grantees, provided feedback on all reporting submitted from a group of reviewers, made efforts to revisit and revise evaluation methodology and more. During the COVID-19 pandemic, the Cities Network reallocated funding to provide cost extensions to one round of Partnership Fund grantees whose grants were due to be completed during 2020. The additional funding in the cost extension allowed partners to pay and retain their staff through the pandemic.

The Partnership Fund itself is the result of a partnership with Center for Whole Communities and is grounded in extensive research, input from an external advisory group and feedback from many internal stakeholders. After gathering advice in listening sessions and conducting research to inform the design of the Fund, which also informs this chapter, several practices were adopted to better distribute funding power and respect the time and thought-partnership of local partners. For example, the RFP included the full whole measures rubric—the criteria used to select grantees—to increase transparency for applicants. The application process included an abstract phase during which all applicants received feedback on their submissions. All of the Cities Program and CBO partners were compensated for the time they spent reviewing the abstract request to provide feedback and ensure alignment. Finally, all grantees were selected by a jury of representatives from external partners.

On the evaluation and reporting side, a dual set of metrics and measures was created for the Partnership Fund to ensure that partners were selecting measures which made sense for both organizations. Ensuring that measures inform the organization's work and development is key to the efficient use of time and resources. The Cities Network also provides feedback on all reports submitted by Cities Programs and partners. The Cities Network made assistance from a professional evaluator available to grantees to support their understanding and approach to the evaluation work.

Tree Planting in Albuquerque, NM. © Roberto Rosales

The Cities Network also designed its own partnership agreement and legal framework for grants, naming TNC Cities Network (as the funder) as a third partner with a set of responsibilities to improve funder accountability, provide transparency in decision making and set partner expectations for TNC as a funder, in addition to setting the funder's expectations for the grantees.

Overall, the Partnership Fund successfully incubated a more deeply collaborative way of working between City program leads and local partners.

4. REFINE GRANT-MAKING PROCESSES TO SUPPORT LONG-TERM SUSTAINABILITY OF CBOS

There are two critical, practical ways to improve the long-term sustainability of CBOs through grant-making that will increase the number and range of organizations able to access funding. First, reduce the administrative burden of funding-related processes, thereby lightening the cost of fundraising and reporting. Second, share decision-making power with conservation partners to ensure that grant priorities align with ongoing, community-informed strategies advanced by CBOs. Each step of traditional funding structures and decision-making processes can be improved or replaced to better support these equitable outcomes.

Here are some approaches to reduce grantee administrative burden:

- **Provide multi-year, flexible or unrestricted funding**, so partners can decide how funding can best be used.
- **Create a short and straightforward application process** that acknowledges potential partners' competence and good intent by reducing oversight. Ask questions directly linked to decision-making criteria and make room for intuitive expression and emotional intelligence-related feedback.
- **Request only information that will be useful to both the funder and conservation partners** when co-designing requests for proposals, grant applications, selection criteria and reporting requirements.
- **Be transparent and clear about what decision-making criteria will be used and who will make decisions**, so that organizations can decide whether they want to opt in or not. A good way to do so is to develop and share the evaluation rubric as part of the RFP.
- **Include recommended rather than strict word limits in reporting requests** so grantees can focus on providing insight into the program's tensions, challenges and productive failures. Integrate an annual/final reporting process as part of the grant renewal process.
- **Provide support and feedback during the grant development period** through webinars, pre-reviews, technical assistance and flexible office hours.
- **Consider providing general operating funds that allow conservation partners to apply the funds without supervision or reporting** or prioritize less restrictive grants and capacity-building support.

Here are some approaches to share funding decision-making power:

- **Adopt a participatory grant-making model approach** to democratize philanthropy, produce better decisions and outcomes, promote social justice and increase community engagement.
- **Bring community members into decision-making during selection processes** and have grant proposals reviewed by a community-led advisory board, potentially using a jury.
- **Be willing to embrace uncertain outcomes.**
- **Allocate a minimum of 20% in every grant for unrestricted funds** that grantees can allocate to overhead expenses, operations or other work at their discretion.
- **Allow a high level of grantee budget control** to give them flexibility to determine how project funds are spent.
- **Offer technical assistance for financial capacity needs** or include funding to hire a consultant of the grantee's choice and explore what financial health entails for a range of CBOs.
- **Prioritize strategies that strengthen the connections between conservation work and the community.**
- **Recognize and work to bridge resource disparities** between larger organizations and organizations with significantly smaller budgets and staffs.

THE ROLE OF THE STRATEGIC RELIEF FUND

TNC's most recent grant mechanism, the Strategic Relief Fund, incorporates many of the best practices above. It was created in response to the COVID-19 pandemic to provide relief services in frontline and environmental justice communities and communities impacted by historic and present-day structural inequalities and systemic racism. It provided flexible funding for local CBO organizations. This Fund distributed grants through a participatory process, including a jury of members of the Cities Network and partner organizations. The application process was extremely short and streamlined, as were the reporting requirements, in order to allow applicants to focus on the critical services they were providing. Grantees were offered a very simple budget form and 20% Indirect Cost Recovery.

The selection criteria rubrics were included in the RFP to create more transparency in the application process. In fact, transparency is the quality that the Cities Network found to be most valuable. Co-developing selection and evaluation rubrics with input from advisory groups or committees helps the Network find alignment from people with different perspectives on the intent, specific objectives and measures of success of each new funding mechanism. Transparent, collaborative design of selection and evaluation criteria not only helps ensure that the grantor only asks for the most relevant information in applications and reporting, but also helps to define measures and metrics of success, provides enough information for partners to determine whether they want to take the time to develop a proposal and is one of the main tools used by decision-making committees to evaluate incoming proposals. Examples of materials produced for the Strategic Small Fund and other Cities Network mechanisms described above are available in the Resources section.

The TNC Cities Network and Cities Programs invest in equitable practices that share funding power. These include participatory grant-making; providing flexible, multi-year funding; using a whole measures framework; funding existing workstreams; using abbreviated application processes; and using program discretionary funds to ensure that indirect funding is more than 20% for all grants to conservation partners. Future plans could include anonymous evaluation of the program and funding mechanisms, such as the Center for Effective Philanthropy's grantee perception report, which encourages grantees to give honest feedback to funders. (See Resources for more information.)

Harnessing TNC's fundraising capacity to recruit aligned funding to support collaborations with local partners, rather than using it for pass-through funding, is a future possibility. This approach would allow the partners, rather than TNC, to administer and distribute a pooled fund and create more space for divestment of funding power. Any future paths to collaboration and funding for the TNC Cities Network and partners will be generated by ongoing dialogue, time maintaining partnerships and relationships, and attention and connection with the communities in the cities where TNC works.

The roles of TNC and local CBOs are not identical, and there will always be a demand for the perspectives, skills and experiences of each. The need for strong conservation solutions that serve diverse communities will only grow in the coming years as society strengthens its response to climate threats. Experiencing the transformation that comes from the cycle of giving and learning is one of the great privileges of funding. Sharing that power and knowledge with others makes the potential gains even greater for all communities.

Working through fear and pushback against changes to privileged funding structures is a necessary part of adopting equitable funding approaches. Organizations intent upon achieving this change can benefit from reaching out to others who have successfully navigated this transition for support and guidance (see Resources).

Mesa Cool Space at Care, Phoenix, AZ, uses nature's cooling systems to reduce heat and improve the ability of residents to deal with heat. © Ivan Martinez

Q&A

with Rebecca Weaver, Cities Program Manager in St. Louis, MO

Treesilience project in St. Louis, MO. © Kristy Stoyer/TNC

WHAT IS YOUR PROGRAM FOCUS? We support community-driven green infrastructure, community-based partnerships and nature-based solutions that are grounded in equity and aim to improve the health, well-being and quality of life for people and nature in the St. Louis region.

HOW DID YOU BEGIN WORKING ON EQUITY IN FUNDING? In previous roles, I worked primarily with grassroots and community-based nonprofits that often struggled to acquire the larger sources of funding they needed to carry out work. Frontline and place-based community groups are best positioned to represent the communities they serve, but they continue to be among the most underfunded organizations.

WHAT IS YOUR VISION FOR EQUITABLE FUNDING? I think that funding, rather than being transactional, can support a just organizational culture and improve the health and well-being of an organization and its people, just as much as it supports any agreed-upon deliverables.

WHAT IS YOUR BIGGEST WIN SO FAR? When I first started, the Missouri Chapter hadn't previously worked in cities, let alone in a city with a challenging history of environmental racism like St. Louis. It wasn't clear to some why we structured our Cities Program projects through co-created grant agreements and subawards with local, place-based community partners. Our State Director encouraged our Chapter staff to invest time and energy to become more aware of the power, privilege, resources and status that TNC holds in the environmental nonprofit world through TNC's Engaging Across Differences training. After considering how uneven power dynamics shape our work with grassroots and place-based organizations, Chapter staff began to support and even champion the Cities Program model with other colleagues. We have created strong, equity-oriented, community-driven projects with our partners here in St. Louis, and now the knowledge and approaches that are foundational to our work are also being used throughout the Chapter.

HAVE YOU CREATED AND MAINTAINED TRUSTING RELATIONSHIPS IN YOUR FUNDING WORK? Our Growing Green Solutions Seed Funding Program began as a long-standing personal relationship that developed into a partnership between TNC and Green the Church. Because of this relationship, the TNC team was aware of Green the Church's vision for funding local faith-based institutions to implement sustainability and environmental justice projects. This work aligned with the Cities Program's interests in leveraging TNC's organizational privilege, access to resources and technical expertise to amplify and support place-based efforts on the ground and drive resources to the frontlines where funding and support is needed. TNC provided $50,000 in funding and codesigned a process to identify sustainability and environmental justice projects led by local St. Louis faith-based organizations as part of the national Green the Church Summit held in St. Louis in 2019.

HOW HAVE YOU REDUCED ADMINISTRATIVE BURDENS AND SHARED DECISION-MAKING PROCESSES WITH YOUR GRANTEES? We intentionally designed a simple, one-page application and reporting process for the Growing Green Solutions Seed Funding program. Leaders from Green the Church and TNC Missouri co-created an RFP process (see Resources). Green The Church advocated to include local environmental justice organizers in the development of guiding criteria and a voting process for selection of recipients. Although TNC provided the funding, we felt that it was important that we were not the ultimate deciding body to select congregations. Ten faith-based institutions were ultimately selected and implemented environmental justice and sustainability projects in partnership with their congregations and communities.

POLICIES AND PUBLIC FUNDING

Public funding in the United States, including for green infrastructure such as parks and rain gardens, tends to be distributed based on political power or industry pressure rather than need.[3] Though many policies have contributed to institutionalized inequities, racism and gentrification, an intentional focus on equitable practice and policy can be a powerful tool to create positive change, especially when it is developed through inclusive and equity-driven processes. Policy goes hand-in-hand with efforts to equitably influence and direct public funding. It can lead to formally adopted and implemented policy solutions that are backed by the law, and can significantly advance conservation, offer opportunities to collaborate and achieve outcomes far beyond what any individual organization could do on its own. TNC's policy work in particular seeks to center equity and incorporate environmental justice, as well as to institutionalize best practices under city, county, state or federal laws, regulations or operating procedures.

DEFINING PRACTICE AND POLICY

Policy is a set of rules and structures created to shape or influence behavior. Policies can also restrict and dictate those behaviors. Written rules include laws, regulations or corporate policy, and their enforcement may be implied or physical. Unwritten or cultural rules also guide people's behavior, such as the values or norms that shape how people face, adapt to and understand an issue. These rules may occur at different scales, such as global market forces, national laws or local regulations or norms. Taken together, rules or policies can direct people's behavior toward conservation or other goals.

Policies in a cities context

What is critical to consider when pursuing policy work in cities? Given the diversity and density of communities, local organizations and forms of governance in cities, policy initiatives are likely to have wide and sometimes unforeseen impacts. Ideally, every policy initiative will involve substantial coordination and collaboration. Desired policy changes may transect multiple municipal departments, jurisdictions, responsibilities and priorities, all of which can shift quickly, especially in election years or during times of crisis. Working in cities also grants opportunities to test policies locally before launching them regionally or federally. Further, the development of effective and just policy should involve building relationships, forming coalitions and establishing engagement strategies to strengthen project goals and potential for success, whether one is working in cities or other locations.

Collaborative efforts to create policy can help amplify voices and viewpoints that might otherwise not be heard. While it's no surprise that those with power and financial resources have little problem gaining access to decision makers, the vast majority of people lack this type of leverage. Some cities have taken steps to provide greater

3 https://www.americanprogress.org/issues/economy/reports/2019/01/31/465687/building-progressive-infrastructure/

access for a broader, more diverse and more representative constituency by increasing cultural awareness, providing jobs or community leadership training and undertaking other efforts.[4] (See Cross-Cutting Practices for Partnerships chapter for suggestions on building effective, authentic relationships.)

It's important to recognize that cities across the United States vary in political power and ability to set policy in different areas. Of note, some states are "home rule," and their state constitution grants municipalities and/or counties the ability to pass laws to govern themselves as they see fit, whereas cities in other states have very little latitude.[5] Municipal government also differs from state government in terms of both priorities and partners; each has different needs, different decision-making structures, different policy-making processes and differences in how much power is granted to a mayor (or another chief administrative official) versus the legislative body. Therefore, even when an organization is working to advance a project that seems very similar to a project in another city, the approach and tactics will likely need to be adapted to the unique context.

> "Despite all the collaboration and analysis required, developing a policy solution isn't the hardest part. The real challenge is building the political will to get the policy adopted by the entity that needs to act on it. Understanding the power dynamics of both the government decision makers and the thought leaders in the community is essential to building an effective and persuasive coalition to promote a policy strategy."
>
> — Sheila Dormody, TNC Director of Climate and Cities, Rhode Island

Steps of policy development

Even though an organization may have an extensive practice and policy background, the most effective policy advocates are those who have deep knowledge of relevant places and topics—and that usually means people in the local community. When an outside entity like TNC is new to a place or topic, a good entry point is to support existing campaigns and organizations that intersect with the outsider's mission and goals, while developing institutional relationships and deeper understanding of the socio-ecological landscape. In other instances, an early step may be to provide opportunities, funding or other resources to bring stakeholders together. It's

FOUNDATIONAL CONCEPTS

- **Beyond laws:** While the terms "practice" and "policy" are often considered to be limited to legislation, in fact they encompass efforts well beyond laws, such as creating or updating regulations, directing funding, passing ballot initiatives, developing municipal plans or changing municipal agency staff practices, such as procurement policies or stormwater management practices.
- **Beyond borders:** Plants and animals do not necessarily obey human-created boundaries. To create the enabling legal conditions for meaningful conservation in a city, organizations may need to look at and potentially work outside municipal borders.
- **Beyond intentions:** Because policy is nuanced, unintended consequences must be identified, considered and reduced. Adaptive management and ongoing tweaking will be necessary. See section on Proven Practice and Policy Approaches for Cities, below.

4 https://www.nlc.org/article/2018/03/26/how-six-cities-promote-diversity-and-inclusion-for-residents/
5 https://www.nlc.org/resource/cities-101-delegation-of-power/

important to prioritize building relationships and trust, respect the historic work accomplished and appreciate the leadership and expertise held by members of the community. (See Cross-Cutting Practices for Partnerships chapter for additional recommendations.)

The concepts developed by such community-centered or collaborative policy efforts may be adopted by government entities. For instance, an organization and its allies may develop a plan or analysis to inform their own policy or practice, and then advocate that government parties adopt it as well. It helps to determine roles early on, such as who will lead the strategy, who will manage the development of the policy, who the decision makers are and who will manage the policy after it is adopted.

Organizations working on policy development in city settings typically go through the following steps:

1. **DEFINE THE PROBLEM AND UNDERSTAND CONTEXT.** Identify and/or become aware of a problem that could be addressed through legislation or policy change; gather background from the community, including whether participation and support are welcome and/or needed. Ask whose connections to natural systems have been disrupted and who has been impacted the most by environmental challenges. Explore municipal staff interest in developing a strategy to address the problem. Check understanding of the problem and center environmental or climate justice in the proposed approach.
2. **ASSESS POLITICAL LAY OF THE LAND.** Conduct a review of potential partners and advocates who are already working on or may be interested in informing and advancing the strategy. Establish relationships with champions to recruit additional partners.
3. **UNDERTAKE AND COMMUNICATE RESEARCH.** Conduct technical, feasibility and stakeholder analyses, and carry out polls and public opinion research. Report study results to community members and elected leaders. (See Resources for extensive additional materials related to this step, including stakeholder analysis and public opinion research.)
4. **AGREE ON A POSITION AND CREATE A POLICY AND BUDGET.** Based on the research, develop a consensus position around which advocates and/or partners can rally. Write the policy and develop a budget.
5. **ENCOURAGE UNDERSTANDING.** Create demonstration projects to illustrate the types of benefits the investment could provide. Create a plan to ensure that people living in the most marginalized communities are prioritized in outreach; provide project tours to community members and elected leaders.
6. **ASSESS POTENTIAL FOR VOTE.** Determine whether there is adequate momentum or broad-based community support to advance toward a vote and/or adoption; if not, regroup toward other policies.

FRAMING PROBLEMS AND SUPPORTING COLLABORATION

How one frames (or presents or explains) a problem has huge implications for potential outcomes, from the likelihood of inspiring community participation to the potential for implementation. Some helpful questions for partners to ask themselves:

- Who has control over the policy’s outcome?
- Are the people most affected by the policy driving its creation?
- Are the community's strengths known, valued and incorporated?
- How are people’s time and expertise compensated, especially those who are not paid to do this work? Paying for people’s time, transportation, childcare, facility rental or other needs often makes it dramatically easier for them to fully engage and remain engaged over time.

See Cross-Cutting Practices for Partnerships chapter for more suggestions.

> "In policy, we always see opportunities to get more done. That's part of how we plan next year's work. For example, the green roof tax abatement in New York City, while renewed and improved, needs to be amended because there are flaws that either will prevent it from being effective or may skew it so that some neighborhoods that might need it most may not benefit enough. But we knew there would be challenges going in, and that there's always more to do, so we're not disheartened. If you're not failing sometimes, or if you're getting everything you ask for, you're probably not asking for enough or thinking hard enough."
>
> — Emily Nobel Maxwell, TNC Cities Program Director, New York

Tree-planting event in Denver, CO. © Kevin Mohatt

Proven practice and policy approaches for cities

The following approaches are important to success, regardless of city-specific situations:

- **ESTABLISH LONG-TERM CONSERVATION OUTCOMES AND DETERMINE EVIDENCE-BASED PROBLEMS THAT EXIST TODAY OR ARE PREDICTED FOR THE FUTURE.** In collaboration with partners, ask what benefits could be delivered to communities and/or natural systems. Using an environmental or climate justice lens, ask whose connections to the natural system have been disrupted and how equity issues will be incorporated. (Because TNC is not an environmental or climate justice organization, there may be limited staff capacity to do this work authentically; consider hiring an outside environmental or climate justice organization to help.) Then develop evidence-based problem statements that are connected to communities and natural systems, followed by aspirational outcomes. The policy reality often falls somewhere between these two. For example, in New York City, TNC staff believed that the city should have more green roofs, yet there was no baseline information on how many green roofs existed or where they were. The first step was to undertake an assessment, which was done in 2016 and revealed that of more than one million buildings in the city, only 736 had green roofs. Further, these roofs were inequitably distributed. The data showed that there was substantial opportunity to increase the number of green roofs in targeted areas.
- **KNOW THE LOCAL REGULATORY CONTEXT.** Determine whether the project will be undertaken in partnership with a public agency or whether it will be released by the partners and used to inform a public agency's work or decisions. Sometimes this is a choice and sometimes it is legislated, so it is important to understand the local regulatory context. Policy and practice will be adjusted depending on how an individual city approaches its day-to-day responsibilities and whether the solution is an ordinance, resolution, budgetary shift, change in administrative rule or citizen initiative. Start with government relations or external affairs staff in partner organizations. Policy analysis and advocacy are important and distinct skill sets, so if the partnership doesn't have one or both, reach out to government relations or policy analysis experts at a local university, in the public policy sector, and at nonprofits that support municipal policy making, as well as to individuals who work in state or municipal governments. An important note: be aware of municipal and state regulations around lobbying, which may go beyond the federal 501(c)3 regulations and are often more strict than federal regulations.
- **IDENTIFY GOVERNMENT AGENCIES AND COMMUNITY PARTNERS WITH ALIGNED VALUES AND GOALS.** Determine whether there is a locus of authority or an opportunity to get interested parties to align around an issue. For example, TNC's Chicago program identified stormwater as a priority because of extensive city flooding in areas with certain topography and infrastructure age, widely recognized equity issues regarding the locations that flooded most frequently, and anticipated climate impacts. The team interviewed a range of stakeholders and learned that the local utility was already taking initial steps to create a stormwater trading program. A well-established local partner encouraged TNC staff to collaborate with them on the problem.
- **DETERMINE WHAT EXPERTISE IS NEEDED AND WHOM TO BRING TO THE TABLE.** The work should be driven by the community so that all are invested in the process. When TNC in Rhode Island was working with partners to form an urban forest plan for Providence, the team budgeted for an equity and engagement consultant as well as an urban forestry planning consultant. Partners also budgeted stipends for community members to provide on-the-ground expertise that informed the plan's development. The resulting plan will become the city's official policy, with equity and engagement components fully embedded.
- **UNDERSTAND WHO THE KEY DECISION MAKER(S) IS AND WHO INFLUENCES THEM.** Create power maps to help inform campaign strategy development. Place the decision maker(s) in the center of a circle and move out in concentric circles, adding constituencies and people who influence that decision maker. Identify the partners' connections to those inner-circle influencers. Some of these influencers will be natural allies and some will be opponents. Understanding these power dynamics is essential to creating an effective strategy

for policy and practice. For example, in Detroit, TNC and partners agreed that the Planning Department and Detroit Economic Growth Corporation should lead a particular effort so that the city would be fully invested in the result.

- **PAY ATTENTION TO HOW POWER FLOWS IN THE COMMUNITY.** Be vigilant about understanding community involvement and power structures. Are grassroots initiatives allowed and encouraged, tacitly or expressly discouraged or outright prohibited? Where does the power sit? Is there a strong mayor, council, city manager or other decision maker such as a neighborhood or community association? What is the power flow among the local government's executive branch, legislative branch and residents? If any of the partners have previously worked in a city, their staff may be familiar with how the system works. When an organization is new to a community or their staff does not have a policy background, this assessment provides another opportunity to talk with partners or conduct informational interviews.
- **KEEP IMPLEMENTATION IN MIND.** A policy is toothless unless it is funded, planned, resourced and implemented faithfully. The budget must account for whatever the city or other entity needs to do, and staff and other resources must be allocated to implement the project in the way that the policy intended. In addition, to fully realize the policy's goals, the departments or units responsible for implementation should do so in ways that meet the community's needs and wants. However, this is often not the case. Department heads or staff may not prioritize the policy, or may avoid or only partially implement it, either using only some of the content or applying the policy to only part of the community. Think beyond the current political season, acknowledge risk factors and determine what changes might take place if and when the political climate shifts. Partners need to stay engaged with the implementing agency, especially since all policy requires refinement once the work is underway.

> "To address stormwater issues in Chicago, we interviewed stakeholders and identified opportunities where TNC could make a difference. The local utility (led by elected officials and an executive director) was already taking small steps on stormwater trading, and a strong local partner encouraged us to collaborate. Relationships with the utility and the city were critical; however, our contacts with the city weren't well established. In hindsight, we also hadn't sufficiently built support with some environmental NGOs, which detracted from consideration of the program. In the end, a group of commissioners successfully advocated for their board to support pilot studies for stormwater trading, which we are now participating in. It's an outcome we didn't predict and probably couldn't have mapped out, but it emphasized the need for ongoing evaluation of the political situation, for understanding dynamics within the public entity you want to adopt your policy and for trying to build as many bridges as possible."
>
> — John Legge, TNC Conservation Director, Chicago

Bowtie Park, along the Los Angeles River. © Mike Dennis

Equitably influencing and directing public sector funding

Too often, public commitments to rectify inequities are not matched with dedicated or adequate funding. In addition, investments in infrastructure and green infrastructure are often singular in purpose, missing out on potential multi-benefits for communities. For example, Los Angeles has large natural protected areas in the Santa Monica Mountains, Angeles National Forest and Griffith Park, but these spaces are not accessible to people without cars, nor do they provide community benefits, such as localized stormwater management.

> "Communities that have suffered from decades of divestment and structural inequities often have less access to nature. The racism and colonialism inherent in those inequities means that nature in cities is more accessible in middle-or upper-class communities and predominantly white neighborhoods. Intentional resource investments in parks, open space and green infrastructure, along with supportive mechanisms such as public transit, can serve as a starting point to reversing these inequitable policies and practices."
>
> — Jill Sourial, former TNC Urban Conservation Director, Los Angeles

Consider greenspace and the equitable distribution of green infrastructure as a multi-benefit investment—one that addresses climate justice or workforce training, for example—in addition to conservation outcomes such as improved water quality or flood reduction.

What this can look like at a municipal or city level:

- Increasing public funding for transit, parks, open space and green infrastructure for communities that have not received fair access to these resources
- Creating equity set asides or fixed amounts within public finance measures that guarantee funds are directed to communities with the highest need
- Influencing policies and practices to advance equitable funding guidelines for competitive funding programs
- Establishing equity goals and ensuring that new finance measures or policies are implemented to achieve them

The work to undo legacies of inequity is challenging and long term. Shifting status quo policies, practices and procedures of agencies toward more equitable resource distribution requires dedicated time from multiple parties across many areas of expertise. Efforts to unravel such harmful legacies often focus on influencing and directing public finance measures, which requires building a coalition of various types of constituencies. But prioritizing investments and shifting power structures also requires more diverse voices in government decision-making; CBOs' interests have historically been underrepresented in government and they have not been invited to help craft or develop public finance measures, especially those focused on open spaces. Conservation practitioners in cities can assist by building trust with these organizations, forming relationships and strongly advocating for fairer systems, policies and practices that direct funding and resources where they are most needed.

For example, in November 2018, with nearly half of Denver's parks rated in fair or poor condition and the backlog for repairs estimated at $127 million, a broad coalition of partners and community members helped pass a ballot measure to generate $1 billion over the next 20 years for parks, rivers, trails and trees. The coalition's goal is to ensure that every Denver resident is within a 10-minute walk of a park. The campaign was led by the Trust for Public Land, Greenway Foundation, the city council president and TNC, and was supported by High Line Canal Conservation, Park People, Denver Mountain Parks Foundation and many others.

GAINING INTERNAL SUPPORT FOR EQUITY

TNC's California Chapter developed its city strategy in Los Angeles while simultaneously working on a countywide ballot measure for stormwater. It was difficult to negotiate with the county on ballot language and criteria when the internal strategy was still under development. TNC external affairs, conservation, science, marketing and philanthropy staff all had different lenses through which they measured success. The program was also in the process of developing baseline data and determining the most appropriate metrics for cities. Focusing on equity in these measures was perceived as a risk because it was seen as distinct from TNC's biodiversity mission. In the end, the team made the case that promoting a diverse coalition and focusing on equity in addition to TNC's science metrics was the right way to go, which proved to be true, and the ballot measure passed.

> "If a photo is worth a thousand words, an in-person tour is worth a million. Making the on-the-ground reality visible as possible was one way we gained support. Bringing people to a place can help them understand the local context and challenges and help build buy-in for equity."
>
> — Jill Sourial, former TNC Urban Conservation Director, Los Angeles

What does an equity-focused approach look like?

In order to reverse historic disparities in green infrastructure, equity must be integral to every aspect of an approach, from evidence and data gathering, to determining how public funding is distributed to governance and implementation. Here are some ways to achieve this:

- Before determining set-asides, use available evidence and baseline data to identify the areas with the highest needs. To ensure that funding is prioritized where it is most requested/required and will have the most benefit, use interviews or data related to community members and those most impacted by the problem or the proposed solution.
- Partner with community-based organizations to lead or assist with inclusive and broad-based engagement processes; seek ways to include people who have been excluded from decision-making.
- Value the expertise of all involved and include the perspectives and skills of people and organizations whose voices have been historically marginalized or ignored. Consider how to conduct meetings in ways that eliminate barriers to participation and make new participants feel comfortable and informed, such as holding meetings in the communities, or near public transportation or at times that take different work schedules into account.

Here are ways to increase public funding opportunities for green infrastructure in communities that would most benefit from the investment:

1. **CLEARLY DEFINE HEALTH AND EQUITY-BASED CRITERIA AND METRICS.** This will enable state and local government departments, agencies and special districts to allocate and spend dollars in communities that have been underfunded. In California, for instance, public health experts developed the Healthy Places Index to complement the CalEnviroScreen tool, which the state uses to identify underserved communities and prioritize spending.
2. **TRACK PUBLIC FINANCE MEASURES SPENDING AND EVALUATE THEIR EFFECTIVENESS.** State and local finance measures should include requirements to track where and how public dollars are spent. Evaluating publicly financed infrastructure projects, including measurement of equity outcomes, demonstrates how equitably such dollars are allocated and sheds light on the direction that future measures should take to achieve more just outcomes. Making comprehensive data accessible to the general public is key to using this strategy.
3. **USE SET-ASIDES AND ALLOCATIONS TO REDUCE INEQUITIES.** Increase general fund allocations for relevant agencies and designate resources to address historic inequities in the availability and distribution of health-promoting public infrastructure. This includes parks and recreational facilities, active transportation and transit-oriented infrastructure, with a particular focus on health and safety hotspots in communities where people earn lower incomes.

> "As we look to the future in Denver and other cities, TNC will work with partners to balance reinvestment in existing parks with the creation of new, vibrant and equitably distributed greenspaces across city communities."
>
> — Chris Hawkins, TNC Urban Conservation Program Manager, Colorado

CASE STUDY

More parks for more people in Portland, OR

Sharing the wonders of nature with children. © Erika Nortemann/TNC

In 2019, residents in Portland, Oregon overwhelmingly approved a funding measure to increase access to greenspace for historically underserved areas. The $475-million bond is the first in the country to prioritize climate resilience and equity in decisions about how funding is allocated. Throughout the measure's development, it was a priority to keep resources in the hands of the community, so partners switched requirements to enable different contractors to get involved and mandated that they pair with community partners when submitting proposals. Multiple organizations now focus on equity training; a small-grants program for metro parks was streamlined to a one-page form to make it easier for community members to apply; and training is in place to combat racism and white supremacy in communities. As a stakeholder on the front end of this process, TNC needed to begin with hard conversations and build self-awareness around institutional racism to be able to appropriately navigate these conversations.

Who does what?

There are as many different approaches to developing policy and supporting equitable public sector funding as there are cities in which to work. Below are a few examples.

PROVIDENCE, RHODE ISLAND

Develop projects to demonstrate benefits that could come from green infrastructure investments

TNC primary roles

- Serve on leadership committee of the Providence Stormwater Innovation Center and the Green Infrastructure Coalition (nonprofit organizations, architects, designers, builders, city planners and state and local policy-makers who work together to promote nature-based solutions for cleaning runoff pollution).
- Support development of communications strategy and materials.
- Conduct polling on willingness to pay and attitudes toward green infrastructure, and communicate results to partners, municipal and state agency staff and elected officials.
- Leverage staff relationships with municipal leaders.
- Advocate for municipal policies with presentations and testimony to city councils.
- Plan and facilitate regular meetings with partner organizations to share best practices and strategy development.
- Write grants to support participation of partner organizations.

Partner primary roles

- Engage residents and commercial property owners in developing demonstration projects.
- Testify to elected officials.
- Coordinate municipal staff training events.
- Develop communications materials.

NEW YORK, NEW YORK

Use science to compel action on green roofs and convene stakeholders on policy or practices related to urban forests and green roofs tax abatement

TNC primary roles

- Leverage staff relationships with local leaders and advocates.
- Plan and facilitate meetings to advance agenda setting.
- Write grants to support participation of partner organizations.
- Act as technical and scientific advisor to provide novel analyses and inform action.
- Advocate for municipal policies with presentations and testimony in public hearings.
- Support development of communications strategy and materials.

Partner primary roles

- Act as subject matter experts.
- Be advocates.
- Raise concerns as landowners and managers.
- Act as regulators.

CHICAGO, ILLINOIS
Develop stormwater trading markets in Chicago and surrounding Cook County

TNC primary roles

- Co-lead with Metropolitan Planning Council.
- Bring advice and expertise regarding green infrastructure finance.
- Fundraise for feasibility studies.
- Manage contractors for feasibility studies with national experts.
- Co-lead focus groups to gather policy input.

Partner primary roles

- Co-lead with TNC.
- Bring local policy expertise and key relationships with municipalities and stakeholder groups.
- Lead advisory and focus groups.
- Provide staff and funding to participate in feasibility studies.
- Comment on policy proposals.
- Provide feedback and input on studies and proposals.

DETROIT, MICHIGAN
Create enabling conditions and accelerate green stormwater infrastructure (GSI)

TNC primary roles

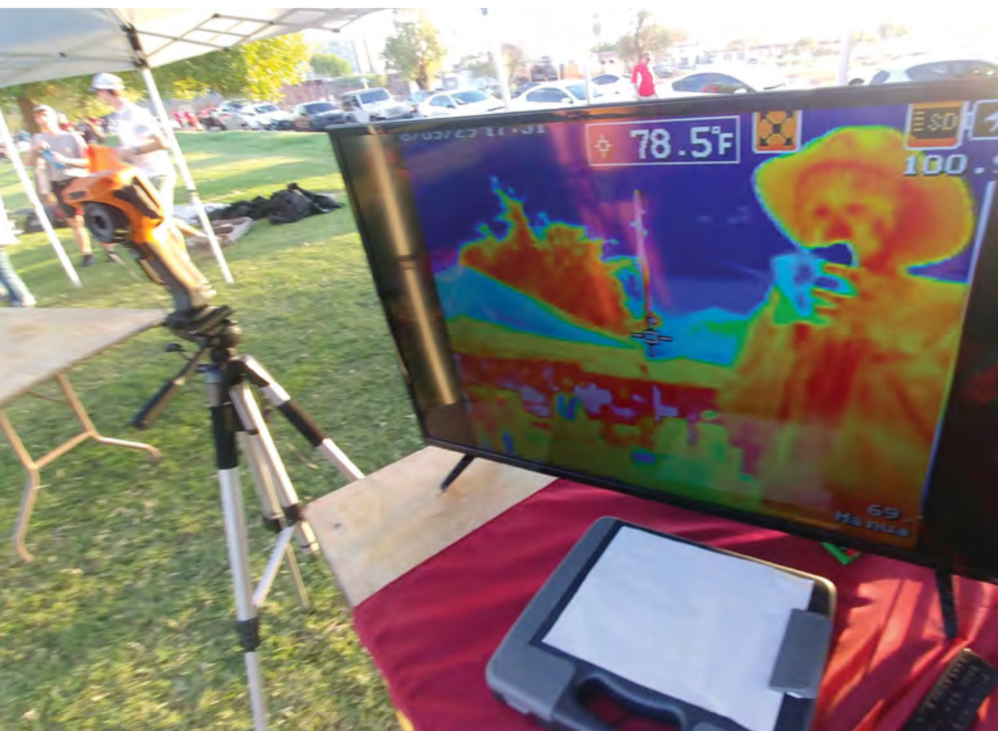
- Provide technical advice on stormwater management finance and regulatory program structure.
- Conduct policy research to inform alternative compliance mechanisms.
- Co-lead development of neighborhood-scale stormwater management plan as part of city-published planning effort.
- Fundraise for, convene stakeholders around and launch web-based GSI project tracking system (the Detroit Stormwater Hub).
- Structure, coordinate and facilitate one-on-one learning exchanges between national municipal stormwater management leaders.
- Manage design and construction of a major GSI retrofit demonstration project.
- Provide grant funding to community partners.

Partner primary roles

- Bring community engagement expertise.
- Build awareness around stormwater management issues.
- Contribute ideas, content, resources and long-term management to the Detroit Stormwater Hub.
- Co-develop stormwater management network plan and gather community feedback.
- Participate in one-on-one learning exchange and use learnings to inform utility program structure.
- Develop resources to support green infrastructure maintenance and workforce development program.
- Inform design and implementation of demonstration projects.

SCIENCE AND RESEARCH IN CITY SETTINGS

Science is one of several ways that humans can acquire knowledge. The word science describes both the specialized research process for collecting and analyzing information (known as the scientific method) and the body of knowledge that results from this process. Scientists use different techniques to collect quantitative and qualitative information, including observation, experimentation and modeling. The information that is discovered using these techniques is further refined and statistically tested, and scientists look for patterns and connections to understand how their data relate to the current body of scientific knowledge. Ultimately, the goal of scientific research is to test hypotheses, challenge existing assumptions and reach conclusions in order to better understand the universe.

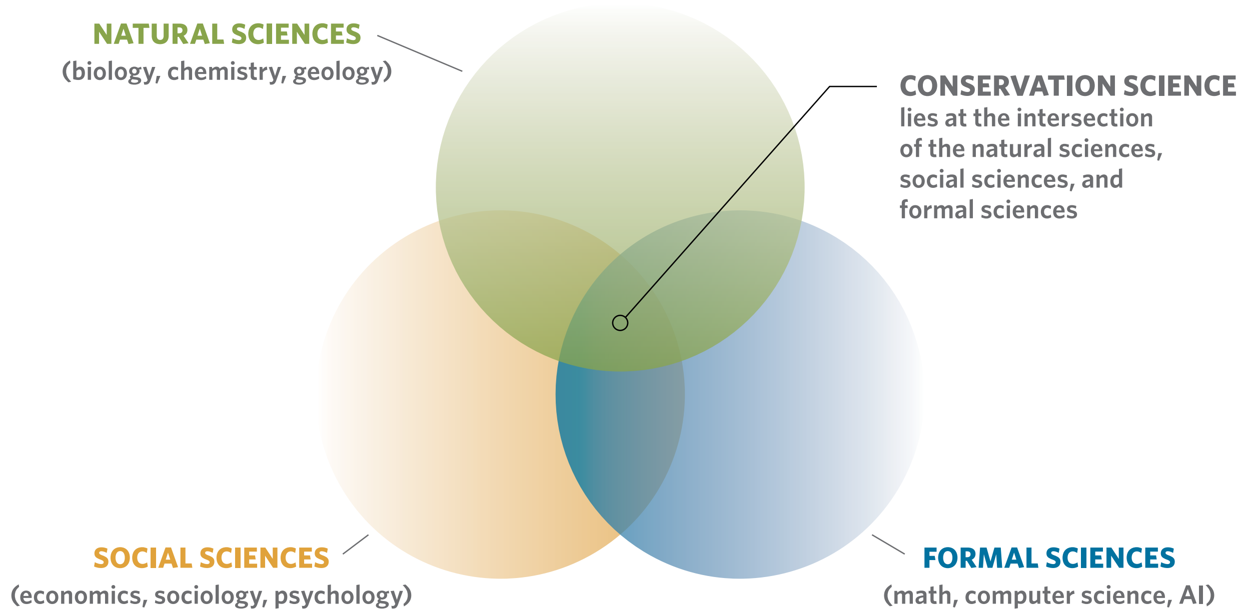


Heatmapper Walk, Phoenix, AZ. © David Hondula

MANY WAYS OF KNOWING

How does one know something? How does one prove the acquisition of a new understanding to oneself or to others? What justifies a belief in one's own mind? In Western societies, scientific understanding is often considered the most rational form of knowledge and is developed primarily through formal education. However, many other ways of knowing are equally valid, including knowledge gained through sense perception, reason, emotion, faith, imagination, intuition, memory and language.

Knowledge can be gained through creative endeavors, hands-on learning, a mentor relationship or the lived experiences of members of a community or society. Each kind of knowledge has advantages and disadvantages, and each has value for conservation practices.



Interdisciplinary science and conservation

Science can and should be used to support decision-making. As an interdisciplinary field, conservation science spans both the theoretical and applied realms. It involves the natural sciences, such as biology, chemistry, physics and geology; the social sciences, such as economics, sociology and psychology; and the formal sciences, such as mathematics, computer science and artificial intelligence.

Conservation biology, which is the biological and ecological study of the Earth's species, habitats and ecosystems, is a core discipline within the larger field of conservation science. As an applied science, conservation biology is specifically focused on evaluating human impacts on biological diversity, developing interdisciplinary approaches to protecting and restoring natural systems and preserving species and their natural communities.

Conservation science in a cities context

While urbanization and the destruction of habitat associated with the growth of cities are among the greatest threats to biodiversity worldwide, cities have conventionally been excluded from conservation science and planning exercises. Meanwhile, conservation science has traditionally viewed "wild" landscapes as existing beyond the realm of human influence.

> "Historically, the separation and exclusion of cities from consideration by conservation scientists was furthered through a dichotomous perception of landscapes. Non-urban areas and the plants and animals within them were classified as nature, while cities and the plants and animals within them were classified as non-nature. Landscape ecologists have recently been challenging this conceptualization through efforts to classify lands as existing along a gradient of uses.
>
> — Sophie Parker, TNC Lead Scientist, California

While some communities have never engaged in the nature/nonnature dichotomy, the falseness of the dichotomy in mainstream conservation has been further emphasized by observations that even densely populated urban centers can contain high levels of biodiversity. Together, these factors have helped rekindle interest in conservation in cities and spurred a contemporary push for more conservation science there.

Conservation scientists face a variety of unique challenges and opportunities when working within a city context. Specifically, urban areas exist as complex natural and social systems and often contain large and diverse communities of people. This necessitates significant and thoughtful engagement on the part of scientists during the research process. The diversity of cultures and ways of relating to the natural world that are apparent in an urban population can and should create new conservation possibilities. In addition, social science conducted on people who live in cities has at times been extractive, discriminatory and harmful. Because of this, individuals or community groups may experience research fatigue or may be hesitant to trust scientists or the scientific process.

Furthermore, the historical lack of engagement by conservation scientists in city landscapes has limited their knowledge about the biology and ecology of these places, and in many cities it has resulted in a need for remedial studies to establish a basic understanding of their flora and fauna. Finally, in order to be useful to decision makers and implementers, conservation science must match the pace and scale of biophysical and social processes in cities, which is difficult because they change so quickly. While these realities may appear daunting, embedded in each challenge is an opportunity for conservation scientists to deliberately engage in research that thoughtfully involves both human and natural communities in their work.

COMMUNITY SCIENCE PROVIDES DATA ABOUT CITIES

Professional ecologists and conservation scientists have historically focused their research efforts outside urban areas, which led to a lack of information about the plants and animals in cities. As urban ecology has emerged as a field of study, scientists have begun collecting more information within urban areas. In addition, community science (formerly known as citizen science) and the popularity of annual events such as the City Nature Challenge and Audubon's Backyard Bird Count have allowed legions of community scientists to collect occurrence data for organisms living in cities and share these data using platforms such as iNaturalist and eBird. Because more people live in cities thanoutside them, there is now more information collected through community science for cities than for areas outside them. Community science in cities not only increases understanding of urban biogeography, it is also essential for conducting any ecological research in urban spaces. This is because, unlike the publicly accessible areas in state parks and federal lands outside cities, most of the lands in cities are privately owned. To conduct an ecological study in a city, either one needs express permission from many landowners or people from the community must collect information about their own spaces. Participation by the community has therefore become an important element in developing the collective understanding of the biogeography of cities.

Community-based research

Conservation science in cities, by definition, is conducted within densely populated human communities. However, it does not always incorporate people. It may be focused, for example, on the biology or ecology of other city-dwelling organisms. Explicitly incorporating human communities into conservation science projects can reveal how human communities interact with and impact nature, and how the conservation of biodiversity interrelates with human community well-being. Conservation science projects that explicitly involve human communities may be described as "community-based urban conservation."

Technology encourages stewardship on the Bachman Creek Trail, Dallas, TX. © R.J. Hinkle

Science that interactively engages human communities while respecting community values and strengthening community linkages is more likely to result in co-benefits for scientists and the community. The level of involvement between scientists and the community during a scientific study has been described by the University of Minnesota as a continuum that ranges from less to more interactivity.[6] The four levels within this continuum are as follows:

1 **COMMUNITY-PLACED RESEARCH PROJECTS** are initiated by scientists and involve a short-term relationship between the scientist and the community. The community is the venue or pool for the recruitment of study subjects but is not otherwise involved. An example of this type of project in a citycould be a one-time survey to query users about their hiking activity in a park.

2 **BASIC COMMUNITY PARTNERSHIP RESEARCH PROJECTS** involve a relationship in which scientists make key decisions about a project,but a community partner is included. These projects consider the needs and interests of the community as they conduct the project and share the outcomes with the community. An example could be a project that tracks park use and health metrics of members of a particular hiking group.

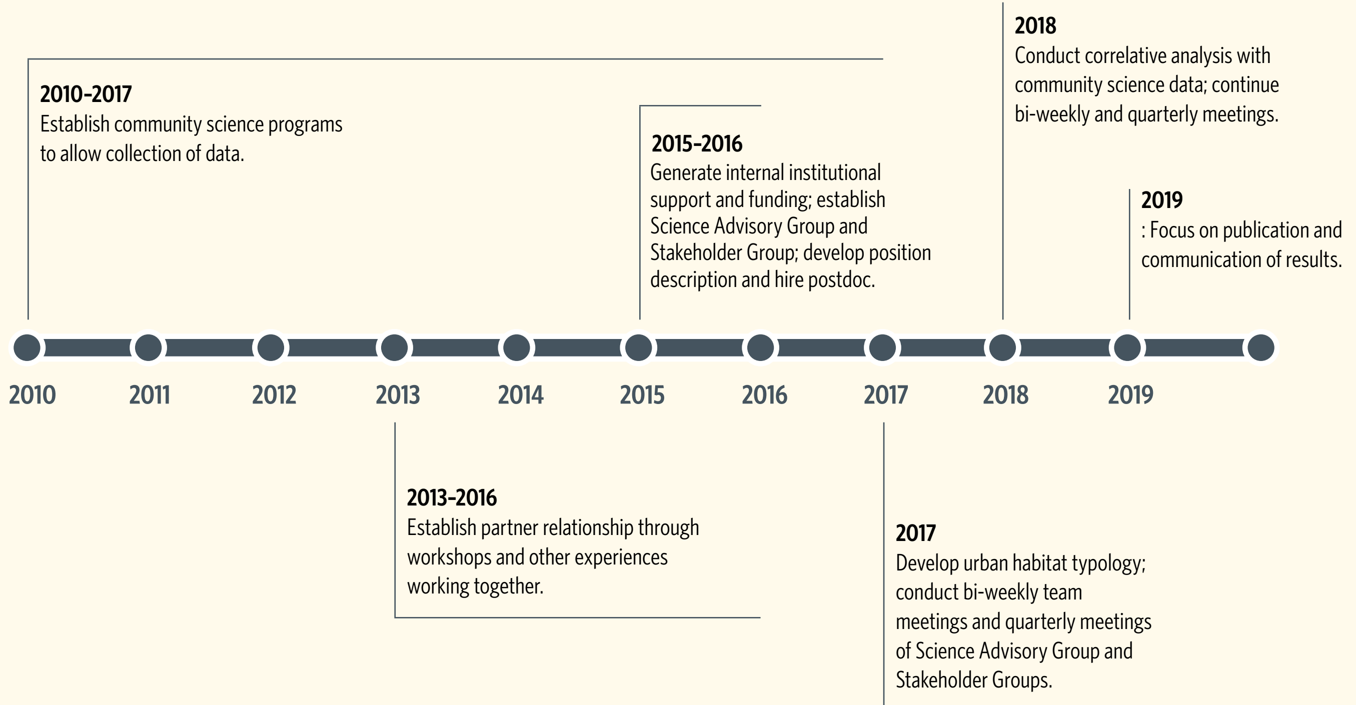
3 **CLOSE COMMUNITY PARTNERSHIP RESEARCH PROJECTS** take place over a longer period of time and are more collaborative. Project goals are co-defined and decision-making authority is shared in order to balance the benefits to scientists and usefulness of the findings for the community. The methodology is primarily determined by the scientists. An example could be a collaborative program to identify important health metrics for community members that use trails within a park system and track these health metrics along with the community members' use of park trails over time.

4 **COMMUNITY-BASED PARTICIPATORY RESEARCH PROJECTS** are co-created and co-led by scientists and the community. The community shares equally (or nearly so) in all stages of project development, implementation and decision-making. Findings from the project are used to implement needed changes or solve problems for the community. An example could be a co-created, co-led, collaborative program that identifies important health metrics for community members who use trails within a park system, tracking these health metrics along with the community members' use of park trails over time and using the results to inform improvements to the park trails system.

6 https://www.cehd.umn.edu/topics/community-based-participatory-research-cbpr/

BAILA: COMMUNITY PARTNERSHIP RESEARCH IN ACTION

Nearly 95% of California's residents live in cities, which is one reason TNC collaborated with the Natural History Museum of Los Angeles to develop a method for using community science data to better understand urban biodiversity. Using this method, the partners conducted the Biodiversity Analysis in Los Angeles (BAILA), a first-of-its kind study that displays the surprising biodiversity of Los Angeles, even in its most developed neighborhoods. The partners worked directly with community members and decision makers to develop the BAILA method so that it can be used to plan for future urban development. The novelty and utility of the BAILA method is that it generates a truly urban biogeographic assessment, revealing which parts of the city support which species and including cities in the understanding of biodiversity across an urban-to-wildland spectrum. The length of the BAILA timeline below illustrates the investment of time and effort that community-based research can require. A full community-based participatory research project may take even longer to accomplish.



STORYTELLING IN CITIES

Stories shape people and the things they care about. They inspire people to work in conservation or volunteer in their community. They provide insight about the issues that affect neighborhoods. They amplify voices and convey emotion and impact. They can help people feel connected to a place or an idea. Stories can be a piece of art, a photo essay, a blog post, a video or audio interview or another creative expression. For conservation practitioners, stories and storytelling are essential in all phases of work: scoping, design, fundraising, implementation, advocacy and evaluation. The storytelling process itself helps develop more respectful dialogue among partners, increases mutual understanding and inspires action for nature and people in cities. Without a compelling story, even the most well-organized conservation program would fail to flourish.

The importance of co-creation

Conservation practitioners almost never work alone, but often only a few voices are heard in stories, especially in those presented to donors, shown on social media or pitched to news outlets. In many cases, partner organizations or communities may not prioritize nor have the resources to develop, produce or share their own stories. So when considering what stories to tell about a program or project, and how to tell them, always begin with intentional co-creation. This means deliberately and authentically collaborating with partners and the people or communities involved to uncover concepts, values, perspectives, contributions and solutions as well as ways to frame and deliver them. Be diligent about centering the voices and concerns of community members, local businesses and organizations involved with or impacted by the work.

Tree planting in Alburquerque, NM. © Roberto Rosales

The very act of co-creating a story benefits everyone involved. The process creates support for mutual outcomes, grounds practitioners in the community, provides a platform for feedback, fosters insights about the challenges and opportunities for change and uplifts community voices. Ultimately, story co-creation builds trust, strengthens relationships and results in more dynamic, equitable and authentic narratives.

Storytelling in St. Louis

TNC's Storytelling Fund was created to inspire and incentivize equitable storytelling—rooted in co-creation and respect among program staff, partners and communicators—that can influence how TNC builds relationships, prioritizes communications and conducts fundraising to achieve conservation outcomes. The Cities Network core budget purposefully planned and allocated funds to this effort, in order to increase the capacity for network members to capture and share compelling stories and to more equitably distribute centralized funding across the network.

For example, in North and South St. Louis, more than 20 organizations worked on the community-led College Hill Neighborhood Solutions Initiative, hosted by Grace Hill Settlement House, which partners with neighbors and stakeholders to identify social and economic challenges in the community. As College Hill is the only neighborhood in St. Louis without a park, its residents engaged in a community-based participatory research process to brainstorm and implement solutions to vacancy, which is their most pressing challenge. Neighbors and collaborators proposed to redevelop and repurpose vacant, unoccupied land into Peace Park, a vibrant and beautiful place where the entire community could gather for events, entertainment and recreation. In July 2020, Grace Hill merged with the Urban League of Metropolitan St. Louis, but the project is still moving forward.

> "We were in deep listening mode during the first year of program development. When the opportunity to apply for the North America Cities Network's Storytelling Fund arose, our marketing lead Kristy Stoyer and I were able to quickly align with our partners and support a key part of the Peace Park project."
>
> — Rebecca Weaver, Missouri Cities Program Manager, St. Louis

The St. Louis partners co-wrote the grant with TNC, which helped reassure community members and build trust. Once the partnership received the grant, they co-created a communications plan as equals, with each partner having a say in how the funds would make the most impact. Together, they recruited interns from the community to help lead the work. While this took time and flexibility, it was a tangible way to ensure that the investment stayed within the community. Community members wanted to produce a video, so first they drafted a narrative that featured people from the community and outlined the research process they had followed. The partners and community members provided substantive feedback in the course of the video's development. The result was a truly co-created story.

> "During our recent meeting, we showed the first of our two-part video project that shares the story of the Peace Park development. The video gives an inspiring recap of the research, the vision and the joy that many people have poured into the project thus far."
>
> — Jeff Hendred, Grace Hill Program Coordinator

Power and permission

As a large, well-funded organization, TNC has the resources and capacity to reach many audiences. This power carries a responsibility to honor those closest to the story. Ask about partners' wishes and priorities related to storytelling; some might not want to share their stories outside their communities. Begin with clarity and transparency about power dynamics, consent, inclusion, decision-making and the use of stories so that the perspectives of all partners are heard and respected.

Planting day in West Philadelphia's Belmont neighborhood. © Kendon Photography

At the beginning of any co-creation process, all engaged parties should ask themselves:

- What stories does the community want to tell? What needs to change in order to put the community at the center of the narrative?
- Are all parties involved in the stories part of the co-creation process? Does anyone else need to be included before proceeding?
- What is the role of each partner in helping the community tell these stories?
- Have the stories been considered with diversity, equity and inclusion in mind, along with considerations of unconscious or conscious bias?
- How might co-creating and sharing the stories benefit the community? Are there downsides or unintended impacts that could result from telling the stories?
- Is anyone misappropriating or telling a story that is not theirs to share?
- Is the storytelling extractive? Could the partners be inadvertently engaging a community solely for the purpose of extracting their stories?
- How will intellectual property and/or storytelling resources be equitably shared? Who will retain ownership and/or house intellectual property and resources?
- How long is it okay to share a particular story?

See the Cross-Cutting Practices for Partnerships chapter for more suggestions.

> "We must not be an organization that jumps in front of community-based work to create a flashy story that is not centered on supporting a community's voice and priorities. Stories must not be used as fundraising or communications tools primarily for TNC's benefit."
>
> — Rebecca Weaver, Missouri Cities Program Manager, St. Louis

Developing a storytelling strategy

A storytelling strategy is the plan of action for the storytelling work. The partners should agree to goals and objectives, define the purpose of the storytelling and determine how its success will be measured and shared. Once the strategy is set, decide on a narrative, or bigger picture context, as well as the sequence of events to be shared and the way the events will come together to form a cohesive piece.

The following questions may be used to frame a storytelling strategy:

- Are the most impacted communities centered in the work?
- Will the story have relevance beyond this year? Will it be helpful for projects that are or will be implemented in the long term?
- Will the story be useful for the partners and individuals featured within it? Does it help advance their goals?
- Will the final products be freely shared with partners?
- Is the story told in a way that accurately reflects residents or partners, avoiding negative stereotypes?
- Does the story connect people, both intellectually and emotionally, to the work being promoted? Will it inspire them to act?
- Does it demonstrate how a community or city could change as a result of the collaboration? Does it provide the context about why the story should matter to the intended audiences?
- Is the story respectful of the cultural and linguistic diversity and history of the communities it is centering?
- How are preferences and biases shaping the stories being used, shared or told?
- To best serve the community, should the final product be translated into other languages and/or formats?

See Resources for additional suggestions.

> "There's a garden in West Philadelphia's Belmont neighborhood called the Friends Garden for Peace and Understanding. Danyell Brent, on staff with Friends Rehabilitation Program, faithfully manages the raised beds that produce fresh vegetables for the neighborhood. Over the years, the garden has become a place for neighbors to meet, for kids to play, for people to feel safe and welcome. If I had passed by the garden before knowing Danyell's story, there is no way I would have appreciated the important role it plays for residents. Without engaging with communities and learning their stories, we can only understand a tiny fraction of the connections and layers that exist. I'm also a gardener. This has given me another connection point to Danyell and the community. We now share gardening tips, seeds and produce, and through that build relationship."
>
> — Bukie Adekoje, former TNC Program Specialist, Philadelphia

Audience identification

Think about the way advertisements work. An ad for tea might show a person relaxing over a steaming mug, while one for an energy drink might show someone sweating during a workout. Both ads are for beverages, but they are created differently to appeal to different audiences, that have different needs, interests and motivations.

The same is true of conservation stories. While a single conservation story might appeal to multiple audiences, most stories require framing or emphasis that keeps specific audiences in mind. Identifying and exploring these target audiences can inspire new ideas for storytelling and increase understanding of their interests and perspectives.

Budget and capacity

Respectfully building a shared narrative through co-creation and collaboration takes significant time, funding and team dedication. But storytelling efforts are rarely well funded, and budgets for this work often do not consider how much staff effort and time are required. Many of the examples in this chapter were supported by grants and other sources of funding and were supported by the Cities Fund or marketing staff rather than by conservation budgets.

Build funding for story development, production and promotions into grant proposals to ensure that storytelling is directly tied to conservation strategy and outcomes. This also helps marketing teams incorporate projects into their planning and deliverables, creating synergy between program and communication staff.

TARGET AUDIENCES

In a local context, relevant information is often held within the community. The best option is simply to ask what people care about, either in person or via email or a short survey. The story co-creation process provides another excellent way to learn what target audiences are interested in, because the people involved in the project are often members of its target audience and can share information about their interests. Social media can also offer excellent insight; take time to discover the topics most frequently discussed, shared and liked by members of the community. Use the information gathered about demographics, needs and interests to create distinct audience profiles based on shared characteristics, desires or concerns.

In Puget Sound, Washington, for example, the TNC Cities team wanted to develop a social marketing campaign called Rooted in Puget Sound to support community tree planting projects. They identified artists as an important target audience, knowing that art can support a shift in underlying values and social norms by appealing to people's emotions. The team's artists-as-audience approach led them to attend public art and music events; host a photography, art and written word contest to engage local artists; and use social media to promote the resulting stories. This creative approach resulted in unique artwork and art-inspired narratives about nature that engaged the community around tree planting.

Partner stewardship and reciprocity

Because of their access to more resources, larger organizations like TNC often take the lead in storytelling. Without thoughtful co-creation between partners, storytelling may lead to inequitable outcomes for the lead organization and its partners. Story co-creation requires time and engagement from partners and community residents, which must be acknowledged and appropriately compensated. If partners co-create a thoughtful story but neglect to steward the project relationships before, during and after the process, there's a risk of hurting the trust built. Mismanaged storytelling relationships can have negative implications for the program, for organizational reputations and for future collaborations.

Tree signs help share the stories of success, like this one with the Gowanus Canal Conservancy partnership. © Jonathan Grassi

Consider the importance of shared intellectual property in storytelling. One way to share power among partners is to share ownership of stories and the resources created during their development. For example, when TNC signs contracts with photographers, it assumes the legal risk of the use of the images but can add a clause to the contract about sharing with partners (see more about this below). This sublicensing agreement communicates to partners the use parameters set by the subjects and photographer, which are often different. A sublicensing agreement grants partners full access to all the materials created. In a scenario like this, remember to include details specific to each photography project to ensure that images are not used outside the subject's expressed consent.

Here are some steps that TNC can take to steward relationships with smaller partner organizations. (See Cross-cutting Practices for Partnerships chapter for more suggestions.)

During the initial scoping and planning process:

- Assess each partner organization's needs. Some organizations do not have dedicated communications or marketing staff. Will requests strain their limited resources and time? How can TNC help offset the burden of requests made to smaller partners?
- Designate one primary contact to lead marketing engagement with partners and commit to responding to feedback and questions in a prompt, respectful and thorough manner.
- Discuss shared expectations early in the process, including frequency of communications, approximate timeline, and how reviews and decision-making will happen.
- Consider incorporating marketing and communications activities into a Memorandum of Understanding to manage expectations and increase efficiencies. Include items such as communications expectations, logo usage, storytelling process, the collection of multimedia assets and rights to assets.
- Assess marketing staff's capacity to provide resources for partner organizations, especially on media training, message development, photography and other areas in which smaller organizations might not have expertise.
- Be open to different ways of storytelling to effectively reach each audience and authentically tell the community's story. Does the community have a strong artistic history or aesthetic? Could the story be told as a song, a spoken word poem or a piece of art?

During the co-creation process:

- Ask partners how they would like the story told and by whom. They may want to write the story or hire a writer or storyteller from the community.
- Consider how storytelling can be a capacity-building opportunity for all organizations involved. Youth participants, for example, might share their knowledge through photography or video. Community members might offer expertise in graphic design, script writing, song writing, etc.
- Budget a stipend to cover community partners' time for interviews and review of communications materials.
- Ask for and quickly incorporate partners' and community members' feedback into communications materials. Transparently communicate what feedback was incorporated or provide an explanation if any feedback was not incorporated.
- Ensure agreement and use of appropriate credits, logos, asset ownership, cross links and social media tags among partners.

Once a story is complete:

- Share any assets developed in the process (audio or video interviews, photos, etc.) in a timely manner. For multimedia assets, consider asking for a Sublicensing Agreement when sharing images with partners.
- Have partners review the story in its final format before it is published and promoted. Share information about timing and how the story will be promoted.
- Send a thank-you letter or gift to acknowledge the time and energy partners and community members contributed to the project.

LEFT Burnham Wildlife Corridor, Chicago. © Emy Rodriguez/TNC; **RIGHT** Ping Tom Park in Chicago, IL. © Laura Stoecker Photography LTD

- If the story will be used for fundraising, ensure that partners and community members clearly understand the use and provide consent. It may be necessary to return to partners to clarify use and obtain consent for future efforts beyond the scope of original discussion. For example, TNC Canada includes the following language in their best practices: "Team Canada will obtain consent from Indigenous partners, or any individuals represented in our communications, whether quoted, referenced or visually represented, prior to publication. This includes a clear and transparent process for understanding the terms of consent and obtaining and implementing consent."
- Host a post-communications meeting with marketers, program staff and partners to celebrate the project, share results and hear constructive criticism about the process, story and promotions.
- Share printed materials and links to any media coverage with partners.

Evaluation

Measuring the effectiveness of a story must go further than traditional marketing metrics, such as number of views or clicks. Measurements should also evaluate the impact of the process, inclusion of partners and connections to conservation outcomes. Quantitative metrics might include the number of people using storytelling tools and key messages or how many are incorporating diversity, equity and inclusion into their communications planning, as well as the number of proposals and grants that include marketing and storytelling as a deliverable and a budget item.

Get creative about finding metrics that assess the qualitative connection between stories and outcomes. Collect anecdotal evidence or have a group discussion to identify common themes that came up during the storytelling process. Ask if the products resulted in positive feedback within the community or if the stories brought more people to events or stewardship activities.

> "We're measuring progress through a new lens by tracking things like new partnerships formed and diversity of voices engaged. While some of this work is harder to quantify, anecdotal information on impacts, accomplishments or lessons learned help bolster more traditional metrics like reach, engagement, click-throughs and open rates."
>
> — Vanessa Martin, former TNC Director of Marketing, Texas

Lewis MacAdams Riverfront Park in Los Angeles. © Mike Dennis

Place-Based Practices

[pleys-beist] [**prak**-tis]
adjective/noun. **place•based•prac•tice**

Activities or actions that are immersed in local heritage, cultures, landscapes, opportunities and experiences.

70 PLACE-BASED PRACTICES FOR DESIGNING GREENSPACE

78 GREEN STORMWATER INFRASTRUCTURE ON PRIVATE LANDS

88 TREE CANOPY ENRICHES CITIES

96 STREAM AND FLOODPLAIN RESTORATION

PLACE-BASED PRACTICES FOR DESIGNING GREENSPACE

Greenspaces can serve a variety of purposes and address a host of conservation challenges, especially when they are co-created with the community. They can offer places for people to connect with nature, find solace and improve their mental, physical and emotional health. They can provide food, increase personal safety and enhance feelings of connectedness among neighbors. They can also reduce heat islands, improve stormwater flow, decrease nuisance flooding and help mitigate the effects of poorly designed or aging stormwater systems. Community-designed greenspaces may take more time, resources or support than greenspaces created by a single municipality or other entity, but co-creation is more likely to lead to sustainable outcomes that are more positive for the users. Whatever the goals are, co-created greenspace design must revolve around deep listening.

Deep listening as a strategy

To navigate a greenspace design process, it is important to have authentic relationships with the local community. It may help to have someone on the team with a formal or informal background in community organizing, especially if that person already has established contacts, context and relationships in the local area. If no one on the team fits that bill, and it is not possible to hire someone who does, then strive to build those relationships by actively listening to people living in and near the community. Provide multiple community engagement opportunities and invite other local organizations with community ties to join the project.

Listening to ideas with Mujeres De La Tierra, Los Angeles, CA.
© Mike Dennis

Attend community-hosted meetings, listen respectfully and be present without having expectations or making demands. Ask whether or how the project can meet local community goals. Offer ideas and technical expertise as a gift (not a trade) without making assumptions about the end results or expecting to receive anything in return. Take time to demonstrate transparency, build relationships and engage in authentic co-creation (see Case Study: It Takes the Time It Takes).

TNC and other large, well-funded organizations are often perceived to be in positions of power because of their financial or human resources. Therefore, it's

incumbent on these organizations and their staff to be thoughtful allies and amplify less-represented or less-often-heard voices and perspectives throughout the planning and implementation process. Take a supportive role in conversations rather than a leading one.

Here are some questions for staff at partner organizations to ask themselves when designing greenspace:

- Where do community needs align with each organization's goals and objectives, and where do they differ?
- Are all organizations and individuals willing and ready to commit to a long-term and time-intensive project? If so, do all participants define this commitment in the same way?
- What other partners or people have a vested interest in the project? Whose voice or opinion has not yet been heard? Who else should be part of the design, building or maintenance process? Who can help identify and reach out to the people who are not yet included?
- What are the city's or municipality's goals for the space? Does their vision complement that of the community? Is their vision captured in a comprehensive plan or neighborhood plan?
- What are the proposed conservation outcomes, and can the space also be designed for additional purposes, such as art space, an orchard or another use that the community desires?
- What are the community gathering needs for this space? What has been the relationship between residents and the space until now? How would they like to use greenspace in the future?
- What expertise is needed to create the space's built components? What has the community requested, and who will design and build those components? Are there local contractors or businesses that could fulfill this need?
- What is the long-term management plan for this space? Are there groups willing and trained to handle its upkeep and maintenance? If not, who will identify and train them? How will those groups be cultivated and supported over time?
- Is there a workforce development opportunity within the building or maintenance process? If not, are there organizations that could be consultants or partners to employ local workers?
- What is the funding source for maintenance, and is it sustainable for at least five years?
- What kind of use will this public space attract, both anticipated/unanticipated and positive/negative? What is the community's plan for those uses? Who will monitor the uses, and how can they enhance the activities that were planned or mitigate the unplanned or unwanted uses?
- Could the greenspace result in gentrification of the community? What is the plan to reduce the possibility of gentrification?

WHERE DEEP LISTENING TAKES PLACE

In the context of greenspace design, deep listening happens at neighborhood associations, city and county meetings, district councils, community group meetings, school boards, churches and other events. It's important to attend without a set agenda or expectation of the outcome. Instead, be ready to offer ideas and technical expertise for co-creation, if welcome. Listening and co-creation happens over time and with trust; it cannot be rushed.

Design expertise and organizational involvement

Miami Climate Convening at the Mayfair, Miami, FL. © Roxy Azuaje

The local city or municipality needs to be involved in any greenspace design project, in order to issue permits, ensure that the design meets building codes, clear land ownership and more. It is essential to partner with the relevant officials from the onset of the design process. While there may be more flexibility in the project design if greenspace is created on private land, partner organizations must still work with public agencies and officials to obtain clearance or permissions according to zoning codes or other ordinances. Design partners may need to be reminded to maintain these relationships.

There are various scales of greenspace design. A small project might be an urban agriculture space, or a few trees coupled with an art installation and benches. Projects of this size can be effectively led by community members and are less likely to need a design professional. More complex projects, such as park creation, stormwater tree trenches, subsurface water retention or pavement removal (see Resources for more examples), should involve an engineer, landscape architect, urban designer or sometimes all three. These design professionals will address vision, creativity, feasibility, safety, permitting and liability and ensure that all work meets city codes.

TNC has used a variety of approaches when designing greenspace. Each has benefits and drawbacks:

- **HIRE AN IN-HOUSE EXPERT.** Julie Ulrich, TNC's urban conservation director in Philadelphia, has an urban design background. This skillset allowed her to work with partners to incorporate green stormwater infrastructure into plans to establish tree cover and plant schoolyard gardens. It saves time and resources to have in-house staff perform double duty in these essential roles. The TNC team served as a critical liaison among design firms, the city and partner organizations, resulting in a participatory approach with the best possible outcomes.

TNC's role	Co-visioner and co-creator, technical expert, project facilitator, overseer of installation, fundraiser, connector, co-creator of workforce development program
Partner roles	Co-visioner and co-creator, anchor institution, workforce development trainer
Benefits	Adds more creativity to designs, enhances opportunities for people/nature co-benefits, saves money
Drawbacks	Challenging to know when to stop and how to stick to budget and design constraints; staff who work "double duty" can become overworked and experience burnout

- **FUND A COMMUNITY ORGANIZATION TO UNDERTAKE A PROJECT.** In St. Louis, Jubilee Community Church purchased land from the city's land bank and requested TNC's help to co-create a greenspace featuring native habitat and food production. The project also included funding from the Metropolitan St. Louis Sewer District to address combined sewer overflow issues. TNC provided a grant directly to Jubilee Community Church to lead project implementation and contract local expertise, including Custom Foodscaping and the Missouri Department of Conservation.

TNC's role	Convenor of skills and resources, grant funder, connector of community and other project supporters
Partner roles	Anchor institution with vision, technical expert, leader of operations and maintenance training program
Benefits	Ensures a community-led project and community ownership
Drawbacks	Challenging to coordinate so many partners

- **UNDERTAKE DESIGN WITH COMMUNITY MEMBERS.** Sarah Hurteau, Former TNC Climate Program Director, New Mexico, worked directly with community members to reimagine a blighted vacant lot and create a pop-up park. Artful Life (a nonprofit that transforms communities through the beauty and power of collaborative art) partnered on the project and focused on social cohesion. The result was a community-driven visioning and design process. The partners co-created an art piece that provides shade and a community gathering space with planter boxes for trees, medicinal plantings and other sensory-stimulating plants to improve visitor well-being.

TNC's role	Facilitator of construction, problem solver, landowner negotiations, contracting oversight, co-convener, identification of long-term maintenance and ownership requirements
Partner roles	Influencer in existing community relationships, community organizing
Benefits	Ensures a community-led project and community ownership
Drawbacks	No engineer or designer to help create easily constructible components

> "In a community-driven design process, vary the focus to gain a fuller, richer outcome. Look at art, food and jobs. Each lens has value and importance. It also helps to begin with all partners building a common vocabulary around design principles and design challenges and to look ahead to who will maintain the finished space. Case studies can be a great resource to help teams understand what a sound greenspace design process looks like."
>
> — Sarah Hurteau, Former TNC Climate Program Director, New Mexico

Operations and management

Just as when negotiating to place a conservation easement on a property, include an agreed structure for operations and management when designing a greenspace project. Here are some lessons learned from TNC projects:

- In Albuquerque, a project hit major roadblocks because land ownership was transitioning from one owner to another. Be sure that land ownership is secured for the long-term, by performing due diligence and legal permitting early and often throughout the process.
- In Philadelphia, a partner announced they were selling a building in the middle of a series of multi-site design projects. The team had to account for this in the larger plan, spend more time in the design phase and consider easements. When designing greenspaces in cities, unexpected changes are common in all phases of work, so if possible, build contingencies into the budget for financial or planning overruns.
- In St. Louis, Jubilee Community Church did not have the in-house knowledge and experience to properly operate and maintain the co-created green space and green infrastructure practices on site, so the project team developed a site-specific stewardship and training program. Site stewards, whether they are volunteers or paid staff, need the resources and training to feel confident in their ability to care for the space.

> "With greenspace design, it's extremely important to know a site's background information, such as parcel history, deed restrictions, land leasing agreements and long-term management and ownership plans. Even though we might not acquire land, it helps to have the land protection expertise in place from the onset of a project."
>
> — Rebecca Weaver, Missouri Cities Program Manager, St. Louis

Time: the necessary ingredient

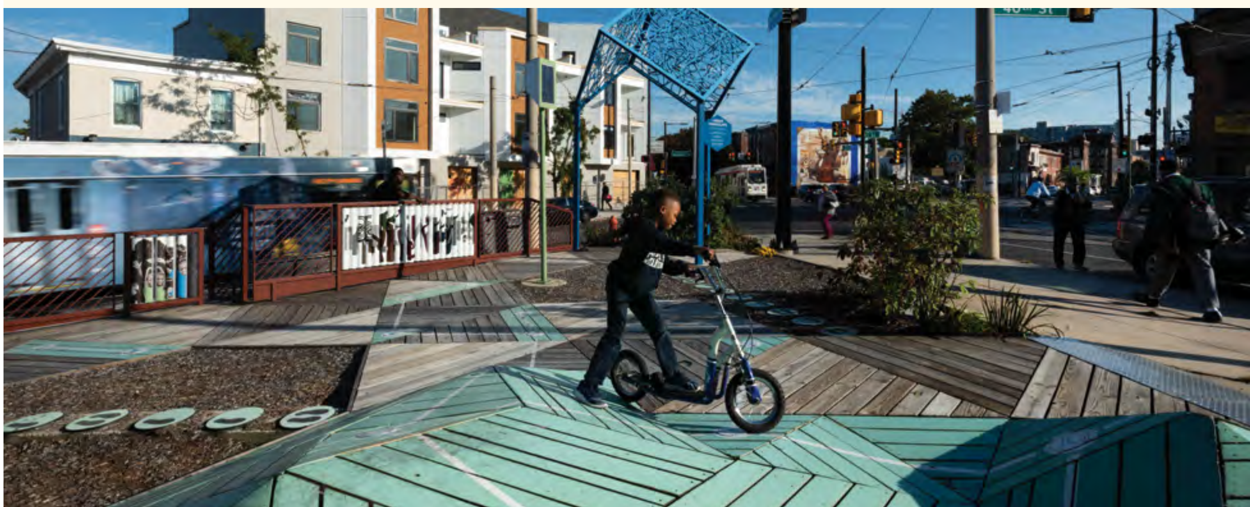
Greenspace design is a nuanced and slow process. All the steps in the process take time, from investing in a neighborhood to developing relationships and trust to co-creating a project. It is also time-consuming to manage permitting, agency approval, legal approval, site design and landscaping plans. Budget and plan for the actual time and resources needed to complete all of these steps.

For example, in Albuquerque, it took more than four years to create the idea with the community, find funding, go through the community design process, build the park and begin maintenance. The pop-up park had to be moved twice during that time before the team found a permanent home for all the components.

> "Though it is very worthwhile, greenspace design is a long process that can be complicated and expensive. Things will change in terms of the partners involved, the landowners and even the project scope. Going in, you won't know the end result. Where you are in the beginning won't be where you are in three months or three years. We aren't in control of most of the pieces because that's how community-led design works. The concepts and outcomes of greenspace design are a shared process that we can influence but cannot and must not control."
>
> — Julie Ulrich, TNC Urban Conservation Director, Pennsylvania

KEY PRINCIPLES FOR GREENSPACE DESIGN

- **THE COMMUNITY IS THE EXPERT.** Talents and assets exist within every community. Include residents early and often in the process to develop a sense of ownership, incorporate diverse talents and have more successful outcomes. Residents can offer valuable insights to a space, such as historical perspective, how the place is currently perceived, what critical issues are top of mind and what is meaningful for those who will use the space.
- **CHANGE IS CONSTANT.** Designing and implementing greenspaces, no matter how large or small they are, is challenging and time-consuming. A small project like a vacant lot conversion can take several years to design and implement and requires at least five years for post-project maintenance. During all these phases, unexpected detours happen beyond design constraints and budget overruns. City codes change, community leadership moves away, neighborhood needs and interests shift and funding runs out. Be flexible and suspend judgment as you respond to the myriad changes that may occur.
- **GREENSPACES ARE FOR ALL.** Carefully consider the people who might be inadvertently excluded from the greenspace. Pay attention to design cues that advertise specific intentions. For instance, a greenspace programmed for activities preferred by a certain class, race or age group will exclude others, even if this exclusion is not intended or advertised. Improved greenspaces can also spark higher property values or a decrease in housing affordability. Explore activities or policies that encourage local investment while keeping people rooted in their current community.
- **THERE IS NO SUCH THING AS DESIGNING FROM A BLANK SLATE.** As noted in the Introduction, landscapes are inherently complex; city landscapes can be even more so. Physical, biological and social relationships are constantly in flux and must be accounted for when designing greenspace. Ecology and socio-economic history contribute to deep-seated emotional feelings about places. Acknowledge and integrate past, present and future relationships. In Delaware, TNC planned a greenspace design for a lot where a business had recently been demolished. The team talked with neighbors about the history of the place and learned that it had been a bar that served as an important community gathering space where even children were welcome. The conversations led the team to include art-based ways to pay tribute to this past.
- **THE WORK WILL GO ON.** Any involvement in a greenspace's design and creation requires releasing the perception of ownership. Get comfortable with a lack of full control and recognize that the role any individual plays is meaningful, regardless of the end result. Working with a group of people and organizations on land owned by others will inherently result in outcomes that shift and evolve over time, long after any person's or organization's engagement has concluded.



Belmont neighborhood in Philadelphia, PA. © Kendon Photography

CASE STUDY

Synergy and deep collaboration in Bridgeport, CT

TEAM MEMBERS

Drew Goldsman and Kayla Patel, TNC Connecticut
Christina Smith and Tanner Burgdorf, Groundwork Bridgeport

Mapping and partnerships in Bridgeport, CT, are helping to leverage the city's natural potential. © Ramon Cabrera

KEY ELEMENTS

In 2016, TNC developed a mapping tool that used environmental, socioeconomic and health data to identify areas where green investments could result in significant social and ecological change, with a focus on economically sensitive neighborhoods. In Bridgeport, Connecticut, the city's East Side ranked at the top of the list. Groundwork Bridgeport is an organization that works with local youth to build leadership skills and foster urban regeneration by creating and stewarding gardens, parks, playgrounds and other open spaces that instill pride in this community. In 2019, TNC and Groundwork Bridgeport received funding to expand environmental education and stewardship across the city, with a focus on expanding Groundwork Bridgeport's landscape design program.

OUTCOMES

Drew Goldsman of TNC and Christina Smith of Groundwork Bridgeport built a relationship based on trust and this allowed them to get to know each other's work well. The two organizations meet weekly to discuss project-focused work and collaborate on student-led designs of community greenspaces. They continue to explore ways to leverage TNC's organizational infrastructure to improve Groundwork Bridgeport's fundraising and operations. The organizations also work extensively with other partners in the city, including local landscape architects, municipal staff and other community-based organizations.

WHAT IT TOOK

This partnership is built on enormous personal trust between Drew and Christina. They started from a place of clear and transparent communication, having gotten to know each other over five years of personal and professional interactions.

LESSONS LEARNED

- This experience highlights the benefits of partnerships and the importance of allocating resources to fully support community-based partnerships. The team assigned dedicated staff to provide technical support (operations, finance, fundraising, etc.) to community-based partners, rather than piecing together resources.
- The project included a well-formulated approach to fundraising with community-based partners. The team planned for donor cultivation and engaged a diversity of donors from all parts of the involved organizations.
- To address different working styles across the project team, especially among multiple landscape architects, the team debriefed together honestly. Those discussions brought to light issues such as outside partners being overly critical of students' proposed designs, based on incorrect assumptions or expectations, and landscape architects who produced plans outside the project budget.
- Project challenges led to a more thoroughly documented communications process. This included a decision-making rubric to select sites and show landscape architects a model that demonstrated the correct scale at which to produce designs.

MOVING FORWARD

Groundwork Bridgeport and TNC are committed to continuing and deepening this partnership, particularly in ways that support community revitalization and fundraising. The organizations seek to enhance learning and expertise developed through a Cities Network Partnership Fund grant (see Equitable Funding and Grant-Making chapter) into a project with the city of Bridgeport, the Water Pollution Control Authority and the local regional planning organization. The project will support student landscape designers in developing concepts for green stormwater infrastructure sites that reflect community needs while helping to reduce water volume flowing into the water authority's primary wastewater treatment plant.

GREEN STORMWATER INFRASTRUCTURE ON PRIVATE LANDS

Polluted stormwater is created when heavy rains or melting snow flow rapidly off hard surfaces and combine with oil, grease, heavy metals, pesticides and other toxic materials. Stormwater can quickly overwhelm sewer systems, leading to flooding or polluted discharge that enters streams, lakes, rivers and oceans. The Clean Water Act establishes the basic structure for regulating the discharge of pollutants into U.S. waters.[7] While thousands of cities and towns are having difficulty meeting these standards, there are solutions to be found using green stormwater infrastructure (GSI). Options include soils, plants, trees or other vegetation; permeable pavements or other porous substrates; or technology such as rain barrels or bioretention. There is, for example, enormous untapped potential in a vast patchwork of paved surfaces managed and owned by corporate campuses, religious facilities, schools and universities, cemeteries, strip malls and other entities. These private lands offer places to install GSI and use nature-based solutions to manage stormwater right where it originates. This allows for more creativity, a potential cost savings gained by an increased level of production and more significant benefits for people and nature, as shown in demonstration projects across the country.

Green stormwater infrastructure (GSI) solutions can include green options like soils, plants, trees or other vegetation; permeable pavements or other porous substrates; or technology such as rain barrels or bioretention

Project planning: A step-by-step approach

Before beginning the planning process, take the time to understand context in the community. In different municipalities, different conditions and policies drive the ability to advance GSI installation, and on private property, implementation is contingent on approval by local landowners. It is important to determine what options exist at the location under consideration.

1. **INCENTIVES.** Some cities provide financial incentives, such as rebates, tax breaks or grants, for landowners to install stormwater retention following best management practices.
2. **OFFSET FEES.** Some cities have stormwater requirements, such as fees based on impervious surface or management requirements for new development, that drive landowners to reduce those fees or meet the requirements by implementing GSI on their land.
3. **INTRINSIC.** Some cities have neither incentives nor offsets in place, which makes it incredibly challenging to locate potential GSI projects on private land. In those locales, relationship building is paramount, as one must appeal to the property owners' personal values or desire to be good environmental stewards. In these cases, it is sometimes helpful to lead with other goals, such as reducing heat island effects or using cisterns to irrigate urban agriculture, rather than leading with stormwater benefits.

7 https://www.epa.gov/laws-regulations/summary-clean-water-act

Stormwater management in Providence, RI. © Ayla Fox

In Washington, D.C., grants are available to incentivize property owners to install GSI. Offset fees are also used in the city's stormwater credit trading program, in which landowners must pay a fee based on the area of impervious surface on their property, but they can install GSI and earn a fee reduction based on the amount of stormwater runoff that is captured. This system has the double benefit of generating a credit to sell to developers, who then do not need to build all of the needed GSI on their own properties. Philadelphia also uses offset fees, allowing property owners to qualify for lower stormwater management fees if they add strategic landscaping, fix drainage problems and improve the appearance of a property. (See Resources for more information.)

Before going through the following steps to design and implement GSI, research the policy context, including stormwater permit requirements, codes and regulations, at federal, state and local levels.

STEP 1

IDENTIFY POTENTIAL SITES

Focus on locations and landowners with the greatest potential to reduce polluted runoff in waterways. Applying GSI for single family homes, for instance, involves a higher cost for a much smaller return. It's better to center resources and attention where large blocks of land could result in relatively fast adoption of big GSI measures, such as commercial or industrial sites, strip mall parking lots, universities, faith-based institutions or even cemeteries. Depending on the city, incentives (such as rebates, tax breaks or grants) may be available for working with specific categories of private land ownership. In addition, some cities require that stormwater management be done on site for projects involving a specific amount of land disturbance. In other cities, the builder can buy stormwater credits and thus does not need to manage stormwater on the site. An important note: always conduct research to determine what types of activities took place at the property over at least the past century, especially in current or former industrial sites. Digging into soils laced with toxic substances could pose human and environmental health risks as well as causing cost and permitting obstacles.

Use outreach and partnerships to help people understand how GSI will improve quality of life in their community and learn what their needs and aspirations are. Residents can directly impact development by demanding that GSI be included in new construction and by supporting municipal codes that bring GSI into their neighborhoods. (See Cross-Cutting Practices for Partnerships chapter for suggestions.)

Desktop mapping can identify priority areas for stormwater retention by analyzing data from sewersheds, watersheds, flooding, large impervious surfaces and other locations. A project site might rise to the top because it would provide an effective demonstration project, creating a ripple effect or showing how the mechanics of GSI would work. When looking at sites, remember to consult with Indigenous peoples or local Tribes and Tribal governments to determine where ancestral homelands are impacted[8] and learn the area's history.

In Philadelphia, the TNC team screened over 400,000 properties citywide using a mapping process developed by TNC's Pennsylvania GIS team. The process included looking at opportunities to highlight social co-benefits, such as less flooding, reduced heat islands and more green space. It was biased toward socially minded landowners, such as schools, faith-based organizations and affordable housing providers, as well as underserved communities. Further, the team introduced community-centered design practices, with local people providing solutions, making decisions and influencing the design process.

TNC Cities programs in Washington, D.C. and Puget Sound identify potential projects by looking for places where conservation benefits, appropriate site size and opportunities overlap, and where public and private funding are available. The D.C. team also looks at USDA soil data to determine infiltration rates and the implications for the type(s) of remediation needed. In Puget Sound, TNC uses Stormwater Heatmap, an online decision-making tool, and filters the data based on impacts to local fish populations (see Resources).

TNC's Chicago program is in the early stages of its water work, forming partnerships in communities that are suffering from localized flooding. With the Chicago Department of Water Management committed to testing a new stormwater market for GSI, TNC and the Metropolitan Water Council seek to demonstrate success through a five-year pilot called StormStore. It helped to have examples like TNC's work in D.C., as a proof of concept from which to build.

8 https://thenatureconservancy462.sharepoint.com/sites/Conservation/lands/indigenous/Shared%20Documents/StrongVoicesActiveChoicesFramework_Final.pdf or https://thenatureconservancy462.sharepoint.com/sites/Conservation/lands/indigenous/Shared%20Documents/TNC%20Pratitioners%27%20Guide_ENGLISH.pdf

> "The largest intangible is discovering if the property owner is willing and open to the idea. It all depends on the owner, and then the community, saying yes, which ultimately comes down to relationship building and trust."
>
> — Kahlil Kettering, former TNC Urban Conservation Director, Washington D.C. and Maryland

STEP 2

BUILD AND MAINTAIN RELATIONSHIPS

Relationship building with property owners is a huge up-front portion of the process and continues throughout a project's lifespan. Ultimately, it is a long-term commitment, as the project will not be successful if the landowner does not buy into the project or does not have a high level of trust in the partnership. This is the most qualitative and time-intensive part of project development. It involves explaining the process, outlining the benefits, involving the property owner in the project's design to ensure that aesthetic and functional needs are met and showing the potential that is unique to each site, all while building trust with the landowner.

One relationship-building strategy is to have conversations with the landowner and partners that evaluate co-benefits and determine how to consistently include benefits that matter to the landowner. Co-benefits are usually driven by local context and are often what excites the community; these include opportunities for recreation or education, space for gardens, trees to reduce urban heat islands, green walls to improve aesthetics and air quality, and skills and workforce development initiatives that support job opportunities within the green economy.

> "In Philadelphia, many landowners pay thousands of dollars in yearly stormwater fees. By doing green stormwater infrastructure retrofits to their properties, they can receive up to 80% in stormwater credits for stormwater management on site. Our job is to help them identify the opportunities and set goals that benefit both the landowner and the community. That can be a lengthy process, which takes building trusting relationships with not only the landowners but also stakeholders and community leaders. In the end, landowners and communities are invested and become stewards of their nature-based solutions."
>
> — Carlos Claussell Velez, former TNC Urban Conservation Project Manager, Philadelphia

STEP 3

MANAGE ENGINEERING, PERMITTING AND CONSTRUCTION

Selection of an engineering firm begins with a well-written Request for Proposal (RFP) that is distributed and developed equitably. Take advantage of opportunities to contribute to the local economy, especially by identifying and working with businesses owned by Black people, Indigenous Peoples, people of color, women or other under-resourced communities. Next, narrow the field to those who understand the location's permitting and government processes, and ask other organizations or government agencies that have worked with GSI in the past which firms they use and trust.

Firms may specialize as either "design-build" or "design-bid-build." Design-build tends to be more cost effective due to the transferability of risk; the burden is on the firm to deliver their design. Design-bid-build offers more opportunity to do value engineering; an external entity reviews the design and may find ways to reduce costs by simplifying construction. The preferred approach varies by municipality, contractor and sometimes project. In many cities, general contractors want to bid after the design is done, while engineering firms want to be part of the design process.

This is another point where time spent building relationships can yield huge benefits. Local partners, utilities and municipal departments likely know how the work is done and which firms do good work. In Puget Sound, TNC relied on utilities to make connections with consultants and firms. The Philadelphia Water Department makes a list of endorsed practitioners available to landowners and has a downloadable GSI Planning and Design Manual and Stormwater Retrofit Guidance Manual (see Resources); many cities have similar resources. Diversifying the pool of firms requires an open process. So, while asking for these connections is important, the process should be fair and transparent and should allow any firm with the required expertise to be a candidate.

STEP 4

ASSESS RISK AND CHALLENGES

Any construction project involves risk, but an examination of contracting, insurance and licensing can reduce the potential for problems. It's important to have certificates of insurance to limit liabilities for landowners and organizations. Contractors should be licensed and bonded, but there are ways to work around that if necessary. For example, TNC's Philadelphia project includes an affordable housing/social services provider that trains residents in GSI maintenance. Because that provider has its own workforce training insurance, it was relatively easy for the provider to add in GSI maintenance insurance.

Be aware of the difference between anticipated or estimated construction costs and actual bids. An estimate shows the tasks associated with a project and an approximate price, but there is no guarantee that the work will be done for that amount. A bid states that the cost will not exceed the agreed-upon price unless work is added, subtracted or changed.

Also consider whether improvements stemming from GSI might increase property values. Be prepared to help the community reduce that risk by exploring policies or activities that can reduce gentrification. Even projects that incorporate education or workforce development must be planned so they don't negatively affect people already living in the community. (See Cross-Cutting Practices for Partnerships and Place-Based Practices for Designing Greenspace chapters for further information.)

> "We must keep the long-term in mind. Budgets are often allocated through construction, but maintenance is frequently underestimated or overlooked. When green stormwater infrastructure isn't maintained, it doesn't work and doesn't look good, which can lead to negative opinions and backlash. It's important to incorporate full life-cycle costs into the project plans."
>
> — Kahlil Kettering, former TNC Urban Conservation Director, Washington D.C. and Maryland

STEP 5

MANAGE CONSTRUCTION DURING THE PROJECT

Determine who will coordinate the actual construction process, beginning with setting up pre-construction meetings with the engineering team, general contractor, owner and city permanent agencies. In addition, plan for erosion and sediment control practices. Pre-construction tasks include establishing tree protection practices to avoid damaging mature trees, their drip zone and roots; working with the landowner to plan for any potential new traffic patterns during construction; and creating a process for potential "change orders" for any unforeseen issues. (When excavating in an urban area, for example, there are often infrastructure, utilities or other unknown concerns that require deft, adaptive management and design changes in real time.) The management responsibilities also include coordinating inspections with the permitting agency, setting up a payment schedule for the contractors, taking pictures to tell the story and for permitting inspections, setting a schedule to periodically visit the site during construction, meeting with the landowner to make sure they are satisfied and getting the contractor to record construction measurement data and materials used for the "as-built" submissions at the end.

STEP 6

CREATE A LONG-TERM OPERATION AND MAINTENANCE PLAN

Reach a consensus, preferably early in the process, regarding who will maintain the project and who will pay for the maintenance. This involves understanding what, if any, incentives are built into the financial structure. Regulatory policies can either penalize or reward GSI maintenance; the specific context matters and should be discussed in the project's early stages.

In Philadelphia, a landowner can receive a credit for stormwater fees, but the trade-off is that they must agree to a 45-year contract for the system's maintenance. If they don't, they may lose the credits until the system is brought into compliance. This is an annual benefit that creates a reliable source of income for the city. Maintenance is typically contracted out to vendors. To capitalize on this opportunity, TNC is helping advance a workforce development program that trains community residents in jobs to meet these maintenance needs.

In Washington, D.C., TNC manages the maintenance properties in the Stormwater Retention Credit program because TNC-related entities are the ones selling the credits after the projects are complete. In Chicago, the city does not provide incentives for long-term maintenance, and the local stormwater trading pilot has a one-time payment/credit that does not allow for long-term funding. Many cities are in a similarly challenging situation.

In Puget Sound, maintenance and long-term operations are managed on a case-by-case basis. Where infrastructure benefits a single property, like a residential rain garden, the landowner is usually responsible for maintenance. If a large-scale project provides a benefit above and beyond a property's footprint, it's possible to negotiate maintenance with the local utility. In Seattle, construction under the Aurora Bridge (see sidebar) included a stormwater runoff system that collects more than 200,000 gallons of runoff each year into a series of compartments featuring soil and plants. The landowner maintains the above-ground vegetation, and Seattle Public Utilities maintains the underground infrastructure.

Summary of roles and responsibilities

An individual or group on the project team must take on all of the following duties in order to most effectively design, implement and maintain GSI on private land:

1. Identify priority locations and cultivate relationships with property owners; establish an understanding of local issues (including potential fears), listen to concerns and suggestions from community members, discover shared goals and identify a value proposition (see Cross-Cutting Practices for Partnerships and Place-Based Practices for Designing Greenspace chapters for recommendations).

2. Demonstrate proof of concept by bringing case studies and other examples to the community and to those who make stormwater policy decisions.
3. Read and interpret engineered stormwater management plans, best management practice designs and other technical materials.
4. Conduct feasibility studies, geotechnical surveys, topographical surveys, ground-penetrating radar studies and other studies as needed.
5. Understand the permitting processes of the local government agencies and the EPA.
6. Adaptively manage the project: write RFPs, develop a funding strategy, hire contractors and firms, negotiate final construction prices, conduct site assessments, manage construction process and timelines and coordinate inspections, all with an eye toward maintaining flexibility.
7. Approve general contractors and meet with them before and during the design process and throughout the construction process; plan for challenges, including long-term maintenance, liability issues and required codes/permitting.
8. Act as financial agent, sharing expertise on raising capital, managing budgets and conducting full-cost accounting that includes long-term maintenance.
9. Act as a consultant to guide landowners and community-based organizations through the process and build their capacity to act as consultants or advisors in the future.

GSI IN PUGET SOUND

The regulatory structure that guides utilities is not sufficient to clean Puget Sound. That's why TNC focuses its program on voluntary above-and-beyond-code actions with both the private sector and utilities. In this way, the program successfully and directly affects quality of life in the region, alongside clean water for salmon, orca and other wildlife that are highly valued.

In addition, federal and state regulations, like the Clean Water Act, do not sufficiently address water quality issues. In the case of Puget Sound, the state's interpretation of the Clean Water Act leads to a very specific focus on combined sewer overflows. However, the vast majority of stormwater pollution comes from stormwater that does not flow through the combined sewer system. Further, because this is a rapidly growing urban region, Puget Sound water quality and its indicators are still declining, despite aggressive stormwater programs.

TNC sought to influence and engage private developers, working alongside corporations, utilities and community organizations, to ensure clean water for Puget Sound's people and wildlife. The process involved the following steps:

- Develop incentive policies to attract private landowners to participate.
- Develop talking points about why taking action is important.
- Create science-driven project selection and prioritization metrics.
- Build relationships with specific landowners.
- Undertake feasibility and design studies.
- Gain approval from appropriate agencies.
- Construct the project.
- Develop a plan for long-term maintenance and stewardship.
- Leverage the project to identify other opportunities.

A project of Growing Vine Street, the Cistern Steps bring the calming rhythm of nature to Seattle's Belltown neighborhood, a project of Growing Vine Street.
© AJ Dent

CASE STUDY

Trust, reciprocity and respect in Philadelphia, PA

The following summary is from an interview with Julie Ulrich, TNC urban conservation director in Pennsylvania, and Carlos Clausell Velez, former urban conservation project manager/Cities Network, to discuss issues in Philadelphia at the intersection of stormwater pollution, private land and new green solutions designed to address aging infrastructure in the nation's sixth largest city. While the methods for engaging with organizations around changes in infrastructure are often bureaucratic and systemic, working with communities directly impacted by such changes can be anything but.

HOW DO YOU RECALL THE PARTNERSHIPS FORMING IN THE FIRST PLACE?

JULIE: TNC didn't go in thinking, "Here's our end goal, here's this organization I want to do XYZ with." I remember a LOT of breaking bread with the community, a lot of meals and good food. It was a core tenet of what we have done and how we have had dialogue and community. It was challenging because there's plenty of urgency and push from within TNC, wanting us to have projects with high visibility, high-profile organizations. It took a lot to be able to create this safe space and to move at the pace that was needed. We really wanted to learn more about each other's organizations and have a mutual respect for the core mission and value of each other's programmatic areas.

CARLOS: Human connection and partnership building is parallel with the discovery of new ways to approach environmental and social outcomes and helps in not only the partnership but also the human relationship between the partners and ourselves. One would think such an approach would always be there, but it was often missing. This allows for the transactional process to come later.

HOW WERE THESE PARTNERSHIPS DIFFERENT FROM PREVIOUS WORK TNC HAS DONE?

CARLOS: We did thorough research and made sure we understood the partners' mission, their work, the population they were serving and the goals they had already. We developed a strategy for opportunities that was based on their goals, vision and strategy. We did the social work but also a lot of technical work to show that there was an intersection, or an alignment, between the work that they were doing and the work we were doing.

JULIE: We gave weight and space and appreciation to the fact that the process was just as important as the end product. Not setting our own agenda is critical to any successful partnership rooted in trust, reciprocity and respect. I want to underscore that for TNC leaders who want things to happen at a faster pace, and really underscore that for funders, and reiterate it over and over and over and over again [laughs]. We tried to uplift the beauty of that.

ANY ANECDOTES UNDERSCORING THE EFFECTIVENESS OF THIS APPROACH?

CARLOS: We are working with organizations that are improving the quality of life for underserved communities. When we started our joint process, we included residents from the very beginning. Partner organizations started doing the same and even invited us to those sessions. The affordable housing providers brought in residents from the beginning, and the architects were able to get really critical feedback and they were like, "Whoa ... we never thought about this or that." The feedback led to significant changes.

JULIE: It's shifting that more paternalistic approach to affordable housing and even environmentalism and saying, "We can do this differently." We had resident partners who were uncomfortable with high visibility, and then there's TNC that wants to market, market, market, be highly visible, get donors out! So, we had to completely shift that paradigm and develop a workshop series around dialogue and strategic communication as a vehicle for respect and a place for people to tell their own story.

WHAT OUTCOMES WERE MADE POSSIBLE BY THIS APPROACH TO PARTNERSHIP

CARLOS: The community has a sense of ownership and empowerment because they were a part of the process from the beginning, and they see their input in the implementation process. In the case of GSI, it has to be maintained for the next 45 years. If the community is not the steward of those interventions, then it's very hard for the partner organizations to take care of those systems and therefore meet the long-term goals.

JULIE: There are a lot of project-based, physical, vegetation and environmental outcomes that come out of this work. But it's harder to tell the story of the non-physical-based outcomes. So often it's about what's the next shiny thing, or who's gonna give the most money, or what's the next high-profile case, how do we make a video about something. It's really about whether you're there to commit and to do the hard work together and will you do it over and over again regardless of who's watching you, without these checkpoints of validation. It doesn't mean anything if you're not willing to show up day in and day out.

WHAT IS THE LEARNING FOR TNC AT LARGE?

CARLOS: Working in the urban environment is also working toward environmental goals. People are also a species we need to protect. The most vulnerable communities will be most affected by environmental issues. In the future, 70% of people will live in cities, so it's critical that we focus our efforts there.

JULIE: This organization has spent decades and decades courting particular landowners, working for years with ranchers and other types of partners, so why is cities work any different? This is building off decades of work, and it's a natural evolution to be doing this work where we're doing it and how we're doing it. Less "othering" of this work and more rooting it, giving it space and voice, normalizing it, is really key.

TREE CANOPY ENRICHES CITIES[9]

Forests in cities and towns represent approximately 42% of all tree cover in the United States. But communities are losing this asset at the extraordinary rate of 36 million trees each year.[10] Trees help form greenspaces where people live, learn, work, worship and play. They are also critical infrastructure that provide environmental, social and economic benefits (see sidebar). However, trees are not distributed equitably in cities; neighborhoods that have higher home values typically have denser, more mature tree canopy that provides residents with substantial benefits, while neighborhoods inhabited by lower-income earners have lower tree cover and disproportionately suffer from heat island effects, air pollution and other consequences. Thriving, productive, beneficial city forests do not happen by accident. A robust forestry strategy for cities must be interdisciplinary and requires planning for succession (tree planting) as well as maintenance (stewardship). It also relies on strong partnerships among people in the communities, municipal and regional leaders, nonprofit organizations, volunteers and others (see Cross-Cutting Practices for Partnerships chapter for guidance).

The Gowanus Tree Network is putting tree canopy over the streets of Brooklyn, NY. © Kate Frazer

SOME BENEFITS OF TREES IN CITIES[11]

Environmental: Trees offset pollution, improve air and water quality, provide habitat for wildlife and sequester carbon

Human health: Trees improve mental and physical health, reduce stress and encourage outdoor exercise

Economic: Trees increase property values, reduce energy bills and reduce heat islands

9 Since the drafting of this publication, changes have been made to several of the programs referenced in this chapter. We retained the examples because we believe the work to be exemplary and illustrative of the points made, and we would like to honor the hard work of TNC staff and partners, especially those in Albuquerque, Dallas and Birmingham, along with Dave Queeley and colleagues from Texas Trees.

10 https://www.nrs.fs.fed.us/news/release/cities-communities-losing-tree-cover

11 https://www.nature.org/en-us/what-we-do/our-priorities/build-healthy-cities/cities-stories/benefits-of-trees-forests/

> "If your goal is a healthy, long-lived urban forest, plan before you plant. If your goal is a healthy forest that serves the needs of communities in ways that matter most to them, engage before you plan. Working collaboratively with community leaders, residents, activists, faith leaders and others is the only way to achieve success in both the social and biophysical landscape."
>
> — Rachel Holmes, TNC Urban Forestry Strategist

Plan before taking action

Tree plantings are increasingly used to combat challenges faced by people who will experience the first and most severe impacts of climate change; this often includes Indigenous Peoples, people of color and those with limited financial resources. To have the greatest benefits for all people as well as for nature, tree plantings should follow a tree canopy enhancement plan. An urban forest is primed for long-term success when such a plan is created with and for the community and when it incorporates specific actions to increase trees' resilience to climate change, makes provisions for their long-term care and maintenance and includes a strategy for regular monitoring.

The first step is to analyze a city's forest resource and management strategies at multiple levels, from individual neighborhoods to the entire municipality or even region. This includes assessing existing tree canopy using available remotely sensed data (e.g., satellite imagery) as well as data collected through field work, such as tree inventories. Some municipalities have existing tree inventories or professional urban tree canopy analysis tools (see Resources) to guide species selection and identify areas with low canopy, heat risk, human health challenges or socioeconomic vulnerability.

OPTIONS FOR ANALYSIS

If previously gathered inventory data or urban tree analyses are not available, the U.S. Forest Service's open-source i-Tree software is one option for analysis. It can prioritize high-need locations, guide species selection and quantify specific benefits—such as removing carbon from the atmosphere or intercepting rainfall—that an urban forest could provide. This tool might work unevenly across regions; local ecology should be taken into account in planting decisions. In addition, data and/or analyses older than five years may be outdated, depending on what changes have occurred to the landscape within that time, such as new developments, zoning changes and tree canopy loss from weather events and/or insects and diseases. See Resources for more information on i-Tree and additional suggestions for analysis.

Until 2017, there were no inventories of urban forests on public land in Birmingham, Alabama. TNC, the University of Alabama at Birmingham School of Public Health: Lister Hill Center for Public Policy, Cawaco Resource Conservation and Development Councils, and the City of Birmingham Department of Planning created a greenprint map to help practitioners prioritize tree planting and urban forest maintenance efforts. The tool identified neighborhoods and places where people experienced urban heat islands and flooding. Funded by National Fish and Wildlife Foundation Five Star Grants, the data produced from the i-Tree analyses will be used to pursue funding and influence decision-makers to take action to maintain the city's urban canopy health.[12]

12 The Alabama Chapter disbanded the urban conservation program in June 2020 in the wake of the COVID pandemic. As of 2021, former Alabama urban conservation lead Francesca Gross was pursuing this work with partnerships formed through the TNC program.

Urban forestry programs should focus on both private and public land, when possible, but each has special considerations that should be taken into account during planning. Tree management on private property often involves reconciling the sometimes-conflicting values or landscape goals of individual landowners and homeowners. Meanwhile, trees in public parks and on rights of ways (e.g., street trees) may be managed by multiple municipal or even state government departments depending on where the trees grow. Furthermore, nonprofit organizations often support stewardship and maintenance of public trees. In short, urban tree management is a shared responsibility, often carried out through complex networks of tree stewards.

Albuquerque, New Mexico, offers a typical scenario. Until recently, more than eight city departments and divisions were involved in planning, installing and managing trees on public property, since management depended on a tree's location; yet agencies only had access to a single tree care contractor. The 2019 *One Albuquerque Urban Forest* report—created by the City of Albuquerque Parks and Recreation Department, Albuquerque Bernalillo County Water Utility Authority and Parks and Open Space Division, Tree New Mexico, New Mexico Forestry Division and TNC—provided recommendations for a new division to oversee stewardship of all city trees, develop and implement an urban forest management plan and enact a campaign to encourage residents to participate in tree stewardship (see Resources). Mayor Tim Keller subsequently adopted a goal to plant 100,000 trees in 10 years or, as he put it, "one tree for every child in Albuquerque."

MATURE TREES AND CLIMATE IMPACTS

Climate change is making cities hotter and weather events more extreme. Rising temperatures, along with invasive insects and diseases, have shifted tree ranges and nearly eliminated entire genera like ash (*Fraxinus* spp.). Hurricanes and increased storms have contributed to tree stress, dieback and mortality nationwide, especially in coastal regions. Mature trees play a particularly important role: they provide more ecosystem benefits in reducing these impacts for people and wildlife than newly planted trees.[13]

Urban tree planting and stewardship planning should be conducted by a diverse team of stakeholders. Consider these tips when planning urban forestry work (see Cross-Cutting Practices for Partnerships chapter for additional guidance):

- **UNDERSTAND SOCIAL CONTEXT AND GOVERNANCE STRUCTURE.** Obtain local knowledge regarding formal and informal power structures, community relationships and decision-making so the work begins from an asset-based perspective (see Storytelling in Cities chapter for resources).
- **DETERMINE WHERE AND HOW TO LEVERAGE ORGANIZATIONAL RESOURCES TO SUPPORT COLLABORATIONS.** In Dallas, the Cool and Connected Oak Cliff neighborhood canopy and community health project integrated TNC's Urban Forest Health Monitoring Protocol into local planning and management (see Healthy Trees, Healthy Cities detail below). This required a strong partnership with Texas Trees Foundation (an established regional organization with expertise ranging from on-the-ground planting and maintenance to citywide science and planning) and Groundwork Dallas (an organization that creates recreation opportunities while preparing youth to become future stewards of the environment).
- **IDENTIFY EACH PARTNER'S ROLES AND RESPONSIBILITIES.** Make sure the partnership includes expertise such as community organizing, data collection support, strategic planning and fundraising.

13 Research findings presented by Dr. Dave Nowak at the 2019 Partners in Community Forestry Conference, Cleveland, OH. Publication forthcoming at the time of this printing.

Planting trees in Albuquerque, NM. © Roberto Rosales

- **INCLUDE A VARIETY OF PARTICIPANTS.** Strong relationships among individuals and institutions with diverse viewpoints ensure a coordinated approach to the management of trees and greenspaces on public and private property. For example, as part of a grant-funded tree planting program in Birmingham, Alabama, TNC brought together a team of municipal foresters, nonprofit conservation groups, the regional planning commission, county extension staff and private industry employees.
- **HIRE AN URBAN FORESTER OR CONSULTING FIRM.** Adding this specialized expertise can streamline a project to save time and money, as well as provide insight about opportunities and lessons learned.

> "You can't always change the location, so match the species with the site. If you want a specific species, choose a site that suits it. If you want a specific site, choose a species that will thrive there. Normally we have to compromise on both species and location."
>
> — Zach Wirtz, Texas Trees Foundation Urban Forestry Manager

Prioritize trees for community needs

Urban forestry projects should always be grounded in an understanding of people's values and perceptions regarding trees in their communities. Information gathered from community members and at community meetings is a critical, but often underutilized, data point. While community members may not use the term "ecosystem services," they may talk about stormwater ordinances, flooding, high temperatures, health concerns, property values, job opportunities or climate change impacts. These topics can initiate a conversation about the role of city forests in addressing a variety of challenges.

Health problems can be exacerbated by heat stress, which is more common in densely built areas that lack vegetation. The communities in these areas tend to be historically marginalized and to lack equitable access to resources. They are also more likely to be barred from resources and support systems designed to help withstand heat events.[14, 15]

It should be noted that a dense canopy cover or heavily forested area may hold negative connotations for some. Some people fear that trees serve as hiding places that promote crime or vandalism or as nuisances that drop branches or other debris. In addition, some communities have not received sufficient funding for park maintenance and improvement, so areas with trees are neglected or overgrown and are seen as blights rather than as assets. This again speaks to the need to continually involve local residents in all aspects of their community's forest strategy[16]. Invite participation, listen to them and be open to all perspectives (see Cross-Cutting Practices in Partnerships chapter).

"RIGHT TREE, RIGHT PLACE, RIGHT PURPOSE"[17]

This principle is critical to the long-term survival of any tree. Increasingly, urban forest managers must address tree infrastructure conflicts, such as trees interfering with power lines, especially after major weather events in the Northeast and Midwest regions. Tree roots may get in the way of ground-level or below-ground infrastructure, like building foundations and sidewalks. A tree needs enough space to accommodate its crown size at maturity, so it is important to avoid planting too close to buildings or homes.

In recent years, decisions about tree species and location have begun to more closely reflect the intended purpose of planting trees, whether it is to save energy in homes, increase stormwater absorption or even mitigate soil contaminants. When making these types of decisions, take climate change into consideration. The right tree to plant today is one that will thrive in the near term and in the changing conditions of the coming decades.

Choosing the right tree species and location is not only critical to the tree's survival but can increase community support and minimize opposition from people who view trees as messy or find them an inconvenience.

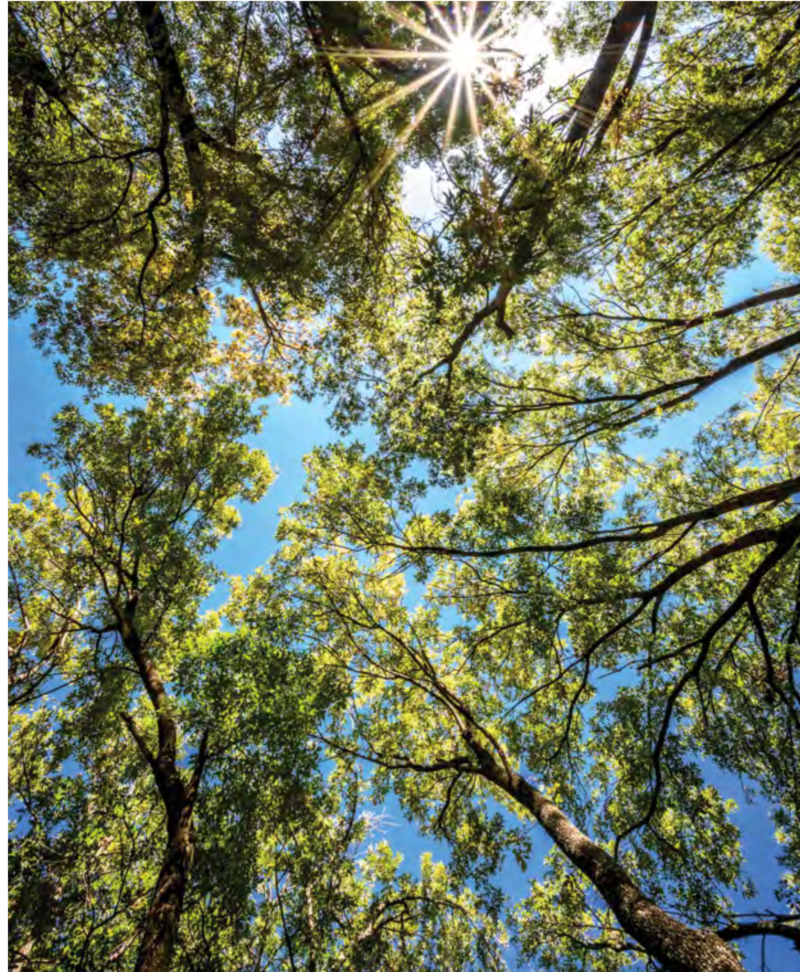
Monitor and manage

A common pitfall of tree planting projects is insufficient planning and budgeting to monitor and manage trees from planting through maturity to removal upon death. It typically takes two to three years for a new tree to acclimate to the planting site and establish root growth; while many groups offer free trees for planting, few provide training beyond that initial step. A best practice is to budget one to two times the cost of the tree itself for stewardship activities, such as staff time and supplies. In Dallas, a proposal to expand a neighborhood tree canopy project included a strong push for a comprehensive urban forest management plan to sustain the new canopy.

14 https://physicsworld.com/a/city-heat-hits-the-poor-hardest/
15 https://www.emerald.com/insight/content/doi/10.1016/S0196-1152(07)15005-5/full/html
16 https://healthytreeshealthycitiesapp.org/resources/publications.cfm
17 https://healthytreeshealthycitiesapp.org/resources/publications.cfm

And in Albuquerque, TNC staff supported and trained homeowners not only to plant new trees but to care for them and existing trees on their property.

It is impossible to protect or garner support for a resource that someone does not know they have. Therefore, inventories of both mature and newly planted trees are important. One way to complete a good inventory to document trees is the Healthy Trees, Healthy Cities tool (see Resources). This tree health monitoring initiative, coordinated by TNC, the U.S. Forest Service and the University of Georgia's Center for Invasive Species and Ecosystem Health, supports researchers, managers and community scientists in the maintenance and protection of city trees and forests nationwide. It uses a mobile app to collect data, educate the public and increase stewardship. The resulting database reveals trends in tree condition and mortality and can help identify emerging threats. A web-based project management dashboard lets users manage their own data, access information about data collection efforts and prioritize management responses to the trees that are most in need.


Bachman Creek Trail in Dallas, TX. © R.J. Hinckle

As of 2020, this tool has been used in 16 U.S. cities, and partners have trained more than 800 people who have evaluated 101,000 trees. Nearly all the trainings included a work development component for underemployed individuals—such as youth, veterans and those who have been incarcerated. The app has been used to track time spent on more than 27,000 stewardship activities. This metric allows researchers to quantify the impact of community-driven stewardship on tree health.

Catalyze human development through trees

Tree stewardship and planting activities present excellent opportunities to initiate rich dialogue about natural resources, as well as dialogue around community needs, which can foster new ways of thinking about the benefits of conservation action. For example, for many faith communities, stewardship is a meaningful way to care for spaces and elements of nature that people consider sacred. In addition, workforce training or career exploration programs provide ways for underemployed people to gain valuable skills in arboriculture, urban forestry and general job competencies.

In Boston, for instance, the Codman Square Neighborhood Development Corporation, the Talbot-Norfolk Triangle Eco-Innovation District and TNC—supported by a $250,000 grant from the Cities Network's Partnership Fund—are providing local residents with green infrastructure training and certification opportunities to help them qualify for related jobs. The trainings cover tree planting and tree health monitoring for youth, adults

(including people of color and formerly incarcerated Black men) and others to support them as they jumpstart new careers. Not only is this capacity building focused on people who may not have equitable access to the job market, participants gain meaningful, long-term employment in their own neighborhoods.

In Atlanta, a CBO called HABESHA partnered with the TNC team to train and hire a diverse group of residents, from teens to grandparents, to plant trees and steward a local forested area. The co-created curriculum, based in tree planting, urban forest stewardship and greenspace management, also included lessons in socio-emotional intelligence, urban agriculture and vegan cooking. Light exercises in preparation for tree planting were an opportunity to integrate physical fitness with tree maintenance. Subsequent paid internships, training and employment opportunities are also helping create paths for participants' long-term career development.

In Chicago, a pilot career exploration program was launched through Imani Works of Imani Village, a sustainable community founded by Trinity United Church of Christ. TNC and Imani Works partnered with Advocate Health Care, the U.S. Forest Service, Morton Arboretum and the University of Illinois at Chicago to help community members become lifelong learners and adopt healthy practices, as well as to foster economic development in neighborhoods on the city's South Side. This career exploration program is built on the understanding that a person's health is determined in large part by the landscape and environment where they live and that healthy natural resources are essential to human well-being. Participants conducted urban tree health assessments, served as community health workers in Advocate's Trinity Hospital, operated food "farmacies" that gave fresh fruit and vegetables to families and educated people on the connection between health and the environment. Some participants have since been hired into the environmental field or continue to support community health work at the hospital.

Advocate and celebrate

Long-lasting care of urban forests in cities takes effective local, regional and national policies, plus effective communication to build public support. In places like Providence, Rhode Island; Seattle, Washington; and Bridgeport, Connecticut, TNC programs are doing precursor work to influence policy on urban forest master plans or creating roadmaps for strategic coordination of urban forest management operations, governance and financing to achieve a specific set of outcomes at a specific scale.

Nationally, TNC participates in the Sustainable Urban Forest Coalition (SUFC), a network of 35 member organizations focused on national-scale urban forestry. The coalition influences financial appropriations and provides strategic guidance on the management priorities of federal agencies like the U.S. Forest Service. It also works with legislators to craft nuanced policies and legislation that support practitioners' efforts to improve the health of the nation's urban forests and communities. The SUFC provides useful real-time advocacy and policy information, content and resources to the public to increase awareness and engagement in urban forest advocacy efforts. For the past five years, SUFC has connected organizations and institutions through a variety of networking initiatives and mechanisms to advance collaboration. The initiatives are open to all engaged in urban forestry, regardless of their mission or scale of influence. SUFC actively seeks collaboration on funding proposals, thought partnership and community support for their urban forestry efforts.

In many cities across the United States, urban tree canopy analyses reveal that existing funds are inadequate to care for the trees, and the threats to urban trees and surrounding communities are growing. Despite these challenges, it is important to take time to capture completed work, beyond simply documenting the number of trees planted, stewarded or monitored. Share stories of landscape and community transformation (see

Storytelling in Cities chapter). Various TNC city programs, including those in Louisville, Kentucky; Albuquerque; Dallas; and Seattle have produced short films featuring the individuals and groups that invest their time and energy in the future of their community's trees (see Resources). These stories can capture and harness community energy around trees and lead to long-term investment.

It is also important to share results with the people who are impacted by and involved with the work. For instance, Chicago's Imani Green Health Advocates program included a community briefing to share information about the tree health findings. This culminated in a group meal and celebration to reflect on the work done and honor those who invested time and energy to support their landscape, natural resources and community. Such events are indispensable to the health and longevity of partnerships that support forest management in cities.

Volunteers and Scouts team up to carry water to trees that were planted in South Dallas, TX. © Mark Graham

STREAM AND FLOODPLAIN RESTORATION

As the intensity and frequency of rain events increase due to climate change, streams and floodplains—and the people who live near them—are among the first affected. Stream and floodplain restoration can therefore be a powerful tool in a city's climate resilience or adaptation strategy. Such efforts provide stacked benefits, ranging from flood management and water capture to increased carbon sequestration and reductions in heat island effects.

Restoration projects present both a challenge and an opportunity. Streams and floodplains often cross political or geographical boundaries and affect communities with differing educational, income or job opportunities. But they also can be places where diverse groups—representing health, transportation, growth or connectivity sectors, for example—can unite over shared challenges, needs and interests. The goal of stream and floodplain restoration should be to restore waterways with and for people and to create healthy, thriving human communities alongside healthy, thriving natural systems.

STREAM RESTORATION CAN ACHIEVE ECOLOGICAL AND SOCIAL GOALS SIMULTANEOUSLY

Some outcomes of stream restoration include the following:

- Creekside trails for recreation and ecological connectivity
- Social gathering spots
- Improved wildlife habitat and increased biodiversity
- Better access to nature
- Heat island mitigation
- Educational programming
- Dedicated areas for community gardens or other activities

Restoring equity

Streams and floodplains exist in the lowest parts of a landscape. Because property values have historically been lower in areas prone to flooding, these areas are frequently home to people who have not had equitable access to employment, schooling or other opportunities. In many cases, this is due to deliberate "redlining," or unfair and racist policies that reserved more desirable locations for white, middle- and upper-class people. These policies and the resulting lack of investment meant that these communities have fewer trees, parks and other greenspaces, which further compounds the effects of flooding, heat islands and other environmental and health challenges impacting the people living there.

If approached with an equity mindset, stream restoration can add or restore greenspace accessibility and connectivity within communities. The opportunities differ depending on each city's specific context. For example, in South Austin, Texas, TNC worked with community members to develop a vision and plan for residential floodplain buyouts that will begin to remedy long-standing inequities in flooding and park access. In Kentucky, one of the Louisville Mill Creek Project's goals is to improve greenspace access for the surrounding underserved communities (more details below).

In all circumstances, conservation practitioners must work alongside communities to understand local priorities, build ownership and establish long-term stewardship plans. Many decisions regarding restoration activities could have positive impacts for some community members and negative impacts for others, as well as trade-offs from both environmental and social perspectives. Be proactive about the potential for displacement or gentrification that can be linked to improved greenspaces, parks and greenbelts. What are people's concerns and priorities? How can restoration work benefit or complement their vision for their community? What are the hallmarks of gentrification, who are the most vulnerable people and what support do they need to remain in their neighborhood? Remember that people may experience planning fatigue or lose momentum if they do not see progress. Frame expectations in advance of meetings and plan activities that can show forward movement within a reasonable timeframe. (See Cross-Cutting Practices in Partnerships chapter for more suggestions.)

The two scales of restoration

There are two ways to approach stream and floodplain restoration in city landscapes: at the stream level (from the stream looking out, restoring streams so they are better able to handle water during rain events) and at the watershed level (from the broader watershed looking in, dealing with water before it enters streams). Ideally, both approaches should be used. Make sure to work alongside communities in order to understand local priorities, build ownership and have a plan for long-term project stewardship.

Stream-level activities might include:

- Restoring the geomorphology to a predetermined state/time by physically changing the shape of the stream channel with heavy machinery, or restoring the habitat to a predetermined state/time by adding substrate or woody debris within streambeds to support aquatic life
- Stabilizing banks with vegetation and other resilient multi-benefit materials, like locally sourced boulders and native plants
- Increasing diversity and density of streamside vegetation and/or managing invasive species along stream banks and in the floodplain
- Reconnecting streams and floodplains or enhancing wetlands and floodplain benches
- Changing landscape management strategies to minimize intensive activities (such as trails and sports) near stream banks, allow vegetation to re-establish, improve soil structure and/or prevent erosion
- Creating an active maintenance plan with the municipality and community to ensure the sustainability of the restored ecosystems

A LEGACY OF INDUSTRIAL INTERESTS

In many cities, policy makers, businesses and citizens have historically prioritized industrial interests when it came to waterways. Rather than appreciating streams and viewing them as a resource for communities, some people valued streams only for their ability to move stormwater as quickly as possible away from roads and development. Streams were neglected, altered, ignored and even hidden underneath pavement. They were viewed as polluted, degraded, inaccessible or dangerous. While many cities have passed policies that require developed areas to better manage stormwater on their sites and increase the use of rain gardens and other features that mimic the hydrology of natural systems, cities still face a large-scale legacy of places that were built on, paved over or otherwise covered with surfaces that water cannot move through.

Watershed-level activities might include:

- Installing rain gardens, rainwater harvesting cisterns and other green stormwater infrastructure to capture runoff from impervious surfaces such as roofs or parking lots
- Restoring or creating wetlands
- Reforesting at a large scale
- Installing engineered systems such as stormwater retention basins
- Removing culverts or daylighting streams to provide ecosystem benefits like improved infiltration, nutrient processing, reduced velocities and better connectivity
- Integrating stormwater management into parks and public housing spaces

There are trade-offs to each activity, and not all are appropriate or possible in all scenarios. For example, in Los Angeles, decreasing flows entering the river by increasing stormwater capture in the watershed would reduce invasive species, because invasives thrive when there is more water. However, decreasing flows would also reduce opportunities for kayaking and other recreational activities in the river and would negatively affect wetlands that are stopover sites for migratory birds. As another example, removing concrete siding along a river may be appealing from a restoration standpoint, but this is impossible in Los Angeles because development goes up to the river's edge and those properties would experience flooding without the concrete siding. In the long term, local communities may be able to engage in "un-building" to remove some development and gain the aforementioned benefits.

Urban stormwater solutions like the Aurora Bridge Bioswale Project in Seattle, WA, can help clean runoff before it reaches waterways. © Courtney Baxter/TNC

Planning an urban stream or floodplain restoration project

Our earlier publication, the *Field Guide to Conservation in Cities in North America*, outlined a useful approach for drafting an action plan (pages 49–58) that can be a starting point for any city project, including those that involve streams and floodplains. The highlighted principles and examples show how various stream projects use this framework to select the most suitable approaches, strategies and project areas before starting.

1. **GATHER AND CONSOLIDATE INFORMATION.** Perform a situation analysis to better understand the scale of the challenge. Who are the people and communities impacted, what is the history and current state of the system and where are the gaps and opportunities?

   Example: In Los Angeles, TNC conducted a study of the Glendale Narrows stretch of the Los Angeles River to better understand the historical ecology, historical and current hydrology and hydraulic conditions and current biodiversity along 2.5 miles of the river. The study identified where the greatest opportunities exist and highlighted the 18-acre Bowtie Parcel as a place to restore habitat, capture stormwater and provide public access by daylighting a storm drain from an existing pipeline and diverting water through a natural arroyo, or steep-sided ravine.

2. **PARTICIPATE IN COMMUNITY PLANNING.** Identify and develop relationships with people who live near the stream or floodplain to illuminate common issues, goals or other points of intersection, as well as gaps and unmet opportunities. Sometimes the plan begins with a discussion around an issue that may seem disconnected, such as crime prevention and safety. What work is already happening where value could be added? Are there ways to make solutions larger than the sum of their parts? What does the community know that outside organizations do not?

   Example: In Birmingham, Alabama, post-World War II zoning limited many Black citizens' housing options to redlined areas, which were often located in or near floodplains. During community meetings hosted by TNC, some residents were concerned that crime would increase if more trees were planted, since wooded areas might hide criminals or criminal activity. These conversations reinforced the need for mindful interactions with neighbors—before, during and after projects—to better understand the ways that history affects people and places and to inform directions for potential restoration projects.

3. **DEFINE THE SCOPE OF INTEREST.** Scale the solution to the problem. What is the full spectrum of interests and needs, both social and ecological? Where does opportunity for impact intersect with opportunity to leverage available resources (funding, partnerships, staff, etc.)?

   Example: In Austin, Texas, storms are already becoming larger and more frequent as a result of climate change. Floodplain buyouts are one way to remove people from harm's way and reclaim flood storage, but the process often creates a patchwork of vacant lots in vulnerable neighborhoods with no real plan for how to use them. The Williamson Creek project, a collaborative effort by community members, the Community Powered Workshop, the City of Austin and urban planners Asakura Robinson, focuses on 58 acres of parkland and two miles of connected land within a 100-year floodplain. The goal is to improve flood control, increase habitat for wildlife, contribute to carbon sequestration and provide opportunities for residents to use greenspaces for recreation, relaxation and social gathering.

4. **ARTICULATE BENEFITS TO SPECIFIC PEOPLE, COMMUNITIES, STAKEHOLDERS, BIODIVERSITY AND ECOSYSTEM FUNCTIONS.** Identify and explain the stacked benefits (see Storytelling in Cities chapter for guidance) to build support for restoration projects. Be prepared to address decisions that may have more positive environmental and social impacts for some communities than for others.

   Example: In Louisville, Kentucky, a 1,000-acre park called Mill Creek features one of the largest city stream restoration projects in the country. It aims to promote ecological and human health by permanently protecting and restoring floodplain forest, wetlands and streams, while creating a community-designed, flood-resilient trail network that will provide greenspace access to people whose neighborhoods have few parks or other amenities. TNC uncovered this opportunity by identifying intersecting goals among many groups and organizations and has facilitated the partnership of city government, municipal water managers, state government, nonprofits and local communities.

5. **ASSESS EXISTING VISIONS AND METRICS.** Determine whether there are community-wide goals in place and how progress toward those goals is measured. For example, check with city departments, local elected officials (such as the mayor's office or city council members) and local neighborhood and community groups. The vision might address water quality, aquatic health, flood reduction, community resilience, people's health, equitable park access, connectivity or other issues. Identify opportunities to plug into existing visions and make sure they include environmental and human health outcomes.

   Example: Climate change is pushing new development in Miami further inland, putting pressure on communities like the city's Allapattah neighborhood. It's one of Miami's most diverse; more than 70% of Allapattah's residents are Hispanic and 21% are Black.[18] Allapattah is also home to Wagner Creek, the state's most polluted waterway, which is located in the heart of the city's Health District, a neighborhood known for its large concentration of medical and research facilities. Under the Wagner Creek Greenspace Project, TNC brought together community members, along with faculty and students from the University of Miami's School of Architecture and graduates of the Miller School of Medicine, to hear and incorporate their vision for the creek and connect it to broader goals for the city, county and state. Meanwhile, developers are working on affordable housing initiatives and employment centers to make sure that Allapattah's transition does not displace the community's working-class residents.

6. **ANTICIPATE AND PLAN FOR SCALING.** Identify the conditions and resources needed to expand the project to other streams, into floodplains or across the full watershed. Determine whether there are opportunities to create replicable, scalable models that could be brought to other parts of the city or even to other cities.

   Example: In Texas, the City of Austin Parks and Recreation and Watershed Protection departments' Grow Zone projects aim to improve areas where creeks or streams transition to land in 19 city parks. A pilot project demonstrated that vegetation could help stabilize stream banks while providing habitat for diverse tree and plant communities that outdoor enthusiasts can explore. TNC coordinated a team that planted trees, set up a temporary system to water new plantings and seeded native plants. The team quickly learned that if they wanted to scale up the work, temporary irrigation systems were too difficult and costly to establish; instead, it was more cost-effective to densely plant seedlings.

7. **BALANCE ORGANIZATIONAL PRIORITIES WITH COMMUNITY AND PARTNER PRIORITIES.** To maximize stacked benefits, build a coalition of organizations that have varied interests and multiple funding sources. Find opportunities to leverage their capacity and resources toward a common vision or set of goals. The longest lasting benefits will happen in collaboration and via resource sharing.

18 https://statisticalatlas.com/neighborhood/Florida/Miami/Allapattah/Race-and-Ethnicity

Example: The city of Providence, Rhode Island, is devoting $1.5 million toward natural infrastructure in Roger Williams Park within the Pawtuxet River watershed. The Roger Williams Park Conservancy joined the Department of Environmental Management, Providence Parks Department, EPA Region 1, Audubon Society of Rhode Island and TNC to create the Providence Stormwater Innovation Center. They will share knowledge about best practices with other stormwater initiatives and organizations and engage with regional communities to spread awareness about shared stormwater goals.

8. **BALANCE LONG-TERM INVESTMENT WITH IMMEDIATE OPPORTUNITIES.** Remember to consider short-term goals in the context of a long-term vision that is realistic and feasible. It may help to break a large project into smaller phases that can be adapted as conditions change or new information or resources emerge.

   Example. In Dallas, Texas, a long-term goal is to integrate natural infrastructure into the city's comprehensive policy and planning initiatives. One important initial step is to perform city-wide analyses to identify areas where green stormwater infrastructure can most effectively address flooding under current and future conditions, from technical and cost-benefit perspectives. This Green Stormwater Flooding Analysis now informs more holistic, integrated decision-making around site selection and future strategic investments in green infrastructure.

9. **ESTABLISH CLEAR DECISION-MAKING PROCESSES.** Be transparent, internally and externally, about budgets, priorities and partnerships.

   Example: In New York, TNC and the New York City Environmental Justice Alliance are Partnership Fund (see Policies and Equitable Public Funding chapter) recipients who contribute public comments and recommendations in response to citywide initiatives, visions and proposals regarding green roofs, stormwater management, coastal protection and other efforts. The partners fully discuss decisions they need to make together, from simple things like the logistics of where to meet to more complex elements of policy positions, types of products they are developing and collaborative communication with city agencies. They do this through honest discussion at biweekly check-ins and real-time communication when needed. When issues arise that are a priority for one team but not the other, they quickly and clearly recognize that is the case and do not compel the other to work on it.

Taking advantage of opportunities

Restoring streams and floodplains in cities offers numerous benefits to people and nature. Think broadly about the full range of those benefits and how best to understand and include local perspectives. Find ways to incorporate education and outreach throughout a project, explore new target audiences and share information as plans expand beyond pilot projects, as new information is incorporated or as successes (expected or unexpected) occur.

For example, Austin's Grow Zone initiative wanted to reduce mowing adjacent to creek edges and allow native vegetation to re-establish. But some residents were suspicious that tall and dense vegetation near creeks would be unsightly or increase flooding on private property or public roadways. Over time, with thoughtful educational programming and outreach, the project changed some people's perceptions of what nature looks like and how it works. In the eight years since the program began, restoration has commenced in over 300 acres of creekside vegetation across the city. Now the term Grow Zone has become iconic; people ask for it along the creeks in their neighborhoods and it has been replicated in nearby communities.

CASE STUDY

Envisioning a beloved community in Atlanta, GA

Trainees of Green Urban Jobs tend their urban garden. © Lynsey Weatherspoon

PHASES

Early analysis, planning, collaborative and regional planning, strategic planning, program development, project implementation, monitoring and evaluation and adaptive management

TEAM MEMBERS

Myriam Dondzina, former Atlanta Healthy Cities Director, Deputy Cities Network Director; Deron Davis, Georgia State Director; Sara Gottlieb, Director of Freshwater Science and Strategy; LA Allen, former Equity and Workforce Program Manager

RESEARCH TEAMS

Green Infrastructure Center Inc., Georgia Tech, NASA Develop, UGA ICON PhD Program and Sixpitch, Inc.

IMPLEMENTATION PARTNERS

HABESHA, Inc. (a Pan-African organization that cultivates leadership in youth and families), Trees Atlanta, Atlanta Canopy Alliance, Thomasville Heights Civic League, Purpose Built Schools, Ryan Gravel, the City of Atlanta, The Conservation Fund and Park Pride

KEY ELEMENTS

The backyard creeks and streams in metropolitan Atlanta drain into four tributaries: the Chattahoochee, Flint, Yellow and South Rivers. These waterways provide drinking water, recreation opportunities and biodiversity habitat. The South River winds through 60 miles and six counties, passing landfills, a state prison complex and multiple EPA-registered contaminated sites. Despite local freshwater conservation efforts, the South River has experienced more negative than positive impacts. For decades, the river has faced a variety of threats, including raw sewage spills, dumping and chemical runoff. In 2015, TNC embarked on a process to study this landscape, build relationships with existing people and organizations and build momentum for positive change for the South River watershed. In 2017, the city released a study, *Atlanta City Design: Aspiring to the Beloved Community*, that also identified the South River watershed as a place where community-based conservation could meet social equity and environmental justice objectives. It called for parks and protected land to be expanded, improved and guarded from new development and for the underserved neighborhoods around the park to remain intact.

OUTCOMES

TNC partnered with local nonprofits, the City of Atlanta and Dekalb County to create a vision for the region that was deeply rooted in this place and included environmental justice and social justice goals. TNC and HABESHA, Inc., created the Urban Green Jobs program. As of 2020, 60 residents—more than half from Thomasville Heights, a historic community on the city's south side—had participated in the paid training program that teaches greenspace management, urban agriculture and other conservation topics from industry experts. The team envisions a 3,500-acre public greenspace called South River Forest, which will preserve tree canopy, reclaim underutilized industrial areas for sustainable, equitable development and connect people with nature. This will include funding and supporting community projects that improve water quality and wildlife habitat and make the river safer for recreational use. TNC also plans to provide local residents with skills and tools to advocate for themselves and their community on environmental issues impacting their daily lives, in addition to providing continued and deepened community engagement around workforce development.

WHAT IT TOOK

- **RELEVANCE.** TNC had an established history in the region, working for decades across Georgia to protect forests, waters and coastline. These projects brought TNC into metropolitan Atlanta through involvement in the Chattahoochee River Greenway Program. In the South River Forest initiative, TNC revisited this geography with a specific focus on improving water quality through strategic placement of green infrastructure projects.
- **RESEARCH.** Research was conducted on many different levels to understand the issue, map the landscape and identify feasible strategies. This inquiry included a stakeholder analysis, spatial analysis, socioeconomic baseline analysis and a biodiversity assessment. In partnership with the University of Georgia's NASA-DEVELOP program, Green Infrastructure Center, Georgia Tech, the University of Georgia's ICON PhD

program and other research partners, the team analyzed the landscape to identify places where ecological outcomes and potential for local support overlapped.

- **RELATIONSHIPS.** Engagement with existing neighborhoods, businesses and institutions and collaborative planning were key to developing the right project goals and objectives. Nonprofit and community partners asked for a focus on restoring native vegetation in key areas of the watershed. Partners like the City of Atlanta, Atlanta Regional Commission, HABESHA, Inc., and Trees Atlanta helped determine who was involved and what their interests were. With this information, TNC developed a plan to support the restoration and management of natural areas in Atlanta's local watersheds.
- **REPRESENTATION.** Engagement efforts were strategically targeted so that TNC would become meaningfully involved in a variety of communities. The program team and relevant stakeholders distinguished among communities of interest (those concerned with how the area is managed, developed or conserved) and communities of place (those who live and work there) and noted when people belonged to both communities. For example, a conservation group may be interested in how a greenway is connected to a local nature reserve to ensure biodiversity, while a neighborhood association may have concerns about the types of uses allowed on the greenway. Some of the same people could be in both groups.
- **RESIDENTIAL SUPPORT.** When TNC began to engage in neighborhoods, we created a series of demonstration projects and worked with residents who wanted to explore the possibility of partnership. Mr. James T. Booker of the Thomasville Heights Civic League was instrumental in helping the project team forge a relationship with older residents who led beautification efforts and neighborhood improvement efforts since the community was desegregated in the 1960s. This humble beginning led to a broader neighborhood engagement strategy.
- **REGIONAL PLANNING.** Beyond what was gleaned from local perspectives, TNC budgeted for a project management and design team, an expert on local issues and a videographer to refine a narrative and visualization tools to help promote a shared vision for the watershed. This two-year process was aimed at developing regional coordination in order to conduct an extensive design and discovery process that sourced and reviewed all foundational plans, studies and projects within the area; complete mapping, research and fieldwork; identify and meet with core participants; define central goals around equity, community, connectivity, possibility and resiliency; and create visual and narrative presentations.

LESSONS LEARNED

- Develop knowledge about key informants. Find out whether they are long-time residents and understand how deeply seated that person's local knowledge and understanding of community biases is, as well as knowing their perceptions and their history. This is key to understanding current conditions and drivers of change.
- When identifying communities of place that are local and may have concerns about land management, include neighborhood associations, religious communities and sports affiliations as well as civic and conservation groups, such as local tree stewards, adopt-a-park or birding groups, to include a broad array of interests and concerns.
- When evaluating whether or how to work in a particular community, begin with existing assessments and reports to build on early project interviews and point to what social data can be readily collected. While health data, crime rates at the street level or access to healthy food may all be factors to consider, these data are difficult to assess quickly when looking at large landscapes and trying to determine where interventions may be most strategic.

- Investigate the existence of baseline data. For example, TNC staff did not have access to an up-to-date baseline assessment of Metro Atlanta's urban forest. This made it difficult to conclude which areas were least covered by tree canopy and to determine which areas have changed the most or faced the most development pressure.
- Establish project goals to determine which factors should be evaluated. For example, if seeking to improve water quality, a watershed makes a logical boundary for landscape analysis. If the goal is to improve the environmental health and quality in communities with untapped potential, then consider social and economic data. If the goal is to choose areas facing the greatest environmental threats, then consider rates of land conversion, acres of brownfields or areas slated for large highway projects, all of which threaten community stability or environmental quality. These concerns can be mapped and overlaid to pinpoint priorities for intervention.
- Rather than selecting places facing the greatest threat, consider where intervention can have the greatest positive effect or where communities have underutilized assets. In ecological terms, such an area might be one where streams are just beginning to decline and degradation can still be reversed.

The partnership with HABESHA and TNC created a paid training program that teaches greenspace management, urban agriculture and other conservation topics from industry experts. © Lynsey Weatherspoon

GLOSSARY

acequia	an irrigation ditch or canal[19]
adaptive management	the ability to monitor a situation and flexibly evolve the project to meet new, unforeseen realities while maintaining the goal of achieving the desired outcomes
anchor institution	an institution that is important to the local economy and that, once established, tends not to move location[20]
asset-based perspective	one that positively views diversity in thought, culture and traits and that focuses on strengths rather than needs, deficits or problems[21]
bias, conscious or unconscious	having a tendency to view things from a certain perspective that is not supported by the facts; conscious bias involves being aware, intentional and responsive with regard to this tendency, while unconscious bias involves being unaware or acting on one's bias without realizing it, which makes this behavior more difficult to identify[22]
bioretention	a regenerative upland-based water quality and quantity control practice that uses the physical, biological and chemical properties of plants, microbes and soils to remove pollutants from stormwater runoff[23]
combined sewer overflow	a system designed to overflow occasionally and discharge excess wastewater directly to nearby streams, rivers or other water bodies; it may contain not only stormwater but also untreated human and industrial waste, toxic materials and debris[24]
community-based organization	a place-based public or private nonprofit organization of demonstrated effectiveness that is representative of a community or significant segments of a community, and provides educational or related services to individuals in the community[25]
community engagement	a process that seeks to better engage people in the community to achieve long-term and sustainable outcomes, processes, relationships, discourse, decision making or implementation; to be successful, it must encompass strategies and processes that are sensitive to the community context in which it occurs[26]
conservation easement	a legally binding agreement to protect land for future generations while allowing owners to retain many private property rights and to live on and use their land, at the same time potentially providing them with tax benefits[27]

19 https://www.merriam-webster.com/dictionary/acequia
20 https://community-wealth.org/strategies/panel/anchors/index.html
21 https://www.memphis.edu/ess/module4/page3.php
22 https://unleashpotential.ie/conscious-and-unconscious-bias
23 https://www.fws.gov/ChesapeakeBay/PDF/stream-restoration/USFW_guide_d08.pdf
24 https://www3.epa.gov/region1/eco/uep/cso.html
25 https://www.law.cornell.edu/uscode/text/20/7801#5
26 https://aese.psu.edu/research/centers/cecd/engagement-toolbox/engagement/what-is-community-engagement
27 https://www.nature.org/en-us/about-us/who-we-are/how-we-work/private-lands-conservation/

daylighting	bringing buried waterways back to life by physically uncovering and restoring them[28]
deep listening	hearing every dimension of the other person, both what is said as well as what is implied[29]
environmental justice	the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies[30]
floodplain	a nearly flat area along the course of a stream or river that is naturally subject to flooding[31]
floodplain bench	a long, relatively narrow strip of relatively level or gently inclined land that is bounded by distinctly steeper slopes above and below it[32]
frontline	a community that experiences continuing injustice—and whose population may include people of color, immigrants, people with lower incomes, those in rural areas and Indigenous Peoples—and that faces a legacy of systemic, largely racialized, inequity that influences the residents' living and working places, the quality of their air and water and their economic opportunities[33]
gentrification	the process whereby the character of an area is changed by wealthier people moving in, increasing the cost of living and housing, changing the culture of the community and typically displacing current inhabitants, driving out people of color and causing minority-owned businesses to close[34]
geomorphology	the study of the characteristics, origin and development of landforms[35]
green infrastructure	utilizing systems and practices that use or mimic natural processes to infiltrate, evapotranspirate or reuse stormwater or runoff on the site where it is generated[36]
green investment	investment activities that focus on companies or projects committed to the conservation of natural resources, the production and discovery of alternative energy sources, the implementation of clean air and water projects or other environmentally conscious business practices[37]
green stormwater infrastructure (GSI)	a system that reduces and treats stormwater at its source while providing multiple community benefits; designed to mimic nature and capture rainwater where it falls[38]
greenbelt	an area of woods, parks or open land surrounding a community[39]
greenprint	a conservation assessment that integrates biodiversity and ecosystem services into city and regional planning[40]

28 https://americanrivers.org/wp-content/uploads/2016/05/AmericanRivers_daylighting-streams-report.pdf
29 https://www.huffpost.com/entry/deep-listening_b_11477900
30 https://www.epa.gov/environmentaljustice/learn-about-environmental-justice
31 https://www.dictionary.com/browse/floodplain
32 https://en.wikipedia.org/wiki/Bench_(geology)
33 https://www.greenbelt.org/land-use-planning-dictionary/frontline-communities/
34 https://www.nationalgeographic.org/encyclopedia/gentrification/
35 https://www.dictionary.com/browse/geomorphology
36 https://www.epa.gov/green-infrastructure
37 https://www.investopedia.com/terms/g/green-investing.asp
38 https://www.epa.gov/G3/why-you-should-consider-green-stormwater-infrastructure-your-community
39 https://www.dictionary.com/browse/greenbelt
40 https://www.conservationgateway.org/ConservationPractices/PeopleConservation/greenprints/Pages/what.aspx

greenprint map	a map that highlights key areas for protection based on residents' own conservation priorities and where possible conservation funding is available[41]
greenspace	a type of land use that notably contributes to city environments in terms of ecology, aesthetics or public health, but which basically serves human needs and uses[42]
heat island	a city area having higher average temperature than its rural surroundings owing to the greater absorption, retention and generation of heat by its buildings, pavements and other impervious surfaces and human activities[43]
infiltration rate	a measure of how fast water enters the soil, typically expressed in inches per hour[44]
intersectional	the complex, cumulative way in which the effects of multiple forms of discrimination (such as racism, sexism and classism) combine, overlap or intersect, especially in the experiences of marginalized individuals or groups[45]
intersectional environmentalism	an inclusive version of environmentalism that advocates for both the protection of people and the planet and identifies the ways in which injustices happening to marginalized communities and the Earth are interconnected[46]
nature-based solutions	the sustainable management and use of nature for tackling challenges such as climate change, water and food security, biodiversity protection, human health and disaster risk management[47]
neighborhood plan	a process to maximize the health, safety and economic well-being of all people living in a specific community, that involves thinking about how people move around in the community, how to attract and retain thriving businesses, opportunities for recreation and other aspects that create communities of lasting value[48]
nonprofit industrial complex	people working for social justice in the United States who are limited by the dysfunctional funding system that sustains most nonprofits, which requires organizations to compete for government and foundation funding and forces them to maintain their funding sources rather than fulfill their mission, and ultimately can disenfranchise their constituents, put undue concern on remaining in business and/or reduce the importance of social justice goals[49]
pass-through funding	funds issued by a federal agency to a state agency or institution that are then transferred to other state agencies, units of local government or other eligible groups per the award eligibility terms[50]
policy	a high-level overall plan embracing the general goals and acceptable procedures especially of a governmental body[51]

41 https://www.tpl.org/how-we-work/plan/greenprinting
42 https://www.sciencedirect.com/science/article/abs/pii/S1618866711000902?via%3Dihub
43 https://www.dictionary.com/browse/heat--island
44 https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053268.pdf
45 https://www.merriam-webster.com/dictionary/intersectionality
46 https://www.thegoodtrade.com/features/practicing-intersectional-environmental-justice
47 https://www.nature.org/en-us/what-we-do/our-insights/natural-climate-solutions/
48 https://www.planning.org/aboutplanning/
49 https://academiccommons.columbia.edu/doi/10.7916/D8JM2MGP/download
50 https://www.grants.gov/learn-grants/grant-terminology.html#P
51 https://www.merriam-webster.com/dictionary/policy

pop-up park	the temporary or permanent transformation of an underused space into a community gathering area through beautification[52]
power map	a visual tool used by social advocates to identify the best individuals to target in order to promote social change[53]
practice	the customary or repeated way of doing something[54]
racial justice	the proactive reinforcement of policies, practices, attitudes and actions that creates equity (in power, access, opportunities, treatment, impacts and outcomes for all); it is about the presence of intentional and deliberate systems and supports to achieve and sustain racial equity[55]
redlining	a discriminatory practice that puts services (financial and otherwise) out of reach for residents of certain areas based on race or ethnicity[56]
sewershed	a delineation of the land area contributing stormwater and/or wastewater to a single downstream point[57]
social cohesion	the strength of relationships and the sense of solidarity among members of a community[58]
social justice	the fair treatment of all people in a society, including respect for the rights of minorities and equitable distribution of resources among members of a community[59]
stacked benefit	combining the value of different benefits, allowing for expanded opportunities for ecosystem functions[60]
stormwater	water that originates from rain, including snow and ice melt, that can soak into the soil (infiltrate), be stored on the land surface in ponds and puddles, evaporate or contribute to surface runoff[61]
stormwater retention basin	an area to collect stormwater and slowly release it at a controlled rate so that downstream areas are not flooded or eroded; retention basins include a permanent pool of water[62]
stormwater trading program	a market where property owners can buy and sell volume-based stormwater credits[63]
stormwater tree trench	vegetated, engineered landscape practices designed to filter or infiltrate stormwater runoff[64]

52 https://en.wikipedia.org/wiki/Tactical_urbanism
53 https://en.wikipedia.org/wiki/Power_mapping
54 https://www.merriam-webster.com/dictionary/practice
55 https://www.racialequitytools.org/glossary#
56 https://www.investopedia.com/terms/r/redlining.asp
57 https://www.lawinsider.com/dictionary/sewershed
58 https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/social-cohesion
59 https://www.dictionary.com/browse/social-justice
60 https://www.resourcesmag.org/common-resources/ecosystem-service-stacking-can-money-grow-on-trees/
61 https://en.wikipedia.org/wiki/Stormwater
62 https://sustainablestormwater.org/2009/05/28/stormwater-101-detention-and-retention-basins/
63 https://www.wef.org/globalassets/assets-wef/3---resources/topics/o-z/stormwater/stormwater-institute/ar_stormwatervolumecredittrading_final_revised100919.pdf
64 https://stormwater.pca.state.mn.us/index.php?title=Green_Infrastructure_benefits_of_tree_trenches_and_tree_boxes

structural racism	a system in which public policies, institutional practices, cultural representations and other norms work in various, often reinforcing ways to perpetuate racial group inequity, that has come about as a result of the way that historically accumulated white privilege, national values and contemporary culture have interacted so as to preserve the gaps between white Americans and Americans of color[65]
subsurface water retention	improving water storage in sandy soils for sustainable crop production by installing polyethylene membranes within the soil profile to prevent the loss of irrigation water via deep percolation[66]
systemic racism	in many ways systemic racism and structural racism are synonymous; … structural racism analysis pays more attention to the historical, cultural and social psychological aspects of our currently racialized society[67]
tree canopy	the layer of leaves, branches and stems of trees that cover the ground when viewed from above[68]
tree canopy enhancement plan	an assessment or report that establishes baseline data on the extent and function of the existing urban forest, analyzes recent changes and trends and provides tools, data and other resources to guide future community forest management and reforestation efforts[69]
value engineering	a systematic, organized approach to providing necessary functions in a project at the lowest cost, while including stakeholders, with the purpose of examining a design or plan to find efficiencies that could reduce cost, timing, etc.[70]
value proposition	a reason given by a seller for buying their particular product or service, based on the value it offers customers[71]
watershed	the region or area drained by a river, stream, or other body of water[72]
whole communities	attempts to engage the full capacity of the private and nonprofit sectors, including businesses, faith-based and disability organizations and the general public, in conjunction with the participation of local, tribal, state, territorial and federal governmental partners[73]
workforce development	training that focuses on an individual's ability to grow their skills and develop the tools they need for business success; training people to be more productive and prosperous in the workplace, which benefits both the employer and the worker[74]

65 https://www.aspeninstitute.org/wp-content/uploads/files/content/docs/rcc/aspen_structural_racism2.pdf
66 https://acsess.onlinelibrary.wiley.com/doi/abs/10.2136/vzj2014.11.0166
67 https://www.aspeninstitute.org/wp-content/uploads/files/content/docs/rcc/aspen_structural_racism2.pdf
68 https://www.cwp.org/urban-tree-canopy
69 https://www.americanforests.org/wp-content/uploads/2015/04/AF-Community-ReLeaf-%E2%80%94-Hartford-UTC-Assessment.pdf
70 https://www.investopedia.com/terms/v/value-engineering.asp
71 https://dictionary.cambridge.org/us/dictionary/english/value-proposition
72 https://www.dictionary.com/browse/watershed
73 https://www.fema.gov/sites/default/files/2020-07/whole_community_dec2011__2.pdf
74 https://myworkchoice.com/blog/workforce-development/

Bachman Creek Trail in Dallas, TX. © R.J. Hinckle

RESOURCES

Cross-Cutting Practices

PARTNERSHIPS PUT IDEALS INTO PRACTICE

- Community engagement analysis and spectrum models
- Jemez principles for democratic organizing
- Power mapping example
- Whole Measures for Urban Conservation

EQUITABLE FUNDING AND GRANTMAKING

- Reports, tools and trainings
  - Building Equity and Alignment for Environmental Justice
    - From the Margins to the Mainstream
  - Candid Issue Lab
    - Participatory Grantmaking
  - Center for Effective Philanthropy
    - Grantee perception report
  - Engaging Across Difference
  - Equitable Evaluation Initiative (EII)
  - Grantcraft
    - Funding Indigenous Peoples: Strategies for Support
  - GeoFunders
    - Shifting the Evaluation Paradigm: The Equitable Evaluation Framework
  - InDEEP Initiative
  - Indie Philanthropy Initiative
  - Just organizational culture
  - N3B Foundation
    - Indigenous Voices & Practices—Recommendations for Grantmaking to Native-led Organizations
  - Resonance: A Framework for Philanthropic Transformation
  - Spark Policy Institute
    - Advocate's evaluation toolkit
    - Developmental evaluation toolkit
  - Racial Equity Tools
  - Trust-based philanthropy
  - Whole Measures framework

- Equitable funding practitioners
  - Building Equity for Alignment and Environmental Justice
  - Donors of Color Network
  - Chorus Foundation
  - Grassroots International
  - Kindle Project
  - Jessie Smith Noyes Foundation
  - Libra Foundation
  - Liberated Capital
  - Mosaic
  - NB3 Foundation
  - Solidaire Network
  - Whitman Institute
- Equitable funding networks and advisors
  - Center for Whole Communities
  - Justice Funders
  - Native Americans in Philanthropy
  - Old Money New System
  - Praxis Project
  - Rise Consulting
  - Roanhorse Consulting

POLICIES AND EQUITABLE PUBLIC FUNDING

- Advocacy Strategy Framework by Center for Evaluation Innovation
- CalEnviroScreen tool
- California Healthy Places Index
- Detroit Stormwater Hub
- Green roof summary
- NYC Urban Forest Task Force facilitator RFP
- Providence Tree Plan RFPs for equity and engagement consultant and planning consultant
- Rhode Island Green Infrastructure Coalition impact assessment
- Spark Insight's advocacy evaluation toolkit

SCIENCE AND RESEARCH IN CITY SETTINGS

- Audubon Backyard Bird Count
- City Nature Challenge
- eBird

- EPA EJSCREEN: Environmental Justice Screening and Mapping Tool
- Global Biodiversity Information Facility
- Google Earth Engine
- iNaturalist
- University of Minnesota
  - Community-Based Participatory Research
  - Center for Urban and Regional Affairs research framework

STORYTELLING

- Center for Whole Communities: Whole Measures framework
- Guide to asset-based framing
- Key questions for inclusive storytelling
- Peace Park video
- Pixar's 22 rules for storytelling
- Reimagining change: How to use story-based strategy to win campaigns, build movements, and change the world
- Rooted in Puget Sound
- Storytelling measurement rubric
- Sublicensing Agreement
- Team Canada (Nature United) guidelines for communications with Indigenous partners

Place-Based Practices

DESIGNING GREENSPACE

Additional information

- Harding High School 1-pager

Resources

- Equitable grantmaking barriers and transformative practices. Researched and prepared by Sarika Tandon, TNC and Center for Whole Communities (2018).
- Greenspace design examples: stormwater tree trenches, sub-surface rainwater retention or pavement removal
- Operationalizing equitable grantmaking. Researched and prepared by Afia Genfi, TNC and Center for Whole Communities (2018).
- Partnership fund rubric
- Puget Sound passthrough grant RFP

GREEN STORMWATER INFRASTRUCTURE ON PRIVATE LANDS

In general, seek out local design guidelines and public GIS maps provided through the city or municipality, as well as online construction project management tools and Gantt charts/RACI (Responsible, Accountable, Consulted, Informed) charts.

- NatureVest
- Chicago
  - StormStore
- Philadelphia
  - GSI planning design manual
  - Stormwater retrofit manual
- Puget Sound
  - Aurora Bridge bioswale fact sheet
  - How to filter two million gallons of stormwater
  - Stormwaterheatmap.org
- Washington D.C.
  - Benefits for landowners generating stormwater retention credits
  - Steps of an SRC project
  - Stormwater retention credits
  - Stormwater retention credit project contract design and build steps
  - Stormwater retention credit trading synopsis

TREE CANOPY ENRICHES CITIES

Metrics

- Green Heart
- Healthy Trees, Healthy Cities
- i-Tree
- U.S. Forest Service Forest Monitoring

Albuquerque video series

- Learn to plant a tree with Albuquerque city forester Joran Viers
- Mayor Keller knows best, trees are good for Albuquerque workforce development
- Planting trees and futures in Albuquerque
- Trees are the answer for Albuquerque

- Arboriculture and urban forestry (2018): Citizen science and tree health assessment: How useful are the data?
- Cool Connected Oak Cliff
- Dallas ordinance amending landscape and tree preservation regulations (2018)

- Dallas tree planting photos and video
- Evaluating Albuquerque's urban heat impacts
- Green Heart Louisville fact sheet
- Healthy Trees, Healthy Cities resource library (includes tree health monitoring video series)
- Initiative seeks to increase nature's benefits in Boston's Codman Square
- Northern Institute of Applied Climate Science climate change response framework for urban forestry resources
- Texas Trees Foundation, urban heat island management study (2018)
- One Albuquerque urban forest: A new approach to holistic urban forest management
- Urban heat island management study
- Urban Tree Canopy (UTC) analysis tools

STREAM AND FLOODPLAIN RESTORATION

- Atlanta urban conservation draft business plan
- BAILA in Los Angeles
- Benefits of urban forestry and social justice issues and considerations in the production and distribution of metro Atlanta's forest: A review of the literature
- Conservation Letters: Social equity and urban nature conservation

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