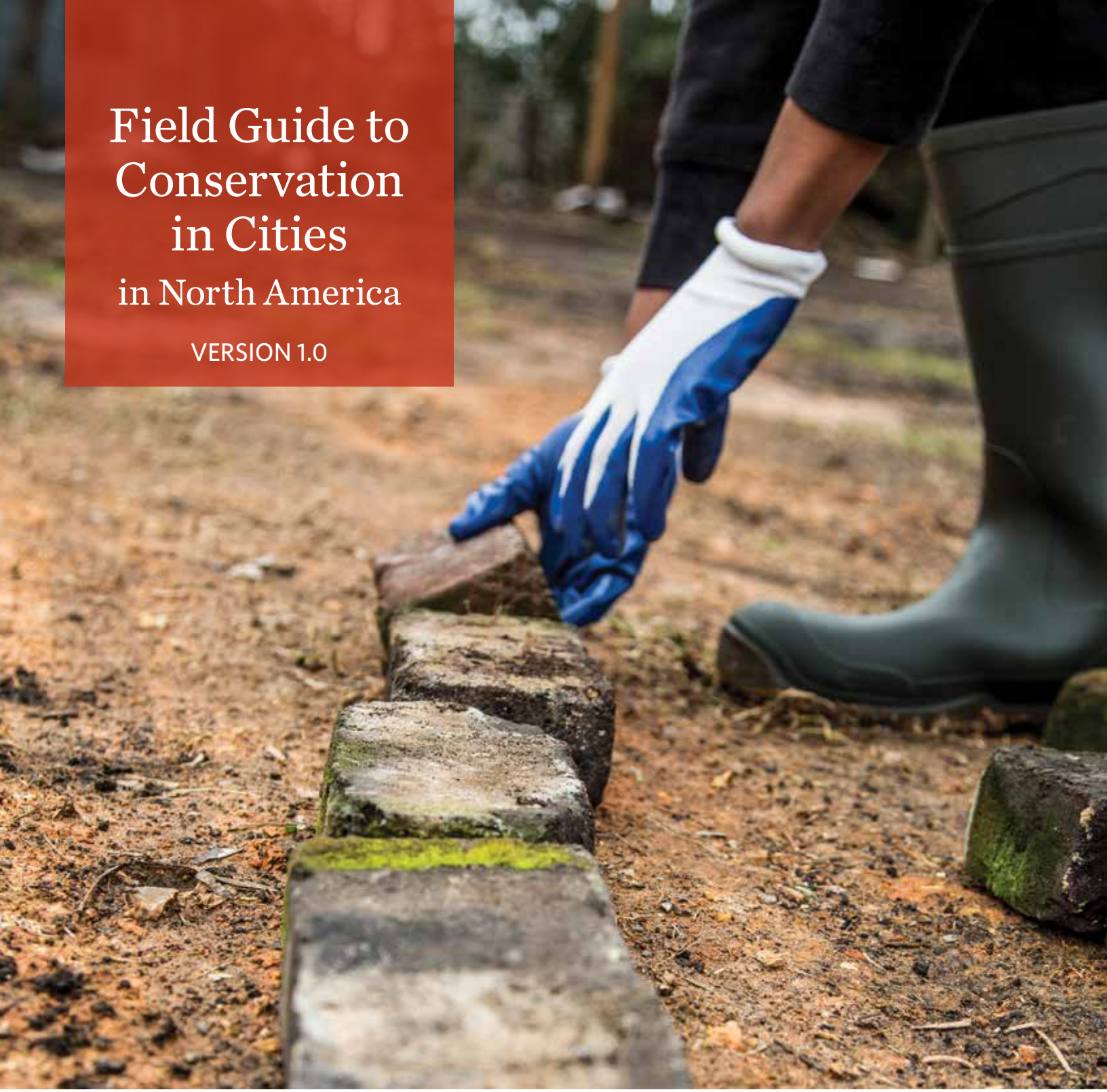
Field Guide to Conservation in Cities

in North America

VERSION 1.0



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About the Partnership

The development of the North America Cities Network and this guide have been accomplished in part through the significant partnership between The Nature Conservancy and Center for Whole Communities (CWC). Our two organizations have worked collaboratively from the outset, co-developing the initial vision and strategy for the network, and ensuring that urban conservation, wherever possible, directly benefits historically marginalized and underresourced communities. The Conservancy's expertise in conservation science and land stewardship, and CWC's expertise in equitable cross-sector collaboration and cultural competency, have provided a fertile ground for learning and innovation that has enriched both organizations and helped them grow. We honor our collective efforts, our failures and our successes as we work to make cities places where nature and *all* people can thrive.

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COVER: Students transform vacant lot. Birmingham, AL. © Devan King/The Nature Conservancy; **p1:** Rain garden. Seattle, WA. © A.J. Dent; **INSIDE BACK COVER:** Community-wide planting event. Louisville, KY. © Devan King/The Nature Conservancy; **BACK COVER:** Community-wide planting event. Louisville, KY. © Devan King/The Nature Conservancy

Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.

— Jane Jacobs, *The Death and Life of Great American Cities*, 1961

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Community Garden
Herb GARDEN
School Garden
ORCHARD
OUTDOOR CLASSROOM

Foreword

At The Nature Conservancy, opinions about how we should approach our work in cities are as numerous and passionate as our staff. If you laid them out on a spectrum, the extremes would look something like this:

> Cities might seem like a new frontier for The Nature Conservancy, but we've actually been doing this kind of work all along. Our calling card is our ability to get things done with various partners, and working with urban partners isn't essentially different than working with their rural counterparts. We are avoiding the 'paralysis of analysis' and using our proven strategies. We use our expertise, work in the radical center, and we make sure to keep things moving. We get things done.

> The urban context is incredibly complex and raises issues of systemic neglect by mainstream institutions, including large environmental NGOs such as The Nature Conservancy. The well-being of people in cities should not be fully entrusted to outside experts. Communities must have a voice in their own opportunities. We are biodiversity and connectivity experts. Working in cities in service of human well-being raises many complex issues that will be new to many of us. Working sensitively across differences in privilege, race, class, immigration status and gender requires a fearless investigation of both ourselves and our organization. If we have the hubris to think we know the answers, we are likely to do more harm than good.

The two paragraphs above both hold significant truths. Together, they illustrate the paradox within which the North America Cities Network and this Field Guide operate. In our daily work in and with cities, our Cities Network of over 40 staff are continuously learning more about urban communities and the infrastructure and ecosystems they rely on. We are learning to define our role in urban areas, as well as to understand our responsibility to the cities and communities with which we collaborate. Since the inception of this program, we have learned many things that work, and many more that do not.

The Nature Conservancy has worked for decades in complex partnerships for land and water protection, and we are learning to bring these skills to the next level in service of even more complex outcomes that include supporting the well-being of people. Our work in cities is at once similar to and divergent from The Conservancy's more traditional conservation practices. We are focused on contributing to the sustainability of urban ecosystems, which sit at the crowded nexus of the natural world, the built environment, human culture and communities. We exist to improve the lived experience of urban species—humans and others—in the places that they call home and to protect their right to continue to thrive in these places. The Cities Network focuses its efforts on low-income and other vulnerable communities whose well-being serves as an index for the overall whole. While broadening the base of conservation supporters might be an important byproduct of the Network, it is not one of our stated goals, priorities or outcomes.

I joined The Conservancy to lead the Cities Network in September 2014, when there were five official cities in the network. Through the generosity of The JPB Foundation and the vision of the original authors of the grant that funded the Network (Kacky Andrews, Caroline King, Emily Nobel Maxwell and Ginny McGinn), we were able to partner with Center for Whole Communities to build and resource the Network. We expanded to 12 cities and used the Network's centralized resources to support state chapter programs while also developing region-wide communication and learning channels and competencies. At that time, other Conservancy staff often asked me, "Why people? Why cities? Why The Conservancy?" Two years later, we are working in 20 cities that span the continental United States, and our mission statement, Conservation by Design 2.0, and Shared Conservation Agenda have led many Conservancy staff to ask a new, rhetorical question: "How could we ever accomplish our mission without cities?"

The Cities Network predates the launch of The Conservancy's new planning process, Conservation by Design 2.0, and our new framework, the Shared Conservation Agenda. Many of the human well-being outcomes and metrics that we started

P4: Community garden. Baltimore, MD. © Jeffrey MacMillan

using at our inception appeared more radical then than they are now. Now the Cities Network is an organizational priority, and the Shared Conservation Agenda explicitly calls us to bring transformational positive change in service of people and nature. Therefore, this Field Guide can help those looking for pragmatic guidance, as well as those who wish to understand more about how The Conservancy interfaces with cities.

We have assembled best practices from a broad field of internal actors, gathering what we have learned from our work to date. Our objective is to provide guideposts for Conservancy staff: state and regional directors, science and conservation staff, and practitioners across The Conservancy who are interested in launching new or expanding on existing urban conservation programs and partnerships. Whether you are embarking on a Cities program of your own, or seeking relevant guidance for a project you've already started, this Guide captures the early stages of an emerging program. We share what we've learned about planning, getting programs off the ground, handling partnerships and promoting engagement. Our next version of this guide will focus on latter-stage project development, metrics and recommendations for specific conservation interventions. While you are welcome to share this version with external partners, it has been written specifically for an internal audience. As our work is ongoing and evolving, we also welcome your thoughts, comments and reflections as you read and use the Field Guide.

Mark Burget, our Vice President and Managing Director for North America, once gave me some good advice. He said, "When you see a paradox, remember: it's not there to be solved. It's there to be the container for what you do. All you have to do is live inside it."

So, colleagues and collaborators, the first two paragraphs of this Foreword serve as the container for the full potential of our work in cities. Here is our emerging guidance for living inside it.

Meera Bhat, Director
North America Cities Network
The Nature Conservancy

Second Cultivating Whole Cities Retreat. Washington, DC. © Sarika Tandon/Center for Whole Communities

Introduction

This Field Guide to Conservation in Cities captures the collective experience of The Nature Conservancy and Center for Whole Communities (CWC) from 2014 to 2016, as we initiated a network of urban conservation programs in 12 cities across the United States (Figure 1). This North America Region program, generously supported by The JPB Foundation, was designed to expand The Conservancy's work in cities. Its objectives were to culturally and operationally prepare us to engage in urban environmental issues in and with low-income communities, using an ongoing learning network to develop and scale successful conservation programs in urban areas.

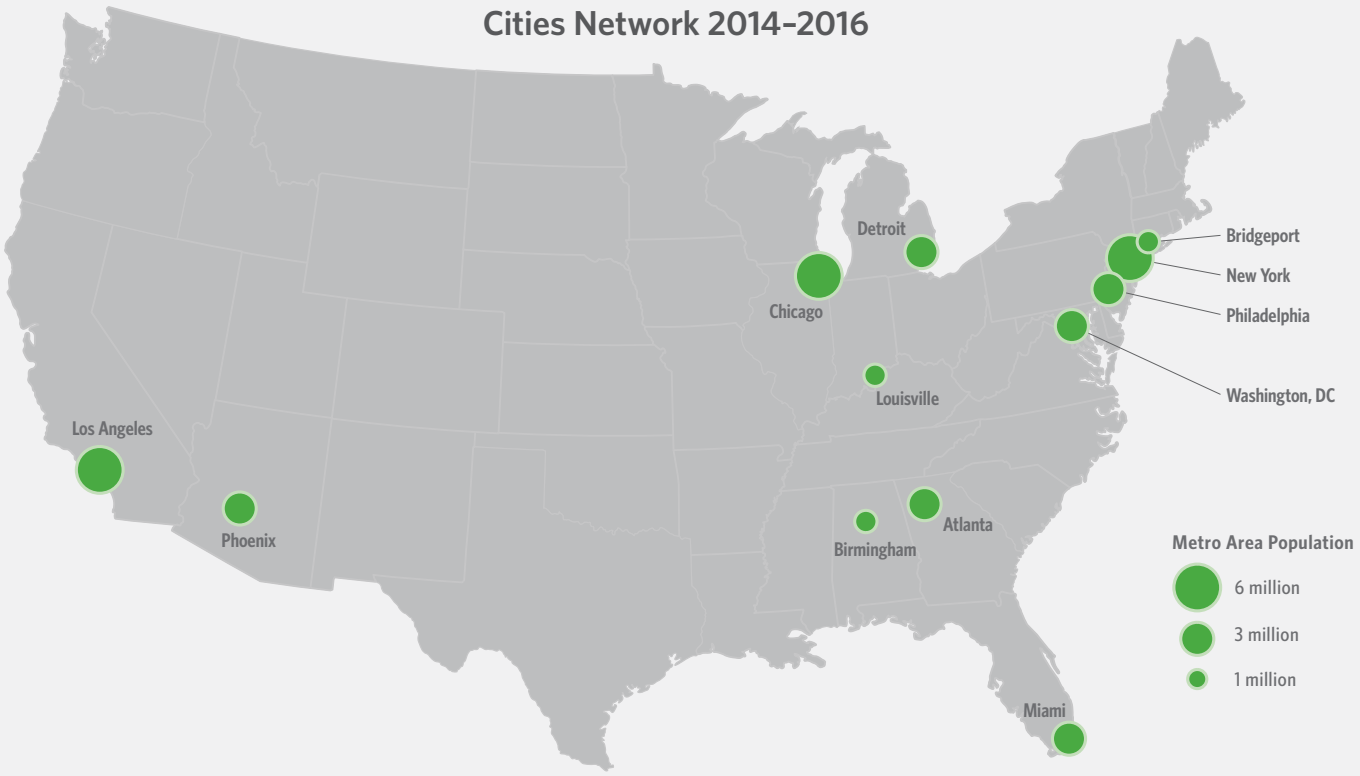


Figure 1: The Cities Network from 2014 to 2016 spanned 12 cities.

A key component of the initiative is this Field Guide. Here, we seek to convey what we have learned in our first two years by providing the reader with the background and context needed to engage in urban conservation, using real-life examples and sharing additional resources. The Field Guide is written from the dual perspectives of The Conservancy and CWC, and much of the content is based on both organizations' well-established practices and processes. Accordingly, in some instances the guidance will be specific to Conservancy staff. For the most part, however, it should be easily translatable for other organizations.

The Field Guide is organized as follows. The first three sections provide background by explaining common principles for urban conservation, the planning frameworks used by The Conservancy and CWC, and some of the big-picture considerations that are unique to urban work, including the role of environmental justice and the need for community engagement.

We then turn to the practical aspects of designing an urban conservation program. We have included sections on creating a plan; monitoring, evaluation and learning (ME&L); and fundraising, marketing and communicating. In these sections, we comprehensively break down the activities into a series of steps based on the varied experiences we have had around the country, while recognizing that not every step will be needed in every situation. The Story from the Field features, based on interviews with practitioners from the Cities Network, have been incorporated throughout the Guide. They help illustrate our work to date and highlight lessons learned.

Even as we write this Field Guide, we are continuing to explore what works, learn from our partners and gain experience that will guide us in the future. Our experience to date is that in urban areas, it is essential to focus simultaneously on community well-being, environmental health and the use of natural resources in order to improve quality of life and create the conditions for both people and nature to thrive. Properly designed urban conservation programs will advance public health, economic development, social justice and environmental goals, and we hope that this Field Guide will assist

practitioners seeking to enter this critically important arena. Although the content of this guide represents our experiences in the first year and a half of building a program, through June 2016, the Story from the Field features reflect our learning and experiences up to the beginning of 2017. Our learning is a continuous process.

Conservation in Cities

The world is experiencing unprecedented urban growth. Today, more than half the world population lives in urban areas. Cities are home to billions of people who depend on healthy natural systems to provide clean water, food, flood protection and resources for industrial, recreational and other uses. Urban areas can contain high concentrations of poverty, as well as many protected natural areas that sustain biodiversity within or just outside their borders (United Nations Population Fund).

A growing global population and an increasing trend toward urbanization are placing higher demands on the natural systems in and around urban areas. In order to meet the growing demands for clean water, food and energy, cities must find ways to maintain human well-being through sustainable land use, efficient resource use and the protection of biodiversity. Innovative strategies for urban conservation are needed.

> **Urban conservation** is the active management of the natural resources and systems of a city to preserve, maintain and restore their functions; deliver a wide array of benefits to protect biodiversity; and enhance the well-being of city residents, while ideally prioritizing the needs of underresourced and frontline communities.

Although there is no single agreed-upon definition of urban conservation, we have developed a working definition for the purposes of this Field Guide. **Urban conservation is the active management of the natural resources and systems of a city to preserve, maintain and restore their functions; deliver a wide array of benefits to protect biodiversity; and enhance the well-being of city residents, while ideally prioritizing the needs of underresourced and frontline communities.** To help practitioners grapple with the complexity of this work, we have also developed guiding principles for purposeful urban conservation drawn from our initial experience, which will be introduced in the next section.

What is a city?

Every country has its own definition of what constitutes an urban area, and definitions vary widely. The United States Census Bureau defines urbanized areas as having populations of 50,000 or more people and urban clusters as having populations between 2,500 and 50,000 people. The nation's urban population increased by 12.1 percent from 2000 to 2010. The U.S. Conference of Mayors anticipates that by 2042, there will be 70 major metropolitan areas with a population over 1,000,000—an increase from only 51 in 2012.

Depending on the goals of an urban conservation project, different definitions may be appropriate for defining the boundaries of a project area. For example, administrative or geopolitical boundaries can be used to define the area for an urban project. Alternatively, an urban area might be defined as a metropolitan area, including densely settled areas in the urban core and the suburbs and exurbs that surround them.

Urban theorist Edward Glaeser views cities as the most efficient use of human and environmental capital: *"Building cities is difficult, and density creates costs as well as benefits. But those costs are well worth bearing, because whether in London's ornate arcades or Rio's fractious favelas, whether in the high-rises of Hong Kong or the dusty workspaces of Dharavi, our culture, our prosperity and our freedom are all ultimately gifts of people living, working, and thinking together—the ultimate triumph of the city."* (Glaeser, *The Triumph of the City*, 2011, p. 270)

Michigan Avenue. Chicago, IL. © Lloyd DeGrane

Urbanization clearly has both positive and negative effects on regional ecosystems. On the negative side, cities generate air, land and water pollution. They put immense pressure on regional ecosystems, including streams and rivers, forests, and coastlines, and they can negatively impact ecosystem biodiversity. Concentrations of pollutants and other negative outcomes of poor planning can impose acute environmental challenges at the local level. The land on which cities sit has historically been considered collateral damage from an ecological perspective—sacrificed to the greater good to relieve pressure on other lands and provide services to urban dwellers. This view of cities and their relationship to their soils, waters and ecosystems has been a historic failure of traditional city planning.

On the other hand, urban living can provide a host of environmental benefits. Urban areas are more densely settled, use less land and share resources and services. This settlement pattern can support the health and well-being of the environment and its complex systems. A well-planned city can enable low-carbon lifestyles and reduce development pressure on regional ecosystems.

Urban conservation has the potential to generate multiple, compounding benefits, all of which challenge the narrative that cities are inherently destructive to nature. Urban conservation also offers us the opportunity to optimize the benefits that nature can provide human communities, often referred to as ecosystem services. Such services include drinking water provision, flood and stormwater mitigation, air purification, shade, urban heat island mitigation, biodiversity persistence, coastal protection, recreation, aesthetic beauty and opportunities to support physical and mental health (McDonald, *Conservation for Cities*, 2015).

Cities around the world are making strides to revitalize urban ecosystems and better integrate them into the fabric of city life. In addition, more and more communities are realizing the power of nature to alleviate very real issues facing cities, ranging from flooding and water quality to air quality and coastal resilience. Solving these problems will improve the quality of life for urban residents, particularly those in underresourced communities. This is the promise of urban conservation.

FAQs about the North America Cities Network

Why is The Conservancy focusing on work in cities?

Cities are home to an estimated 62.7% of the U.S. population and cover 3.5% of the country's land area (U.S. Census Bureau, 2015). In order to fulfill our mission to "conserve the lands and waters on which all life depends," The Conservancy must address the conservation needs of urban areas, which are home to a majority of the U.S. population. Nature-based solutions have the potential to provide multiple benefits in urban areas. Perhaps the biggest opportunity lies in improving the quality of life of people in cities while also improving ecosystem function.

Although working in cities has not historically been our focus, The Conservancy has a long history of successfully building new practice areas over time (e.g., expanding from land-based conservation work into marine and freshwater conservation, building long-term relationships with ranch communities to conserve ecosystems in the western United States).

Before the North America Cities Network was started, The Conservancy already had five programs in cities: Houston, New York, Chicago, Miami and Los Angeles. Because of The Conservancy's established presence throughout North America, and its conservation, technical and tactical expertise, we have the potential to be an effective driver of change in the field of urban conservation.

Why is equity a top priority?

Low-income communities are often the most vulnerable to the impacts of climate change and environmental degradation. By their nature and history, cities are places with deeply entrenched inequities. If we do not pay careful attention to issues of equity, urban conservation measures could exacerbate inequalities, thereby negatively impacting the health and well-being of marginalized communities. However, practitioners of urban conservation who convene equitable processes that respect and support the voices and vision of local communities have the opportunity to generate robust, innovative conservation solutions. Community engagement can improve the likelihood of the long-term success and support of a project. Equity-oriented conservation in cities offers us the opportunity to learn where nature-based solutions can have the most impact for people and nature.

Many communities have not historically been engaged by the conservation movement because of racial, economic and other barriers. Many of these communities are also heavily affected by environmental degradation in urban areas. When it provided the funding to launch this network, The JPB Foundation challenged The Conservancy to look differently at how we do conservation work in cities so that we could be part of the solution to poverty. By doing so, we have the opportunity to break through some of these historical barriers, and our work can benefit a broader and more diverse group of people.

Why is The Conservancy partnering with Center for Whole Communities in this work?

As the North America region was developing its urban strategy, it was clear that The Conservancy could benefit from working with an institutional partner to bring in external perspectives as we were expanding our capacity, particularly in areas such as cultural competency and engaging with diverse communities. Center for Whole Communities (CWC) joined in 2014 to co-develop the vision and help launch the North America Cities Network.

From its inception, CWC has brought leaders from diverse backgrounds together to build their capacity to work across differences. CWC has developed rich methodologies for capacity building for transformative leadership and has expertise in developing and facilitating inclusive processes. CWC uses Whole Thinking practices such as dialogue, working with difference, awareness and story to help leaders develop skills for collaboration. CWC also brings Whole Measures, an equity-based participatory framework for planning, community engagement and evaluation. CWC has worked with leaders from The Conservancy since 2005 on issues such as leadership development, inclusion and cultural competency.

Guiding Principles of Urban Conservation

When The Conservancy began to think strategically about creating city-based conservation programs, it became clear that to be effective, we had to address human communities as part of the larger biodiversity and ecosystem function that we sought to conserve. Cities are defined by the density of their human populations. Urban conservation should accordingly be defined by its emphasis on both people and nature.

Urban conservation can maintain and strengthen the bond between cities, nature and people by deploying nature-based solutions that conserve biodiversity and improve quality of life in cities. Working successfully in such a complex space demands that we implement new strategies and follow new guidelines. At the same time, urban conservation is also heavily dependent on context. What we do and how we do it differs in each place we work.

Our experience to date indicates that despite the diversity of urban conservation contexts, three guiding principles should inform the practice of urban conservation. These principles protect the interests of people and nature in cities. They are: (a) understanding the needs of people and nature before identifying and applying nature-based solutions; (b) improving conditions for human well-being as a primary goal; and (c) developing broad coalitions of partners and stakeholders (Figure 2).

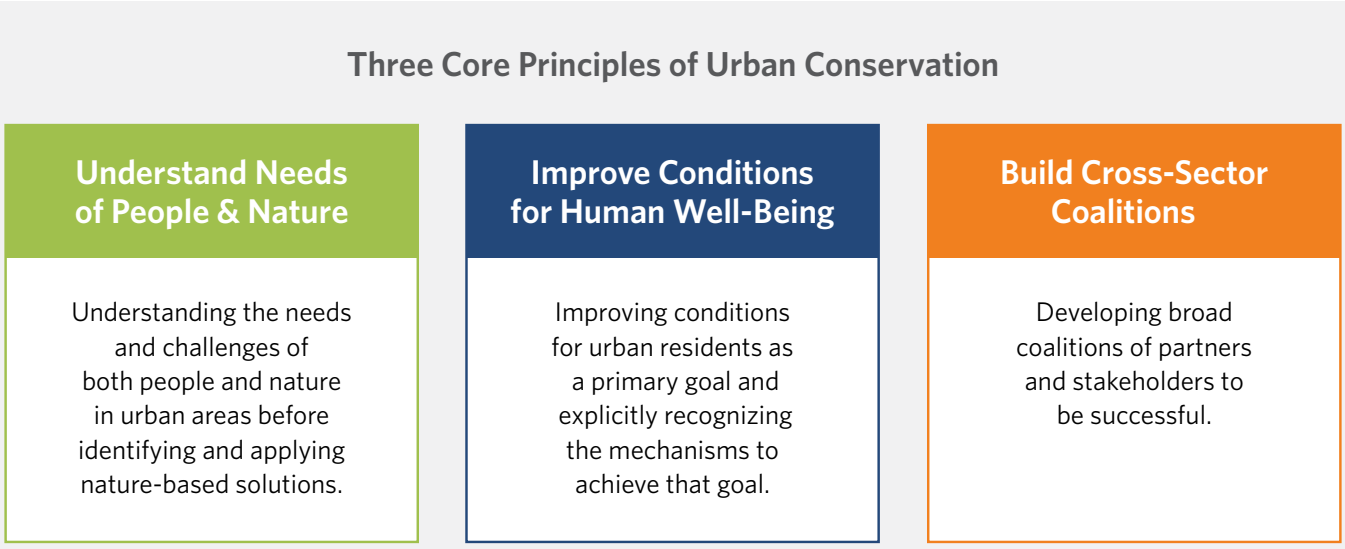


Figure 2: Our approach to urban conservation follows three Guiding Principles.

Conservation in cities sits at the locus of many complex natural, social and infrastructural systems. These guiding principles seek to include a range of considerations in the planning and implementation of urban conservation practice. In addition, they differentiate the practice of urban conservation from other conservation practices that might be happening in or near urban areas. Rather than focusing only on protecting nature *from* cities, the guiding principles of urban conservation focus on protecting nature *for* cities. This shifts the focus to improving the functions of the systems on which cities rely, as well as improving the lives of people in cities.

An example of these guiding principles at work is demonstrated by our work in Bridgeport, Connecticut.

STORY FROM THE FIELD

BRIDGEPORT, CT

Eco-Urban Assessment: A Geo-Spatial Tool Leads to Deep Greening

© Douglas Gritzmacher

When Drew Goldsman began working as an Urban Resilience Planner in Bridgeport, Connecticut, he needed a method to prioritize where to focus his efforts. Drew worked with the Connecticut Chapter's Director of Science, Adam Whelchel, and GIS Specialist, Manon Lefèvre, to create a GIS tool that layered environmental, health and socioeconomic data. This geo-spatial analysis enabled both ecological and human well-being impacts to be mapped and prioritized—a relatively new approach for The Conservancy. The maps created in the assessment helped the team identify specific areas where investments in green stormwater infrastructure, open space and trees would have the greatest social and ecological value. The analysis also helped Drew communicate these needs to the community, municipal leaders and nonprofit organizations in the area. The following is a description of how the Connecticut team developed the Eco-Urban Assessment for Bridgeport and how it has influenced their work.

Drew and Adam started the process of building the Eco-Urban Assessment tool with a series of brainstorming sessions. They articulated the goals of the assessment and identified key assumptions, drawing from many informal conversations that Drew had with nonprofit and municipal leaders about key environmental issues facing the city. This process helped them to define priority topic areas, including flooding, air quality, park access and park connectivity.

The assessment specifically sought to answer the following questions:

- Where are flood risks most concentrated in low- to moderate-income communities?
- Where are youth living in low- to moderate-income communities most exposed to poor air quality?
- What areas are most in need of new parks?
- Where are opportunities to better connect people with existing parks?

After identifying the key questions and objectives, the team reviewed relevant available science and research on the priority issues, identified the data layers and sources they would need, and chose intersection mapping, walkshed mapping and raster hotspot analyses for the assessment. (The walkshed is the walkable area from any point, usually defined as a range.) They also reviewed existing tools for prioritization related to green infrastructure and tree canopy siting.

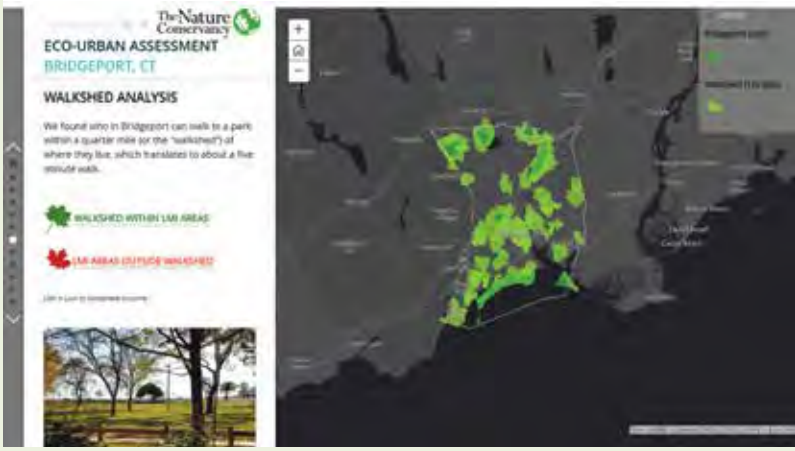
The team decided to build their own prioritization tool that would be user friendly and easily translatable for other municipalities so that similar types of GIS analyses could be easily implemented and understood. They hired a GIS specialist who could be a thought-partner to develop the process and help push them beyond their assumptions. They built the system to be simple, straightforward and accessible even to people who are not experienced with mapping.

After the team located the relevant data and added them to the model, they used the tool to generate maps demonstrating individual threats and conditions, such as asthma rates and local flood risk. They also generated maps exposing intersections between individual threats and conditions, such as areas with high rates of asthma and low tree canopy. The tool generated maps that helped the team identify specific areas where investments in green stormwater infrastructure, open space and trees would have a high social and ecological impact. In an effort to focus the assessment on economically sensitive neighborhoods,

all of the models used data layers showing the locations of "low- to moderate-income communities, defined as areas where incomes were no more than 80% of area median incomes. They built **The Eco-Urban Assessment Story Map** to share some of the city's stories and the findings of the assessment.

One of the priority areas identified by the assessment is Bridgeport's East Side neighborhood. This is a priority neighborhood for urban conservation due to its flood risk, low air quality and lack of park access for residents, including a high concentration of middle- to low-income youth. Additional challenges include the area's proximity to I-95 and other highways, the presence of Connecticut's last coal power plant, its high percentage of impervious surfaces and its low (7%) tree canopy cover.

The Connecticut program supported the planning and implementation of a community-led Deep Greening project in this area. Goals for this project include planting 150 trees, addressing local flooding and activating local parks. The Conservancy partnered with multiple community-based organizations and leveraged the North America Cities Network's Strategic Small Grants program to fund their partners' participation. A key project partner, Groundwork Bridgeport, primarily works with underserved high school students from Bridgeport to cultivate their environmental leadership skills. Groundwork Bridgeport has a strong commitment to working in the East Side neighborhood and is co-leading the development of the community engagement strategy, including a community survey on perceptions of nature and tree plantings.



Eco-Urban Assessment. Bridgeport, CT. © The Nature Conservancy

Another organization, Green Village Initiative, is in charge of most of Bridgeport's community gardens and runs related food access/security programs. The Nature Conservancy in Connecticut provided a small grant to fund Green Village Initiative's renovation of three gardens in the East Side. By supporting the renovation of the gardens, as well as working with the organization to develop a community-led vision for an additional vacant lot, The Conservancy is building on this strong partnership and helping grow a much-needed community asset.

The Eco-Urban Assessment helped Drew and his team recognize the intersecting needs and opportunities in the East Side neighborhood of Bridgeport. The Deep Greening project will result in the concentrated greening of a neighborhood where nature-based solutions will have a strong human well-being impact.

The three guiding principles of urban conservation were demonstrated by the Eco-Urban Assessment and the Deep Greening work in Bridgeport as follows:

1. **Understand Needs of People and Nature:** The design and implementation of the tool and Eco-Urban Assessment created a method for understanding the needs and challenges faced by people and nature in Bridgeport.
2. **Improve Conditions for Human Well-Being:** By placing an emphasis on socioeconomic as well as ecological data, the assessment supported the team in finding ways to improve conditions for human well-being as a primary goal and will be actualized through the implementation of a Deep Greening Initiative in the East Side of Bridgeport.
3. **Build Cross-Sector Coalitions:** Through informal conversations with nonprofit and municipal leaders, as well as formal partnerships with community-based organizations, Drew and his team have begun to build the relationships necessary for a broad coalition.

In the next section, we will outline the two big-picture approaches to work planning used by the partner organizations in this network, The Conservancy and CWC. These approaches provide the foundation for turning the guiding principles into action plans.

Railroad Park. Birmingham, AL. © Devan King/The Nature Conservancy

Our Guiding Frameworks

Urban conservation requires a planning approach that takes into consideration the complex interplay between natural systems, urban infrastructure and human society. Therefore, conservation practice in an urban setting requires expertise in natural resource management and ecosystems, the ability to assess positive and negative human impacts, knowledge of equity issues, and the capacity to foster respectful collaboration with diverse communities. In this section, we provide an overview of planning frameworks from both organizations supporting this urban network, **The Nature Conservancy's Conservation by Design 2.0** (CbD 2.0) and **Center for Whole Communities' Whole Measures** (WM).

In order to provide context, we include a brief history of how and why each framework was developed. We then outline the overarching goals of each approach and highlight specific instances in which the two frameworks fostered a synergy of holistic and evidence-based planning in the Cities Network. Both frameworks provide a useful touchstone for any conservation practitioner seeking to engage in urban areas. More information on each framework can be found on the organizations' respective websites.

The Conservancy's Conservation by Design

Conservation by Design (CbD 1.0) was created by The Conservancy in 1997 to provide a clear method for focusing the organization's efforts in a way that could be replicated in all the states and countries in which we worked. This framework took advantage of then-nascent spatial analysis software to examine where different aspects of biodiversity aligned. CbD 1.0 also incorporated basic elements of adaptive program management, including iterative cycles of planning, acting, confirming what happened and then changing course if needed.

In 2002, several large conservation organizations created the Conservation Measures Partnership (CMP), and this adaptive management process was revised and codified in the Open Standards for the Practice of Conservation employed by the CMP.

CWC worked with members of the CMP to create a cadre of Conservation Action Planning Coaches aimed at inclusive stakeholder planning and initially housed in The Conservancy. During the 2010s, it became an independent non-profit, the Conservation Coaches Network. CbD was revised to reflect shifting organizational priorities in 2007, and again in 2015.

The most recent version, CbD 2.0, was published in 2016. It reflects a change that took place in 2012 in The Conservancy's mission and vision to implicitly include people: "conserving the lands and waters upon which all life depends" and "people act to conserve nature for its own sake and its ability to fulfill our needs and enrich our lives." CbD 2.0 has four primary advances:

- *Including people explicitly in conservation* provides a strong link to our work with urban communities and asks practitioners to expressly consider people as part of the ecosystem in which we work. This includes incorporating social safeguards and ensuring that historically marginalized people and communities (e.g., low-income communities, indigenous peoples, communities that depend on the local environment, communities of color, women, children, the elderly) are not negatively impacted and that we incorporate social safeguards into project planning and implementation.
- *An emphasis on systemic change* follows the creation of "whole systems" as a unit of conservation at The Conservancy. This is intended to foster work across state, national and other types of cultural, economic and ecological jurisdictions. It refers to creating, strengthening or shifting the social, economic, political and cultural systems that comprise and sustain a socio-ecological system.
- *Spatial planning is now integrated with developing strategies* in order to consider the where, the how and the why of what we can do simultaneously.
- *The use and documentation of evidence*, whether in the form of peer-reviewed journals or local knowledge, should inform our choices, justify our actions and help us learn going forward.

CbD 2.0 contains 14 steps grouped around five major phases (Figure 3). Below, we describe what is accomplished in each step.

Identify Challenges and Goals

1. **Specify Planning Context.** Define the scope to ensure a focus on significant conservation problems and the relevant geographies where those challenges will be addressed.
2. **Conduct Situation Analysis.** In close collaboration with key stakeholders, analyze evidence to describe current and predicted future situations to identify conservation targets, directly related human interests, threats, drivers, risks and opportunities for creating change.
3. **Draft Goal Statement.** Specify the minimum change needed to contribute to desired systemic change, both for nature and directly connected outcomes for human well-being.
4. **Share Advances in Knowledge Through Relevant Pathways.** Identify the key lessons learned in the process of identifying challenges and goals, determine who needs or will use that knowledge, and document and disseminate appropriately.

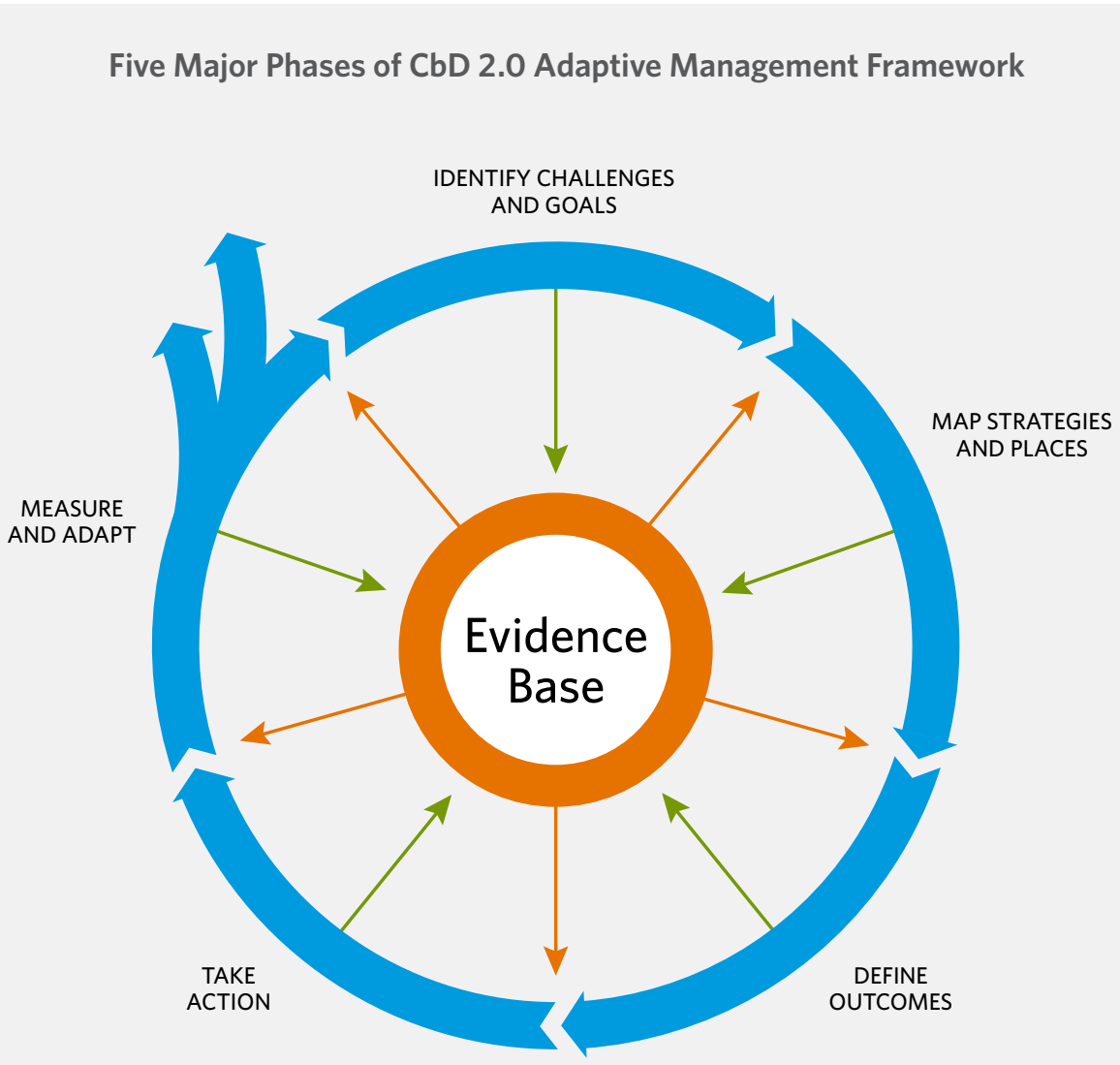


Figure 3: There are five major phases of the CbD 2.0 Adaptive Management framework.

Map Strategies & Places

5. **Identify Candidate Strategies.** Articulate potential strategies to meet your goals, using insights gained in the situation analysis to consider both known and novel strategies and to seek strategies that lead to systemic change.
6. **Construct Results Chains.** Articulate the logic for why proposed actions will change an undesired state to a desired state. Articulate the assumptions necessary for this to happen, and synthesize evidence regarding these assumptions.
7. **Map Strategies and Opportunities.** Characterize the potential magnitude of the effect of different candidate strategies, enabling the evaluation of the contribution of each strategy toward stated goals. This allows an estimate of the conservation return on investment (ROI) for each strategy, which can inform the selection of strategies to implement. Strategy and opportunity mapping also aids the implementation of selected strategies by identifying where each strategy can most effectively touch down in space.
8. **Select Strategy or Strategies.** Identify strategies that, if successfully pursued, at least meet the minimum goal, have relatively good conservation ROI, avoid negative impacts to vulnerable people, and have acceptable levels of financial and reputational risk.
9. **Share Advances in Knowledge Through Relevant Pathways.** Identify the key lessons you have learned in the process of mapping strategies and opportunities, determine who needs or will use that knowledge, then document and disseminate appropriately.

Finalize Outcomes & Develop Measures

10. **Articulate a Theory of Change.** Convert draft minimum goal statements into specific outcomes based on insights gained in developing results chain and strategy maps. Articulate the problem, the solution, and why your organization or team is positioned to implement the solution in a succinct way that colleagues, partners, stakeholders and funders can understand and support.
11. **Define Measures and Create a Monitoring and Evaluation Plan.** Explain how essential evidence gaps and monitoring needs will be filled to determine project success or failure, mitigate legal and reputational risk, avoid and mitigate negative impacts, influence others to replicate and leverage work, satisfy donor expectations, and adaptively use monitoring and evaluation information to manage the project.

Take Action

12. **Implement Strategy(ies) using Sound Project Management.** Provide clarity around roles and develop work plans and budgets. Implement monitoring and evaluation plan.

Evaluate and Adapt

13. **Evaluate.** Conduct analysis and evaluation to fill essential evidence gaps and satisfy monitoring needs.
14. **Adapt.** Use monitoring and evaluation to assess progress toward goals and outcomes and assess the need to adapt to changing conditions, unintended consequences and new opportunities. Share lessons learned via relevant pathways.

The following story provides an example of how the Louisville, Kentucky, urban conservation program used the CbD 2.0 phase “Identify Challenges and Goals” to find a direction for work that focuses on public health and green spaces.

STORY FROM THE FIELD

LOUISVILLE, KY

The Green Heart Project: Linking Green Spaces to Public Health

© Douglas Gritzmacher

In Louisville, The Nature Conservancy is engaged in an innovative partnership to assess the relationship between green spaces and the health and well-being of urban communities. The Green Heart Project will test whether an increase in vegetation reduces the levels of air pollution in Louisville and will document the effects of increased tree canopy on levels of obesity, diabetes, heart disease and mental stress. The study will also assess how greening efforts affect residents' sense of community and participation in outdoor activities. The project partners will work with neighborhoods to develop strategies to improve the health of Louisville residents. If successful, this project could serve as a model for how urban green space can reduce air pollution and, in turn, cardiovascular disease. In this interview, Louisville Urban Conservation Director Chris Chandler talks about the Green Heart Project and The Conservancy's role within it.

Q **Why did you decide to pursue a project that links green spaces with public health?**

A In Louisville, your zip code is your number one predictor of health outcomes. Life expectancy is 11 years lower in certain low-income neighborhoods than in middle- and upper-income neighborhoods. Louisville is known as the "coronary valley," with twice the national average of cardiac disease and cardiac deaths, which carries an annual price tag of $660 million. We rank 17th out of 17 peer cities in air quality and are routinely ranked as one of the worst cities in the country to live in if you have asthma. Louisville also has the fastest growing documented urban heat island in the nation.

When I saw that factors such as proximity to freeway traffic and industry, low tree canopy and urban heat are ultimately taking years from people's lives in certain neighborhoods, I realized that green spaces could be part of the solution. Research suggests that trees can affect health outcomes, but unfortunately, Louisville loses an average of 54,000 trees per year. The city, with support from many groups, has made the stewardship and enhancement of the urban tree canopy a top priority. We began to ask ourselves, who was going to pay for all these new trees and where would they be planted? We saw an opportunity to collaborate with local partners to advance emerging science connecting nature to health and to inform new landscape policies that promote health for people and nature in our city.

Q **How did The Conservancy become involved in the Green Heart Project?**

A I have been so fortunate to build relationships with inspirational leaders, including Christina Lee Brown, founder of the Center for Interfaith Relations and the Institute for Healthy Air, Water and Soil. These leaders have profoundly influenced my thinking on nature's ability to enrich our lives. I introduced Conservancy leaders who were committed to our urban work to Ms. Brown, and she challenged and inspired us to invest in science that seeks answers to new questions about nature-based services for people. The Kentucky Chapter was in the process of developing a new conservation agenda with a dual focus on both nature and people, so the timing was ripe for this kind of partnership.

Q **Who are the local partners involved in the Green Heart Project? What is it like to work with such an interdisciplinary group?**

A The partners in the Green Heart Project include The Nature Conservancy; the Institute for Healthy Air, Water and Soil; University of Louisville; Center for

Neighborhoods, and Hyphae Design Laboratory. These organizations are working with Metro Louisville Government and local neighborhoods to launch a long-term clinical trial to test whether greening a neighborhood improves residents' health. We knew that no one organization or sector can fully address issues of public health and access to nature-based solutions. This inspired us to embrace cross-sector collaborations with our new partners. It's not always easy, but we are learning to work together across disciplines and are building trust. We are becoming a tightknit group, committed to improving our interactions while also having fun.

Q **How have you engaged with different levels of The Conservancy to do this project?**

A We worked to build internal alignment outside Kentucky with the North America Cities leadership team and with the Global Cities team by contributing to a situational analysis on air and heat. The outcomes from that work gave us the "Aha!" moment, when we created a strong theory of change that led to healthy people as the conservation outcome. The Green Heart Project narrative was emerging locally and seemed to build a case for action based on our strategy work and the newly emerged Conservation by Design 2.0 guidance. In Kentucky, we recognized that we would need support from the broader organization to align the project with the new strategies, to finance the greening, and to shape the research study design using science. Without these internal alignments, we would not have been able to lead this project in Kentucky. Our partners have said that our doing so gave them the confidence to push the project forward and submit a funding proposal to the National Institutes of Health.

Q **What will your "on the ground" impact be with the Green Heart Project?**

A The Conservancy will work with our partners and the community to manage the strategic planting of more than 9,000 mature trees and shrubs and over 15,000 native plants on public and private properties in Louisville neighborhoods. We will care for the new plantings for five years while stewarding the health of the urban forest. We have begun this work by identifying ash trees that are at risk from the emerald ash borer and prescribing conservation treatments to protect them for years to come. We are also providing overall project coordination and tracking for the many teams working on this project, including community engagement, air quality monitoring, clinical research and greening, and we are assisting with on-the-ground community engagement. We are fundraising millions of dollars, both locally and nationally, to support this ambitious work.

Community-wide planting event. Louisville, KY. © Devan King/The Nature Conservancy

Center for Whole Communities' Whole Measures

Historically, conservation practitioners have measured success in dollars, acres and biological diversity, without including factors related to community well-being. Whole Measures serves as a foundation for a highly integrated, whole-systems approach that effectively embraces a wide variety of values, such as social equity, ecosystem health, community engagement and economic vitality. What makes it unique is that it centers community well-being as a fundamental priority. When applied to a social or environmental change initiative, WM is a flexible framework for planning and evaluating that can be adapted to meet organizational and community goals.

Whole Measures originated at the Trust for Public Land (TPL). The work began with a bottom-up query to field staff around the country about projects that had impacts beyond the "property line," influencing the life of the community. TPL staff then worked to articulate the core values and benefits that their conservation work ideally might achieve. TPL shared this work in order to help conservation work have stronger impacts and be more innovative. In 2003, Center for Whole Communities convened a conference hosting a multi-disciplinary advisory council of social scientists, biologists, urban planners, writers and land conservationists who created the original template for Whole Measures.

CWC has continued to develop and refine Whole Measures with diverse partners and has since shared WM with the larger conservation community so that it may be applied to a wide spectrum of efforts, encompassing land conservation, urban ecology, food systems, social justice and community-building.

The first generation of the Whole Measures for Urban Conservation (WMUC) framework was completed in 2016 and focused on four values-based areas that are integral to the development of equitable conservation outcomes: Justice and Fairness, Economic Vitality, Community Engagement and Community Resilience. WMUC was designed by a multi-disciplinary working group with members from The Conservancy and CWC. WMUC was developed to guide the planning, evaluation and community engagement strategies of urban conservation projects and seeks to broaden definitions of success by including outcomes that improve quality of life for underserved communities.

The WMUC framework is composed of a set of scoring guides or rubrics that apply across different areas of socioeconomic impact. WMUC is also intended to support a participatory process in which conservation practitioners work in partnership with diverse constituencies to plan and evaluate urban conservation work. This framework is intended to be used as part of a stakeholder engagement process, with the content adapted to address specific conditions and contexts. An extensive guide to WMUC can be found in Appendix A of this document, including a guidance document and a table of rubrics. Each rubric contains specific objectives and indicators that can be used for evaluation, planning and engagement.

In practice, the WM framework helps foster several processes that are key to working with communities on urban conservation. The process of WM can have the following benefits:

Supporting collaboration and creating alignment

- Whole Measures provides a structure and format for engaging dialogue between different organizations and the communities in which they work.
- Conversations guided by Whole Measures can foster more effective, reciprocal and collaborative relationships.
- Engaging internal and external stakeholders with the rubric creates a structure for discussions that center on key potential socioeconomic impacts of urban conservation strategies.

Planning for and measuring impact

- Whole Measures helps organizations align their program priorities, decision-making, resources and activities with their overall vision and values.
- Using participatory methods to develop program objectives and scaled measures of success related to urban conservation and equity can support both planning and evaluation.
- Stakeholders can use the rubric to qualitatively evaluate the impacts on a scale from negative impact to highest positive impact at different phases of the project or program cycle.

Chicago was the first city in which the Cities Network piloted Whole Measures for community engagement. The following story describes the process and outcomes of this work with Whole Measures.

Fifth Cultivating Whole Cities Retreat. Denver, CO. © Joshua Carrera/Center for Whole Communities

STORY FROM THE FIELD

CHICAGO, IL

Using Whole Measures to Support Collaboration and Evaluation

© Douglas Gritzmacher

In 2015, Center for Whole Communities (CWC) presented the Whole Measures framework and methodology to the North America Cities Network. John Legge, Chicago Conservation Director at The Nature Conservancy, realized that Whole Measures offered a valuable opportunity to experiment with measuring human well-being impacts in urban conservation. Having spent many years at The Conservancy, John was confident about demonstrating ecological outcomes in his work, but he needed new methods to measure the benefits of his work to human communities. John and his colleague Karen Tharp, Chicago Director of Urban Stewardship and Engagement, worked together to develop original Whole Measures rubrics for their work at the Burnham Wildlife Corridor (as well as at another site, the Indian Boundary Prairies). With the CWC team advising them on their process and offering regular coaching and on-site facilitation, they brought Whole Measures into a collaborative process with partners. This story describes how John and Karen used Whole Measures with their partners to support collaboration and measure impact in their work at the Burnham Wildlife Corridor.

Background

The Conservancy's Chicago program seeks to benefit both people and nature by increasing volunteer-led restoration and stewardship in Park District natural areas. In 2014, The Conservancy played a key role in a community engagement and restoration project in the Burnham Wildlife Corridor, a 6-mile-long city park bordering Lake Michigan. One of the largest contiguous natural corridors in the city, this area borders economically challenged South Side neighborhoods and provides important migratory songbird stopover habitat. In the 2014 project, 700 local volunteers planted over 10,000 tree seedlings to reforest a section of the park. More than 30 local community groups participated in volunteer recruitment. Three major institutional partners oversaw coordination of the project: The Conservancy, the Chicago Park District and The Field Museum. This event served as the launching point for ongoing efforts to engage and involve nearby communities in the restoration of the Burnham Wildlife Corridor.

The Burnham Wildlife Corridor was an ideal location to pilot Whole Measures because of the project's ongoing community engagement goals, the economically and racially diverse neighborhoods involved, and the combination of partners, ranging from large institutions to small local groups. The Conservancy staff shared background information on the Whole Measures process internally with their chapter leadership and received support and encouragement. Their institutional partners also responded enthusiastically. John and Karen were able to work together to develop their understanding of Whole Measures, while also receiving regular coaching, process consulting, and on-site facilitation from the CWC team.

Process

Whole Measures can be used to support program planning, community engagement and evaluation. John and Karen used the Whole Measures process to support all three of these goals in pre-established programs. First, they reviewed the original Whole Measures rubrics that were developed for land-based conservation work, to use as a reference for developing the most relevant measures of impact on human communities at the Burnham Wildlife Corridor. The measures were organized into four general categories: community engagement, connecting people with nature, strengthening communities and strengthening stewardship. They engaged

with CWC for regular Whole Measures coaching, strategy and planning sessions to refine and prioritize their initial draft ratings system to make sure it was applicable and manageable.

In January 2016, Ginny McGinn and Kavitha Rao from CWC facilitated a half-day workshop to help the partners apply the measures to the Burnham Wildlife Corridor project. The 15 participants, including several staff from each of the two institutional partners, two stewardship volunteers, and a representative from one local community group, worked to rate the collective efforts to date on the restoration according to the 10 measures. During the process, they discussed the project's challenges and their hopes for it.

The Conservancy and partner staff left their first meeting with an increased awareness of two obstacles to success: the power imbalance between large institutions and community organizations, and the lack of clarity regarding overall project goals and partner roles. The Whole Measures process was valuable in illuminating these issues and in strengthening collaboration and supporting alignment between partners. In addition, the process was used to create a baseline assessment of impact on communities in the four categories in the rubric.

In May 2016, the team convened again with a broader range of partners, including 16 community groups and many of the participants from the 2014 planting, in an effort to reconnect them to the Roots and Routes community engagement initiative at Burnham Wildlife Corridor led by the Chicago Parks District and The Field Museum. CWC provided strategic process expertise and facilitated the meeting. The group discussed how to create a vision around Burnham Wildlife Corridor that would increase collaboration among partners, and they outlined what each member could bring to the table. At the suggestion of CWC, The Conservancy offered small stipends to members of community-based organizations to compensate them for their time and participation in these meetings.

"Partnering with CWC and using Whole Measures is a different way of working and is changing the culture of how we work for all of us, including the partners on this project. CWC's approach to developing shared spaces where all participants have an equal voice is powerful. We work with partners and community members and small organizations that are on a shoestring budget. It's necessary to have a process that brings everyone up to the same level. The rubric and assistance from CWC have been essential in keeping that space alive. They keep us from failing into old habits like taking over the conversation, having meetings without compensating community partners or forgetting about certain sensitivities. I appreciate having the community partners at the table, and they have greatly appreciated the small stipends we paid."

— Karen Tharp

The group convened again in November 2016 to further define specific partner roles and outcomes of the work. Two groups were formed to discuss specific opportunities to connect families and young children, adults, elders and teens to the park for ecological stewardship and cultural events.

Over the course of the collaboration, the Whole Measures process was well received and appreciated by program partners and process participants. The Chicago Parks District and The Field Museum are planning to use the Whole Measures rubrics designed by John and Karen for Burnham Wildlife Corridor as a joint guidance document that will guide priorities and support monitoring and tracking of community benefits.

Benefits of the Whole Measures process in the Burnham Wildlife Corridor Partnership:

- Strengthened collaboration between partners
- Opportunity for group dialogue
- Improved clarity about partner roles
- Leveling of the power imbalance in partner meetings
- Increased internal capacity of The Conservancy team to work equitably with community-based organizations

Pedals and Petals: A Community Planting and Bike Ride at Ping Tom Park. Chicago, IL. © Laura Stoecker

CbD 2.0 and Whole Measures: Synergies for Urban Conservation

Since 2014, The Conservancy and CWC have worked together to apply and experiment with these two frameworks in various cities across the United States. Although CbD 2.0 tends to focus on evidence-based analysis and WM has a strong emphasis on social impact measures, we have found synergies in the practice and implementation of these frameworks. For example, both frameworks emphasize human well-being and stakeholder engagement (see Table 1 for more synergies).

TABLE 1. Synergies of Frameworks for Conservation in Cities

PLANNING PHASE	PLANNING FRAMEWORK	
	CONSERVATION BY DESIGN 2.0	WHOLE MEASURES FOR URBAN CONSERVATION
Identify challenges and goals	Specify the planning context, conduct a situation analysis and draft a minimum goal statement	Ensure that equity and value-based areas (e.g., justice and fairness) are explicitly and intentionally incorporated into the conversation from the onset
Map strategies and places	Identify candidate strategies, construct results chains (i.e., logic models), perform strategy and opportunity mapping, and select strategy	Engage with a diverse range of stakeholders to plan and evaluate efforts; engage in open dialogue to discover possible unintended negative impacts and opportunities
Define outcomes and measures	Articulate theory of change, define measures, and create monitoring and evaluation plan	Experiment with adapting the WM rubric; include stakeholders in envisioning and prioritizing different potential and intended outcomes
Take action	Use sound project management approaches that include a project charter, work plan, budget and stakeholder engagement plan	Plan time and resources for continued stakeholder engagement throughout the planning, implementation and evaluation phases of project
Evaluate and adapt	Assess progress toward goals; assess risks and unintended consequences that may require mitigation; produce results tailored to influence key audiences to replicate strategies	Use rubrics to assess impacts, learning from experience to improve work over time; move through adaptive management steps iteratively; revisit earlier steps and re-engage partners in new ways

Applying CbD 2.0 and WMUC together has the potential to combine scientific and relational rigor in both process and outcomes and can lead to improved and lasting conservation and community outcomes.

Community-wide planting event. Louisville, KY. © Christopher Chandler/The Nature Conservancy

Core Practices for Urban Conservation

We have identified two key components that are common to all urban work and that constitute core practices for urban conservation. These components must be top-of-mind for all practitioners entering the urban arena. Regardless of their training, background, conservation goals or strategies, all conservation practitioners entering the urban arena should have a basic knowledge of environmental justice. This awareness should inform our approach and will influence how we are perceived as we

conduct our work. In addition, we should commit to learning what constitutes meaningful engagement and fair and just treatment of others with whom we work. This section briefly outlines key concepts of environmental justice and meaningful community engagement and is meant to guide practitioners toward more robust collaborative and partnership approaches to working with the myriad of stakeholders they will encounter as they work in cities.

Environmental Justice and Urban Conservation

Key Principles of Environmental Justice

- Self-determination
- Protection from environmental waste and toxicity
- Public policy that is based on mutual respect and free from discrimination and bias
- Investment in sustainable infrastructure and economic development
- The fundamental human rights to clean air, land, water and food
- Creation of shared wealth

(See the complete list of the 17 **Environmental Justice Principles** adopted by the delegates of the First National People of Color Environmental Justice Leadership Summit in Washington, D.C. in 1991.)

Proponents of environmental justice advocate for the rights of all people to have a healthy environment and to live, work and play in communities that are free from life-threatening environmental degradation. Urban conservation efforts should support environmental justice and the efforts of frontline communities who are self-organizing to overcome the environmental threats in their communities.

The environmental justice movement works to address the fact that facilities such as toxic waste sites, landfills, incinerators and industrial infrastructure are disproportionately sited in or near communities of color and communities facing poverty. It is particularly important that as we approach urban conservation we understand and support environmental justice, as the conservation movement has not always been respectful of marginalized communities.

For example, the creation of many national parks displaced indigenous people from land to which they had been relocated by European colonialists in the 1800s. Similarly, many black family farmers were displaced to create National Wildlife Refuges. Learning this history is critical to avoid repeating the errors of the past and to understand why some communities may not trust conservation organizations. In some cases, when The Conservancy or other conservation organizations enter a space, they will be perceived with distrust because of the history of the conservation movement. Being aware of this history and these perceptions is important when entering a new work space and initiating new partnerships, where a foundation of common understanding and trust is critical to building authentic relationships. It is important to show humility and to seek to understand the community's history and how it affects their willingness to collaborate.

Another key issue related to historical inequities is gentrification. One of the many benefits of bringing nature to cities is that it increases property values, which also allows rents and tax revenues to increase. While this benefits property owners, it can displace limited-income renters from their communities. Preventing negative impacts such as displacement will be an important focus of conservation efforts in cities.

The Conservancy is a large and well-funded conservation organization. Due to its predominantly white membership, leadership and staff, it is important for The Conservancy to be self-reflective as it begins to work in cities and with

Reading Viaduct. Philadelphia, PA. © Marc Steiner

Environmental justice exists "when environmental risks, hazards, investments and benefits are equally distributed without direct or indirect discrimination at all jurisdictional levels and when access to environmental investments, benefits and natural resources are equally distributed; and when access to information, participation in decision-making, and access to justice in environment-related matters are enjoyed by all."

— Steger, Coalition for Environmental Justice, 2007

communities that have been historically underrepresented and underresourced. It is critically important to step into the space with an awareness of the conservation movement's historical impacts on communities of color and with a humble and open outlook. It is also important to closely monitor the effects of programs that touch down in the complex urban space, as they may play out in unexpected ways that produce unintended negative consequences for underserved communities.

Understanding Power Dynamics

Due to their size and scale, large environmental organizations have access to greater financial and philanthropic resources than do local community-based organizations (CBOs). They also function in a more hierarchical manner and have greater access to traditional power structures such as local, state and federal government and private and foundation funding. It is important to be aware of this power differential and to respect community voices when working with smaller organizations and community groups.

Supporting Environmental Justice in Urban Conservation

- Invest time and resources in training your team around issues of power, privilege and working across differences.
- Build and maintain respectful and reciprocal relationships with community-based environmental justice groups.
- Share decision-making power, media attention and credit with community-based partners.
- When writing grants to partner with community-based groups, include them in the process as early as possible.
- Create budget allocations that allow you to pay community-based partners for their time.

The Conservancy has demonstrated that it can be a respectful and powerful partner in local communities. There are ways to work at the local level that have profound impacts and to be involved in, support and lift up local initiatives without usurping the roles of CBOs and community leaders. The Conservancy can play an important role as an ally to CBOs, while continuing to seek innovative ways to work at the local level to improve life for residents.

Chapters within the organization may engage with local environmental justice groups in different ways. While they may navigate the local landscape in whichever way they see fit, they should remain accountable to local environmental justice efforts. Part of being an environmental justice ally is taking the time to build relationships, listen to the environmental justice leaders and community members, and treat them as experts who hold valuable local knowledge. The Conservancy needs to be aware of this knowledge in order to be effective and achieve its mission. Conservation practitioners are often surprised by what they hear from the environmental justice community. It is very important to be willing to questions one's own assumptions and consider different perspectives.

Urban conservationists should aim not only to provide a broad range of human and ecological benefits, but should generate equitable outcomes that are consistent with the principles of environmental justice and that respect and support the self-identified needs of underrepresented urban communities. Investing appropriate time and resources in community engagement is a key factor in supporting environmental justice.

The following story describes how the urban conservation program in Philadelphia is working to centralize environmental justice principles in their work.

STORY FROM THE FIELD

PHILADELPHIA, PA

Integrating Environmental Justice Principles into Urban Conservation Strategies

© Marc Steiner

When Julie Ulrich, The Nature Conservancy's Philadelphia Urban Conservation Director, set out to create a new urban conservation program for the Pennsylvania Chapter, she wanted to focus on environmental justice issues. At the same time, she wanted to align the work with her chapter's overarching conservation goals. Here, Julie talks about how she strategically integrates environmental justice principles into her work.

Q **What are your urban conservation goals, and how are they connected to environmental justice?**

A Our goals in Philadelphia are rooted in environmental justice issues but framed within traditional conservation language. Our broad goals for the program will address healthy waters, air quality, the heat island effect, building community leadership and improving natural lands.

Q **How are you working to ensure healthy waters in Philadelphia?**

A On a small but concrete level, I have been working at W.B. Saul High School with seniors studying environmental science, some of whom have had rough background experiences. We did a design workshop, and I paired them up with graduate landscape architecture students of color, as well as practicing engineering and landscape architecture professionals. It was a tiered system to bring sustainable design skills to the students, teaching them surveying and drafting skills, while they help with a project to benefit water quality. The project is designing a bioswale system for their school, over a period of six months—that's a drainage course to remove pollutants from runoff. After the first workshop, the teacher said, "This is how education should be done." The bioswale will have a conservation impact, but it's also touching so many people's lives. The fact that we brought in professionals to work with these students meant a lot to them. One of them said to me, "Everyone overlooks us." These are students who don't get these kinds of opportunities regularly.

Q **How do you plan to improve air quality and reduce the urban heat island effect?**

A First, we are working in the Belmont neighborhood, looking at multiple greening approaches and how they might improve air quality, reduce the heat island effect, reduce flooding and provide safe outdoor spaces for residents. We are not just doing a scientific analysis but also asking how we can convene the entire neighborhood, not just for tree planting but to make quality of life improvements and identify the intersections with nature. We are pairing up with housing entities and faith-based communities so that we can do environmental improvements that don't trigger gentrification.

For example, we are partnering with the Friends Rehabilitation Group, a nonprofit organization that provides affordable housing for seniors, low-income families and special needs individuals. They are a faith-based group as well as the largest landowners in that neighborhood. They try to incorporate urban agriculture and rooftop gardens but need assistance in providing more opportunities for their residents. We are in the planning stages and will be working closely with them to strategize how to do greening work that will not cause the displacement of community members.

Q **The Reading Viaduct is another interesting project in Philadelphia that is working to build community**

leadership, improve green space access, and preserve community culture. Can you tell me about your vision for this?

A The Reading Viaduct is an old elevated rail line that goes through eight different multicultural neighborhoods in Philadelphia. This rail line is three miles long—some elevated, some subterranean—and is likely one of the biggest rail line conversions in the country slated for development as a green space. Ecologically it's stunning; there are so many species up there. It's also striking how many cultural assets are in that area. All of it is at risk for undergoing traditional development that would not take into account the effect on current neighborhood residents. Although the High Line in New York City is very popular, the process to develop it was not inclusive; it was intentionally done to redevelop the meatpacking district. In Philadelphia, we have an opportunity to re-envision an equitable process for this. We are looking for a better model of community engagement: how do we residents understand what the risk is, and how do our vision and fingerprints get on it? I'm interested in cultural assets and people's livelihoods, and setting the tone for equity early in this process. I'm partnering with Friends of Rail Park and the Land Health Institute, which does public engagement with communities to re-envision community access to nature. The end goal is to spark a better design and development process that fosters both ecological and social resilience.

Q **What are you doing to improve natural lands within the city?**

A So far, we have used awards from the North America Cities Strategic Small Grants program to support the Philadelphia Orchard Project in a couple of events. First—this was wonderful—we put in an orchard and edible gardens with them at Casa Del Carmen, a Latino community center. It was their first edible space.

The second was with Monumental Baptist Church, which has an African-American congregation. We had an intergenerational workday where we cleaned out overgrown brush and weeds in an adjacent vacant lot and brought in fruit trees and edibles, and neighbors came out to work with us. As part of the workday, we had a local photographer come and do a portrait series for whoever wanted to be photographed. A lot of people had not had a portrait taken before, aside from at school. Working with local artists made the event more meaningful for the community.

Q **You are clearly dedicated to community engagement and dialogue. What is your approach to having conversations with people who are usually left out of conversations about conservation?**

A One example is including homeless communities in conversations about land use. There is a homeless encampment near the river, close to where The Conservancy would like to partner on implementing a constructed wetland park. I do not want to see this community harmed in this process. Sometimes I'll just sit down with the folks in the encampment and have a conversation. These relationships stemmed from getting to know this place along the river, respecting that place as their home, asking permission, and letting the community there get to know me before asking them questions. They have their eyes on things happening on the waterfront and have been able to help me understand the realities of the development pressure. People don't pay attention to them because of their homeless status, but they see and understand where they live because they are there on a daily basis. This is one example of the ways in which I look to the community for guidance and tap into the local knowledge base to better inform the work.

Environmental justice–friendly practices being applied in Philadelphia:

1. Working with and providing opportunities for underresourced communities
2. Working with affordable housing organizations to counteract possible displacement effects of greening
3. Working to include equitable community planning processes so that the vision, values and input of the community are incorporated into future projects
4. Focusing on both ecological and cultural assets
5. Investing in the work of local organizations (such as the Philadelphia Orchard Project)
6. Consulting and respecting community knowledge and vision

> **Community engagement is "the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people… It often involves partnerships and coalitions that help mobilize resources and influence systems, change relationships among partners, and serve as catalysts for changing policies, programs, and practices."**
>
> — Centers for Disease Control and Prevention, Principles of Community Engagement, Second Edition, 2011, p. 3

The Conservancy's work in Philadelphia is an experiment in working with community and integrating environmental justice issues from early stages of program development. The Cities Network is in the beginning stages of identifying positive case studies like this one and testing the impacts of integrating these principles from the outset. As leaders like Julie innovate new ways of working for equitable urban conservation, their learning should inform what will become a standard for engaging with communities. In the following section, we describe in more detail some of the principles, methods and strategies for effective community engagement that can lead to equitable outcomes in urban conservation.

Community Engagement: An Essential Urban Conservation Practice

It would be impossible to successfully and sustainably protect biodiversity and natural systems in urban spaces without coordinating with communities in cities. Providing benefits to people in cities requires us to deeply understand community needs and to engage with communities at multiple stages of our work. Community engagement creates a space for learning, responding to and supporting needs defined by the community.

The Conservancy has a long history of engaging with communities. Urban conservation requires us to draw on existing community engagements skills and often requires more nuance and attention than working with communities that have less social, cultural and economic diversity. The following section will review important tenets of community engagement. It will be familiar to those with community engagement experience, but new to others.

Benefits of community engagement:

- Create more equitable impacts.
- Strengthen networks in the community.
- Broaden the base of support and expertise.
- Increase the buy-in and effectiveness of the program.
- Improve prospects for program longevity and sustainability.

Community engagement requires interacting with stakeholders. A stakeholder may be a local resident who lives next door to the proposed location for a conservation initiative, or it can be the mayor of the city. A common definition of a stakeholder is anyone who has an interest in an issue, whether that interest is financial, moral, legal, personal, community-based, direct

or indirect. Although stakeholder engagement is a desirable strategy, it is important to note that not all stakeholder participation projects include an adequately diverse range of stakeholders, and many fail to include community members who are most affected by the decisions being made, including members of historically underrepresented and under-resourced communities.

It is important to be clear as early as possible in your process both internally and with community stakeholders about why your organization wants to work with the community. You will have to consider how much capacity and funding is available to support engagement efforts. It is helpful to have well-defined expectations for the intended outcomes of the engagement process. In addition, make sure that your goals are appropriate (Table 2).

TABLE 2. Appropriate vs. Inappropriate Community Engagement Goals

APPROPRIATE GOALS	INAPPROPRIATE GOALS
• Earning and building trust • Developing partnerships with new allies • Soliciting community input • Ensuring a more equitable distribution of conservation benefits • Improving environmental health • Building lasting collaborations to do long-term work • Valuing and learning from all forms of local knowledge	• Using the experience as a photo-op to take a "diverse" picture for an annual report or marketing piece • Manipulating the community into accepting a predetermined plan • Collecting community input and pretending to seriously consider the community perspective, without actually doing so

If a community does not have the opportunity to offer early input into decisions that affect them, they might provide critical feedback too late in the project cycle. Failing to appropriately engage a community from the outset can consume greater resources, harm the organization's relationships and reputation, and jeopardize the efficacy of a project.

Guidelines for Engaging with Communities

One of the most important guidelines for engaging communities, whether in urban or rural settings, is to start as early as you can. Building authentic, reciprocal and trusting relationships takes time. If you can, show up at community meetings and take an interest in what community leaders and groups are doing before you ask them to help you with your own project. Also, seek training around issues of power, privilege, diversity and inclusion. This training will help you build cultural competency, ensure that you adopt a respectful approach to other cultures and groups, and enhance your relationships with diverse groups.

Ideally, an engagement process should be built on common values and a shared vision. It should be a two-way process in which both sides exchange views and information, listen to one another and have their issues addressed. Here are some guidelines for engagement:

- Start the process early enough to scope key issues and influence decisions.
- Distribute relevant information in advance so stakeholders will be able to participate in the process.
- Present requests for feedback in a readily understandable format.
- Get a representative group of stakeholders involved.

- Include stakeholders' relevant perspectives regarding gender, race, age, class, sexual orientation, education or religion (as appropriate).
- Follow best practices when engaging with the community.
- Make sure the process is free from manipulation or coercion.
- Target the outcome of the process at those most likely to be affected.
- Make the process relevant to the stakeholders and the context in which you operate, whether it is local or global.
- Build consensus and support among internal departments to facilitate better engagement.
- Use techniques that are culturally appropriate.
- Use appropriate technology that suits the context, level of education or development of the stakeholders.
- Present information that reflects appropriate timeframes, local realities and languages.
- Keep track of who has been consulted and which key issues were raised.
- Have a system to gather feedback, get clarification on next steps and follow up on issues raised during consultation.
- Make sure that the staff running the process have good facilitation, communication and conflict-resolution skills.
- Establish clear roles for all staff, and indicate the points of contact on both sides.
- Make it clear what the objectives of the project are and which activities will be conducted to achieve them.
- Make commitments that the organization will be able to complete.

Facilitating Community Engagement

When we convene community members and stakeholders, it is important to run the meetings well. Inefficient and ineffective meetings can leave people feeling drained or discouraged, rather than inspired and energized. By contrast, good meetings that are inclusive, welcoming and productive help build social capital and strong, effective and successful projects. Good facilitation not only helps to ensure that a meeting runs smoothly and stays on track and on time, but also helps to build relationships, equalize power dynamics in the group and ensure that all voices are heard. (See tips for meeting facilitation in Table 3.)

Pedals and Petals: A Community Planting and Bike Ride at Ping Tom Park. Chicago, IL.
© Laura Stoecker

If you don't have the skills to create an inclusive meeting, consider working with an outside facilitator

who has experience in supporting equitable community processes. Many urban leads seek the assistance of trained facilitators. CWC offers such services, specifically tailored to urban settings. The Conservation Coaches Network also provides a list of facilitators who are trained in conservation and community or stakeholder engagement, many of whom are also affiliated with conservation organizations, including The Conservancy.

TABLE 3. Key Tips for Running Community Engagement/Stakeholder Meetings

SET THE TONE
• Welcome participants and help introduce stakeholders to each other. • Create group agreements outlining how the group would like to work together. If time is limited, it can be helpful to suggest a group agreement and ask if the group can agree to these basic ground rules for the meeting.
BE INCLUSIVE
• Be aware of who is being paid to come to your meeting and who is spending resources to be there. Power dynamics in the room can affect participation. • Choose a diverse facilitator who reflects the diversity in the room and shows cultural competence. • Make meeting times accessible to community members. Consider timing, child-care needs, breaks and snacks.
HAVE A FLEXIBLE STRUCTURE
• Offer a clear agenda beforehand, display it clearly during the meeting and go over it at the beginning of the meeting. • Be willing to adjust your agenda to respond to the needs of the group. • Have a designated place, sometimes a parking lot or bike rack, where ideas, questions and topics for future meetings can be posted. It is common for important things to surface that are not on the current agenda. Unless they are urgent, it is best to save these for future meetings in order to stay on track in your current meeting. • Similarly, it can be helpful to have a place to track next steps. You can use the four-column method to track WHO is doing the task, WHAT they are doing, WHEN they will have it done, and WHAT PRIORITY the task has (on a scale of 1 to 5).
ENCOURAGE PARTICIPATION
• When facilitating discussions, use a variety of techniques to draw out people with different social and leadership styles. – Use a combination of big group, small group, one-on-one and individual journaling formats for gaining information. – Make space for people who don't speak as often (e.g., "Would anyone who hasn't spoken yet like to add anything?").
AVOID COMMON PITFALLS IN FACILITATION
• Ask for help when you need it (a co-facilitator, a note-taker or someone to help with the room setup). • Set clear boundaries between the role of facilitator and participant. • Don't rush the group. • Leave sufficient time and space for voices and/or emotions that may emerge. • Take adequate breaks or be open to adapting the agenda as needed to accommodate the group's energy and needs.

Community-wide planting event. Louisville, KY. © Devan King/The Nature Conservancy

A healthy community engagement process can help build mutually beneficial relationships with communities that foster positive community impacts and community buy-in. Inclusive processes, reaching out to new partners and developing authentic partnerships are important aspects of this work. For more information and process tips on community engagement, see the Community Engagement section of *Whole Measures for Urban Conservation* found in Appendix A.

In the following story, we see an example of how the Miami urban program worked with new partners to engage with communities around poverty and climate change.

STORY FROM THE FIELD

MIAMI, FL

The Miami Anti-Poverty Summit: Engaging with Community

© Rebecca Peterson

In January 2016, over 100 socioeconomically diverse participants gathered to discuss the impacts of climate change in Miami-Dade County at the Second Anti-Poverty Summit. The Nature Conservancy's urban program in Miami co-organized the event with Catalyst Miami (a community-building organization) and Citizens for a Better South Florida (an urban environmental education organization that works with underserved communities). Participants included representatives from nonprofits, local government and private foundations, as well as the general public. On the second day, approximately 150 volunteers gathered to restore habitat at Virginia Key Beach.

Although this was the second Anti-Poverty Summit in Miami, it was The Conservancy's first time as a convener of this event. The Nature Conservancy had just launched its Miami urban conservation program. Below, Miami Urban Conservation Director Greg Guannel shares his experience as a co-organizer.

Q **How did the partnership with these two groups come about? Was it a new collaboration?**

A Earlier that year, Catalyst had approached The Conservancy to have informal and wide-ranging discussions about climate issues. We both wanted to learn more about community perspectives and how climate change affects vulnerable communities. I am a civil engineer, so I didn't know a lot about ways to engage with communities, and I wanted to partner with an organization that had that capacity. We had already met a few times when I had the opportunity to apply for a Strategic Small Grant from the North America Cities Network to support community engagement. It was an easy next step to talk with Catalyst about what we could do together with $5,000. We brainstormed a lot and realized that we needed a third collaborator to cover both the people and nature aspects of our work. So my contact at Catalyst put me in touch with Citizens for a Better South Florida. Catalyst had done an Anti-Poverty Summit the year before with the Center for American Progress, and we decided to do it again, this time focusing even more on community engagement. We created the idea for this summit together. If any of the three partners wasn't there, it would have come out differently.

Anti-Poverty Summit. Miami, FL. © Roxy Azuaje/Catalyst Miami

Q **What was a powerful moment for you at the summit?**

A We wanted to have a broad and useful discussion with many voices, so The Conservancy was only one of many speakers at the summit. I presented about climate risks in the Miami area and a variety of solutions, including

nature-based solutions. I tried to make my presentation accessible and tell participants "this is what is coming toward you" and "this is how you can prepare and organize in order to protect yourself" from climate impacts. They took it very seriously.

It helped me to hear people's stories; it showed me more of an experiential point of view. I learned a lot about the pain that communities are feeling here in Miami. I had never been involved in these sorts of discussions. People were expressing their reaction to what we were telling them about climate impacts. What I realized was that they were faced with so many problems, on top of climate problems. It gave me a different perspective on my agenda: they had so many problems already that thinking about another layer almost seemed like too much.

People were talking about all sorts of issues: the nuclear power plant and brownfields and air pollution and emergencies. I was struggling because I thought the discussion should be about climate change, and another presenter at the summit (the Executive Director of the Gulf Coast Center for Law & Policy) kept making the point "It's all environment, it's all climate—let them talk about it!" I realized that my desire to talk about climate change was not as important as what they had to say. When it comes to urban work, having flexibility is key. Too much focus on structure and hierarchy doesn't nurture the work. I realized that it's important not to impose nature on people, but to let it work for people. I realized I had to start where they are—that's when I understood what that means—and not impose what I think on them. I respect the participants for trusting us and sharing this personal information and direct feedback. I was glad for that.

Q **What do you think allowed participants to be so open about their experiences?**

A I can think of three factors. First, Catalyst Miami was a trusted organizer. People felt comfortable because they were in the care of an organization whose mission is to help them. Also, a lot of the people in the room knew each other, and we had many small breakout discussions where people had a chance to get to know each other better. So by the end, there was a sense of community because we exchanged so much together. We also tried to make it a neutral place. We presented facts, we didn't tell them what to do, but we opened the discussion to ask, "what do you think of what I just told you?"

Q **What were some of the outcomes of the Summit?**

A I think the Summit was one of the main sparks for a broader, deeper dialogue about climate change and climate adaptation in the community. A year later, climate seems to be the focus of many local community groups.

Also since the Summit, we have been asked to be part of the Miami Foundation's Sea Level Rise Committee. We are bringing the voice of nature to that forum. We were invited to do so by their representative who came to the summit, who is now the Chief Resilience Officer of the City of Miami.

Another excellent outcome is that City Commissioner Russell, who attended the summit, successfully lobbied the City of Miami to add a Community Representative to the City's Sea-Level Rise Commission. This is important because the commission puts together building code recommendations to take into account climate change and now they have a voice representing low-income communities. Catalyst continues to focus on adaptation. I feel like this gathering helped me build strong ties with the participants. A year later, when I run into people who were there, they recognize me, tell me they had a good time, and stop to chat with me. It's opened doors and helped The Conservancy gain trust in the community.

Tips from the Summit for Engaging with Communities

- Share resources with community-based organizations (e.g., by procuring grant money for partner organizations).
- Work with new partners who have community expertise and networks.
- Engage in an environmental issue from a frame that is important to the community.
- Engage partners from the earliest stages of planning the strategy and discuss how to use resources together.
- Share the stage with people holding a diversity of other perspectives.
- Bring The Conservancy's technical knowledge to raise awareness while also respecting other sources of knowledge, including community-based knowledge.

Different Points of Entry: Entering as a Convener, Initiator and Invited Partner

There are many ways to begin the work of conservation in a city. Three common entry points include entering as an invited partner, an initiator and a convener. In many cases, urban conservation practitioners find themselves doing all three at the same time, or find that their roles have changed as a project evolved. All of these roles require a spirit of collaboration and a willingness to work with others.

An **invited partner** often has expertise in an area and is invited to participate and provide input into a process. The Nature Conservancy is often invited to participate in urban conservation processes convened by other organizations because we bring experience or expertise to the table or because we are a stakeholder. For example, a city might have a legal or policy mandate to begin a planning process that finds a role for trees, wetlands and other nature-based solutions. The Conservancy's technical expertise in planning and our experience implementing such projects in other cities make us a valuable participant in the work. Specific structures and suggestions for facilitating decision-making processes around ecosystem services can be found in Conservation for Cities: How to Plan & Build Natural Infrastructure by Rob McDonald.

An **initiator** recognizes that a problem exists and decides to do something about it. The project initiator is the person who begins the project. He or she, along with stakeholders, chooses a project manager and finds funding for the project. Usually the initiator has already invested some resources into the project before it is officially launched. When you initiate a collaborative process, ensure that a broad range of reputable partners is engaged at the outset so that the materials generated have legitimacy, credibility and authority, and so that partners have a sense of buy-in into the design and structure of the project.

The third role is that of the **convener**. The convener is an individual or group responsible for bringing people together to address an issue, problem or opportunity. In the context of a collaborative initiative, representatives from multiple sectors are typically convened for a multi-meeting process, usually on complex issues. A convener or group of conveners working together might invite public officials, business professionals, or leaders of community or nonprofit organizations to participate. Conveners use their influence and authority to call people together to collaborate. Often, conveners help fund the process.

The convener's primary responsibility is to serve as the organizer and administrator of the collaboration, carrying out the preliminary and follow-up tasks that ensure the process proceeds smoothly. In creating a "platform" for the collaboration, a convener's tasks include:

- Clarifying the purpose of the collaborative leadership effort
- Developing a preliminary list of stakeholders and leaders with whom to engage
- Securing high-level stakeholder buy-in as well as intellectual and financial support

Conveners who are instrumental in initiating and administering a collaborative leadership process don't often serve as the manager, project leader or facilitator of the process. They may or may not be participants in the working group. It is the convener's responsibility to secure the services of a skilled facilitator when it seems appropriate to do so.

The roles of the invited partner, initiator and convener are all important in the collaboration required to create robust solutions for urban conservation. The roles you choose in your work will depend on the situation in your city, the relationships you have, and the needs of the moment.

The following two Story from the Field features provide insight into the various roles that city leads in Phoenix and Birmingham played in order to launch their urban conservation programs and start building long-term strategic relationships. These on-the-ground stories represent a small cross-section of how urban conservation strategies can play out through various partnerships and collaborations, and how The Conservancy can play diverse roles in helping to make an impact in the urban conservation landscape.

STORY FROM THE FIELD

PHOENIX, AZ

Entering as an Initiator and Invited Partner: Tackling Heat, Water and Resilience

© Douglas Gritzmacher

When Maggie Messerschmidt began her work at the Arizona Chapter of The Nature Conservancy, there was no prior history of urban conservation work at her chapter. Maggie quickly realized that there were many interrelated efforts under way at the city and regional scale. She started by learning about the landscape and joining several efforts as an invited partner. Soon, she was a key partner and collaborator for many initiatives in the Phoenix area. Here, Maggie talks about how she entered the field of urban conservation in Phoenix.

Q What roles have you played in urban conservation work in Phoenix?

A I've entered the space as an initiator and also an invited partner. As the relationships develop, sometimes the role can shift. Things are moving toward The Conservancy being a convener as well. For example, a local health foundation invited us to propose an action plan on heat. The County Health Department has been observing impacts of the built environment on health but needs to partner with those who are prepared to work in that space. We're ensuring that expertise on heat vulnerability from Arizona State University researchers is integrated into the municipal and neighborhood-level urban environmental planning efforts that we are helping to advance. Under these project plans, we will also be working with the County Health Department and conservation partners. The target audiences are city-level planners and engineers. We want to offer strategies that haven't been used there before.

We are connected to various partners who recognize one another's importance, but they don't always recognize that strategies can be aligned. There are so many platforms; you want to show up at the health communities meetings on climate change and the conservation meetings. The question is, can you be in both places? Can you identify the bridges? Over time, I've sorted out which meetings I need to be at regularly, which ones I can call in to, and which I need to check into every once in a while.

The efforts of academia on urban climate issues are substantial; one of the two long-term urban ecological research stations in the country is here at Arizona State University. They are a fantastic convener working with practitioners and researchers on applied urban climate science. The relationship allows us to go farther with our science and it allows the researchers to get closer to the work on the ground, so together we can have a greater impact.

Q How are you developing your urban conservation strategy?

A I've been trying to align our goals in the urban space with our chapter-wide goals. I've been asking what efforts have groundswell and where we can place resources and emphasis in order to make an impact. For me, those priorities have been low-impact development and green stormwater infrastructure opportunities. Heat island mitigation has been on the radar for a while, and I thought of it as a co-benefit of our water work, but not the primary driver. Then I started to realize that there is so much political will to do something about heat that it might make sense to adopt heat reduction as the primary emphasis—we might actually get more water work done that way!

Q Can you explain how we can address water problems through a heat-island lens?

A The water world is very politically charged, and to make change you have to get through to all the water

players. In contrast, if you start on that strategy in the heat space, it isn't as fettered by politics. People want to reduce heat and are saying, "show us how." I think we can do it in a holistic way with nature-based solutions that also solve water problems. I've been code switching between heat and water. Our angle is water use reduction, but the more I talk to our conservation staff and director, the more I notice they want to tell the story in the way that makes sense to our constituents. Political will can direct the goal.

Q **What will your program's unique contribution be regarding issues of heat, water, green infrastructure and low-impact development?**

A I think we could have a lot of impact by incorporating emerging information and community feedback into urban planning and design processes.

Q **Can you describe a moment when you felt things were coming together in your work?**

A There can be a magic moment with partners when you find other people who share the same vision and you don't have to explain yourself. You are brainstorming and thinking of possibilities, and you are seeing their work and what they're proposing, the opportunities for alignment and pushing the envelope and doing something innovative. I have two partners with whom I have a synergistic relationship like this. We are all passionate about ecohydrology and those parts of the water cycle that are de-emphasized in Arizona. We each see the need to pay more attention to what happens to water when it lands and what we do with it across the landscape. We've had meetings with skeptical partners, and we each have a different way of explaining and advocating for the same type of work, and the partner hears it through three different lenses. One partner is patient and careful, going through the science of it; the other points out co-benefits and can make a strong economic argument; and I tend to focus on the people side, the big-picture pieces and regional scale. Having those partners and knowing that we're allies makes me hopeful that over time we can push the envelope on how we think about urban water in Phoenix.

Charette on Integrating Water in the Urban Environment. Phoenix, AR. © Lerman Montoya

STORY FROM THE FIELD

BIRMINGHAM, AL

Entering as an Initiator: The Conservation Lab Project

© Douglas Gritzmacher

In 2015, Francesca Gross began working to launch an urban conservation program for The Nature Conservancy in Alabama. She talked with community members about their concerns, built relationships with other nonprofit organizations and with Woodlawn High School in Birmingham, and then piloted the Conservation Lab program to transform vacant land into low-maintenance landscapes that are assets to the community. In the following interview, Francesca explains how she initiated her work in Birmingham and describes the Conservation Lab pilot project.

Q **How did you get started in building an urban conservation program in Birmingham?**

A The relationship building was so important. The first year I went to meetings and listened and went to neighborhoods and listened. It's a common practice to help people without asking what they need, which is not the best way. There are 99 neighborhoods in Birmingham, each with a monthly meeting. I go to three of them every month. I talk with community members about their needs in a low-key way. I keep showing up, and people can tell I am invested in learning about their community and being a partner. I also go to a lot of neighborhood cleanups and pick up trash with groups like the Village Creek Society. Once you get disgusting and wet and slimy with people, they start to trust you. People see that I am completely in. Getting involved in the community is part of the listening process. When you're working together with people and talking about their neighborhood, they will tell you about what's going on and what they need.

Q **What has it been like to get to know the communities you are working in?**

A In some of the communities I work with, people are struggling with basic needs. These folks are here for the long run, whereas I can leave at the end of the day. I'm often the only white woman in the room, and it takes folks a while to figure out why I'm there and what I'm doing there. I've been lucky to have a strong relationship with the Executive Director of the Village Creek Society. He has been a bridge between the black community and conservation issues. He goes to places I can't go because of politics and race. We share resources and meet regularly. I have supported him with grant writing, and he has given me great support as well. If I can support him moving forward, it helps us both work with low-income communities. I am lucky to have him as a partner.

Q **What about the Conservation Lab concept? What is it and where did the idea come from?**

A In parts of Birmingham, a third of the community contains unlivable properties that are abandoned or burned out, and they're caving in. The research shows that once 25% of a neighborhood looks vacant or abandoned, crime increases dramatically. I looked at how other cities have dealt with vacant land, and in cities like Youngstown, Ohio, they took the approach that vacant land is a valuable resource, not a wasteland. The idea for the Conservation Lab is to use a small investment of money along with resources from the community, school and students to transform vacant land so that it becomes a low-maintenance landscape that can be an asset to the community. It's not a permanent park. It's a visual cue that something good is happening in the neighborhood. It also becomes a learning area for students to connect with nature, learn about science and become part of improving their community. In 2015, I started developing three demonstration Conservation Labs in Birmingham. Each site demonstrates different landscape concepts and ecosystems, including rain gardens, meadows and forests.

Students transform vacant lot. Birmingham, AL. © Devan King/The Nature Conservancy

Q How did you make it happen?

A I partnered with the Woodlawn Foundation, a nonprofit that owned vacant land; the city school system; and another nonprofit called the Jones Valley Teaching Farm, an educational organization that has successfully partnered with the city schools. Woodlawn Foundation gave us permission to use their property, and the school was very supportive. I also used the Strategic Small Grants program from the North America Cities Network to leverage support for Jones Valley Teaching Farm to build a bioswale to remove pollutants from runoff and to plant fruit trees at Woodlawn High School.

Q What exactly are you doing at the Woodlawn Conservation Lab?

A After we built three demonstration sites in 2015, we planned a weeklong problem-based learning project with 45 ninth graders from the Early College Program at Woodlawn High School. In the fall of 2016, we gained access to a three-quarter-acre plot. The students helped do a site analysis, design the landscape plan and plant the plants under the guidance of a local landscape architect. We are in the second year of the Conservation Lab program now and are teaching students how to measure the biodiversity of invertebrates in the soil of the transformed lots. They will learn about biodiversity and about why nature is good for our health. The teachers work with me on site and reinforce the concepts back in the classroom. I am also working to get professors from local colleges involved.

Q Can you tell me about a moment when you felt like your work was making a difference?

A When we were working on the first Conservation Lab in Woodlawn, we didn't know how the kids would respond to the activity—or what their tolerance for physical work was. There were 12 kids and we were outside digging and planting at the site and it was nearing lunchtime. We had the option of stopping and going back to school for lunch, and we told them that it was time to stop. One of the students turned to me and said, "I'm not done—I still have work to do here. We're having too much fun!" We went as long as we could until the teachers said we had to go back or they would miss the end of lunch and their bus ride home. They were so engaged that they wanted to do the work even at the cost of missing lunch. That was really inspiring.

Understanding the Federal and Local Policy Landscape

Before developing a conservation plan, it is important to have a clear sense of the policy landscape. This is important because policy is a conservation tool, not a support service for a conservation program. Policy engagement provides the ability to leverage the actions that we take in one city, or even one community in a city, to create the conditions for change at a much broader scale. There are two primary considerations related to policy that state and program directors, as well as city leads, should consider in the early stages of developing a program.

First, regulatory or compliance programs at multiple levels may influence the work of urban conservation. These might include federal air-quality standards, state water-quality and local zoning constraints. One way of finding this information is to ask, "Where are our areas of opportunity?" These opportunities come in two main policy types: regulatory and voluntary.

Regulatory policy opportunities arise from mandates and forced compliance (e.g., the U.S. Environmental Protection Act regulates consent orders related to water or air quality). Voluntary policy opportunities can be driven by businesses or community-based organizations where self-interest intersects with a policy change. These voluntary policies can also be catalyzed by a favorable funding environment (e.g., a foundation provides grants, local capital investment is channeled into sustainability or green space). Such pilot projects can serve as catalysts for future policy change, and non-governmental organizations can play a role as the agents of that change (e.g., providing funding for a demonstration project via a grant or private philanthropy). It is also important to consider that actors in the voluntary policy arena are likely members of multiple communities at once.

The second consideration is that the policy context in every landscape is complex and different, and it is important to assess the local policy environment with care. The situational analysis in CbD 2.0 may assist in fully evaluating local policy. Not all the issues will be immediately apparent, and policies change over time.

It is also important to consider time horizons and policy goals. For example, a mayor may have a long-term vision but might still prioritize strategies that demonstrate effectiveness within a particular term related to the election cycle. It is important to keep political regime changes in mind as well, as strategies developed to work with a particular administration may not apply to a new administration.

In the following Story from the Field, we see how the Detroit urban program is effectively working with the city government to shape stormwater policy.

Vacant lot. Detroit, MI. © Michael David–Lorne Jordan

STORY FROM THE FIELD

DETROIT, MI

Partnering with Detroit to Promote Green Infrastructure

© Douglas Gritzmacher

When Valerie Strassberg joined The Conservancy as Urban Conservation Director of the Detroit office, she was tasked with promoting green infrastructure at the municipal level. Like many cities, Detroit has aging water and sewer infrastructure that need to be improved. During heavy rain events, the system can experience combined sewer overflow events in which rainwater combines with raw sewage and overflows into rivers and other water bodies connected to the Great Lakes. Over the past two years, Valerie and her team have been working with the city of Detroit to promote green infrastructure in their stormwater management plans to help alleviate these problems. In this interview, Valerie shares her experience of supporting green infrastructure in city policy and explains how she is affected by the federal policy landscape.

Q How did you develop your relationship with the city of Detroit?

A Before I started, Craig Holland from NatureVest had already done some relationship building. His connection was facilitated by The Conservancy's leadership in Michigan, including our Michigan Field Office board chair, our board members and the strong existing relationships between our State and Associate State Directors and the Detroit city government.

I think getting involved with city government is an art and a science. I had to be very proactive and take the lead in identifying and exploring how we could work together. It took time to get to know the different people and departments involved. At one point, I was meeting almost weekly with people from various departments, and I set up recurring weekly meeting invites with a colleague at the Detroit Water and Sewerage Department so we could develop a more consistent communication pattern and routine. Although there were times when they declined three out of four meetings, it was a way of reminding them that I was interested in collaborating and that we had important things to talk about.

In the beginning, The Conservancy's relationship with the City of Detroit was informal. I listened a lot to what they were saying and reflected back what I heard and thought their needs were. I parlayed these needs into a scope of work. Relationship building at any level requires active listening and repeating back what you understand. We now have multiple team members in the Detroit Cities program serving as technical advisors on different projects and activities.

Q How were you able to invest time in building relationships for this work with the city?

A Part of what made my approach possible was the foresight of the leadership at my state chapter. They were smart enough to ask for and receive five years of funding to cover staff time to invest in creating enabling conditions for green infrastructure in Detroit. We also received a grant from the Pisces Foundation that is funding our work with Detroit Water and Sewerage Department.

Q Have you formalized your relationship with the city of Detroit?

A In the beginning, it didn't seem appropriate to ask to do that. I had to demonstrate to them the value of working with The Conservancy before asking them to undergo the administrative burden of formalizing the relationship. When we started to get more involved in discrete projects, I requested a letter of intent, so that when we were collaborating with other organizations and municipalities, I had a document that substantiated our relationship. Now, two years into the project, we are considering developing a memorandum of understanding.

Q How is your work affected by the policy context?

A The State of Michigan's Department of Environmental Quality administers EPA's National Pollutant Discharge Elimination System (NPDES) program, which issues permits for point source pollution. Getting green stormwater infrastructure projects installed is all about money—if you don't have a policy that's forcing a municipality or individual property owners to manage stormwater, it's difficult to get people to do so voluntarily. While the details of NPDES permit obligations can vary from place to place, they can be a key driver for managing stormwater through the use of green infrastructure.

Right now, at the city level, there is no existing policy that requires stormwater management in Detroit. When we started working with the city, they already had an intention to create the policy, in part to support NPDES compliance. We are helping the city draft their stormwater ordinance for new construction and redevelopment. It's important to note though, unlike other cities such as D.C. and Philadelphia, we are not affected by a consent decree that would add the pressure of a federal court order to reduce combined sewer overflows.

Q What is your role in helping the city of Detroit develop stormwater policy?

A Essentially, we are providing stormwater policy options based on national and local research. These options will help the city develop a Post-Construction Stormwater Ordinance and enforcement program structure that will optimize the number of green stormwater infrastructure projects installed and maintained across the city.

In early 2016, we were asked to come up with alternative compliance mechanisms that address situations where someone can't comply with the ordinance head-on. In these

Flooded church parking lot. Detroit, MI. © Michael David-Lorne Jordan

cases, we want to encourage other options, such as off-site mitigation or payment of a fee. This led to a 15-month study called the Alternative Compliance Options Analysis, which looked at stormwater ordinances and best practices across 20 cities around the country, conducted in-depth interviews with three of them, estimated the number of potential future regulated projects based on a back-casting analysis from 2011 to the present, and interviewed eight developers who work at various scales across Detroit. While we're still working on the exact policy language, it's clear that the desired outcomes rely on developing a strong regulatory program structure that supports and enforces the policy.

Q **Was there an inspiring moment when you felt like the work was really coming together?**

A About five months after I started at the job, I was sitting in a city meeting with multiple departments: Housing and Revitalization, Water and Sewerage, Planning and Development, and the Department of Neighborhoods. We were there because of a $9-million grant from the federal Housing and Urban Development department that the city had received to study areas that were severely flooded in August 2014. I was listening to this conversation about how to start and prioritize, how to get projects on the ground and do planning studies. I realized that the majority of the people sitting there did not have deep knowledge and experience around green infrastructure. I jumped in and offered to organize a tour for the group to see projects in Ann Arbor where I had worked closely with the stormwater management leads at the city and county for more than a decade. Three weeks later, 15 of us, including funders, were in Ann Arbor on a tour that I had organized with some of the leaders and municipal staff who had been working for 20 years to build successful green infrastructure in Ann Arbor. This helped the Detroit leadership see what was possible and ask their peers about how they got it done. I think this was a turning point in our involvement with the city of Detroit, and it helped them see how The Conservancy could be an effective partner in the work. I think we all derived tremendous value from that process.

Green Stormwater Infrastructure. Detroit, MI. © Michael David–Lorne Jordan

Woodlawn High School students design vacant lot. Birmingham, AL. © Francesca Gross/The Nature Conservancy

Steps to Action

Creating a Plan

In the section that follows, we outline nine basic steps that apply to a generic urban conservation situation. We also recommend reviewing **CbD 2.0** and Whole Measures to Urban Conservation (Appendix A) to tailor your approach with the steps best suited to your context.

While Conservancy program directors and new city leads may have a clear idea of the conservation issues of interest in their cities, they may not know how to choose the most feasible approaches and strategies. The suitability of approaches and strategies depend on a number of factors, such as social and cultural acceptance of or desire for conservation practices, biophysical constraints and enabling policy conditions. Identifying the best conservation strategies will mean navigating policy, data, barriers, and people and ultimately, taking some risks. The following steps can help you navigate this terrain. See Appendix B for Advice From the Field featuring candid tips from city leads for new urban conservationists.

Steps for Drafting an Action Plan

1. Gather and consolidate information.
2. Participate in community planning.
3. Define the scope of interest.
4. Articulate benefits to specific people and biodiversity or ecosystem functions.
5. Assess existing visions and metrics.
6. Anticipate and plan for scaling.
7. Balance organizational priorities with community and partner needs and priorities.
8. Balance long-term investment with immediate opportunities.
9. Establish clear decision-making processes.

Step 1: Gather and Consolidate Information.

Gather historical information and learn about the current state of conservation strategies in your city to understand what natural processes and ecosystem services may have changed in response to land-use and land-cover changes in the urban area. Review historic maps and literature on local ecology and hydrology. Research and understand the history of racial and environmental justice challenges and the organizations who have been leading that work. Local universities and community-based organizations may have conducted analyses of environmental and social data and could be eager partners. Assembling and reviewing regional conservation plans and environmental justice documents can also be a good project for a student intern or volunteer and can help ground strategy selection and subsequent planning in knowledge of the local landscape.

Step 2: Participate in Community Planning.

All urban conservation work requires meaningful engagement with communities and partners. Actively participating in community-based planning efforts at this stage can help identify points of entry. Review the community engagement and environmental justice pieces in the Core Practices section of this Guide as a reminder of how and why urban conservation projects may be perceived. Be careful to keep your interactions with the community genuinely present and open-minded, and do not focus on your own goals to the exclusion of supporting the goals of the community.

Examples of opportunities for engagement include open space and planning by conservation alliances, sustainability scenarios or watershed management planning. Look for the strongest advocates in your areas of interest, and try to think outside the box to engage with unusual allies. Be ready to explore the following questions: “Who shares or completes your vision, and who has influence? Which voices are not at the table when plans are being made, and can you invite them?” This requires an investment of time to listen to those people and learn where they are in the process of uptake and buy-in.

To achieve this step, it is important to get involved and stay involved in any existing processes that guide a framework for determining human benefits and ecological priority. One approach is to organize site visits to areas of interest with various stakeholders. Taking time to do field work with like-minded conservation groups, as well as new kinds of partners, can open up dialogue and provide great insight into the gaps in the city’s capacity for conservation implementation. Here are some questions to consider while in the field:

- What are identified ecological needs?
- For whom do we wish to conserve and maintain resilience? Who will benefit? Who will be the steward?
- Is there a community-wide vision or retrofit plan?
- Is a business model available, or can one be scaled to the correct size?
- Is there an economic hook, such as compliance with regulatory requirements or direct return on investment?
- How can we support equitable outcomes for underserved communities?

Community engagement sessions may also be used to identify primary and secondary sources for an evidence base (see section on Our Guiding Frameworks, CbD 2.0) or establish a rationale with community members and experts for selecting sources.

Saul High School Design Workshop. Philadelphia, PA. © Julie Ulrich/ The Nature Conservancy

Step 3: Define the Scope of Interest.

Proactively sit down with community leaders to learn about their primary interests; what they value, need and care about; and how that might influence your choices. The meeting may be guided by knowledge gathered in the investigation phase and should follow the principles in the section of this Field Guide on community engagement. Whole Measures can be used as a framework for these conversations. Information exchange may occur one-on-one, in a small group, community-wide, through in-person meetings or via an online survey. Information gained at this step will help refine situation analyses and results chains in the CbD 2.0 framework. It is important to be open to modifying your strategy based on what you learn in this step. As shown in the Story from the Field that follows, community engagement can teach us that our assumptions may be wrong. In this story, we see how the new urban program in Atlanta conducted a stakeholder analysis to help define their scope of interest.

Step 4: Articulate Benefits to Specific People and Biodiversity or Ecosystem Functions.

Equipped with the information gathered from community engagement, you are ready to define very specific human well-being and ecological benefits and beneficiaries. Whole Measures for Urban Conservation contains resources that can help with this step. At this point, a GIS analysis of vulnerability to the effects of a specific conservation issue can help to focus on the primary beneficiaries of an intervention. It is important to be very clear about the distinction between direct and indirect benefits of an intervention. Sometimes it is helpful to do experiential demonstrations to help people see for themselves how nature-based solutions can work.

STORY FROM THE FIELD

ATLANTA, GA

Conducting a Stakeholder Analysis for a New Urban Program

© Douglas Gritzmacher

"The urban program is enriched by its greater context. Understanding context happens through relationships."

— Myriam Dormer

In 2015, the Georgia Chapter of The Conservancy was planning to launch an urban conservation program in Atlanta. In order to create an urban conservation plan, Urban Conservation Director Myriam Dormer knew it was important to understand the landscape of actors in the area. She conducted a stakeholder analysis to elicit the perspectives of regional leaders about environmental issues facing metropolitan Atlanta. Below are excerpts from her 2015 report, Stakeholder Report Summary, that highlight her findings. The main steps of the process are in bold, with details explaining Myriam's process in each section. Suggestions for making stakeholder processes more equitable and inclusive are included as Equity Tips.

1. **Select Interview Participants.**
   - Collaborate. Myriam assembled an internal team of colleagues who were well acquainted with the metro Atlanta community through their professional networks.
   - Choose leaders who represent different thematic sectors. The internal team sought to include perspectives from leaders engaged in urban planning, air quality, water quality, public health, urban forests, youth engagement, policy and volunteerism.
   - Draw from professional networks or conduct research to identify leaders in the field. The team identified 30 local and high-profile environmental leaders, planners, policy analysts, academics, developers and land managers in Atlanta and selected 11 of them for interviews due to their expertise and the points of view they represented.
   - Request interviews. The Executive Director of the Georgia Chapter sent letters to key stakeholders introducing the effort, requesting interviews and providing the interview questionnaire. Myriam followed up by email to schedule an in-person interview.
   - Reach out to community-based organizations and groups.

   EQUITY TIP: To improve community engagement and representation, be sure to include leaders of underrepresented communities, environmental justice organizers and/or members of community-based organizations in stakeholder interviews. Make sure that you aren't just talking to The Conservancy's "usual partners."

2. **Develop Interview Questions.**
   - Devise questions. The interview guide was modeled after a questionnaire developed by the Los Angeles Chapter of The Nature Conservancy for a similar stakeholder analysis. It was a brief, semi-structured questionnaire with seven questions.
   - Make sure your questions are useful and obtain permission to research if necessary. Myriam made sure the questions were locally relevant and worked with her chapter's Conservation Planner, as well as with a Conservancy Policy Scientist, to test them internally for reliability. She sought formal permission, per organization policy, to conduct research on human subjects via the primary data questionnaire. In general, a human subjects review is good practice, but it is only required if interview findings will be shared outside The Conservancy.

EQUITY TIP: Include questions that address human well-being and the needs of highly impacted communities.

3. **Conduct Interviews.**
   - Be flexible. Myriam used her questions to initiate conversations but was flexible in her interview style. She asked follow-up questions and used other active listening techniques to clarify or to encourage an interviewee to expand on a thought.
   - Focus on quality. Myriam found that the quality of the information gathered in her interviews was more important than the number of interviews conducted.
4. **Analyze the Results.**
   - Examine your data. The data from the interviews were analyzed using inductive coding. Myriam started with specific observations and measures, detected patterns and regularities in interview responses, formulated tentative hypotheses, and finally developed general conclusions or theories based on the data.
   - Share results. Myriam prepared a report detailing the survey responses and her analysis. This report was reviewed and edited by Georgia colleagues who have experience analyzing study findings. The report included graphics, charts, graphs and an appendix. Myriam shared her results with interviewees and other local planners.

   EQUITY TIP: Present results in a manner that will be clear and accessible to a variety of stakeholders.

Installing mailbox pollinator gardens. Atlanta, GA. © Aubrey Walli Williams

Outcomes of the Atlanta Stakeholder Analysis

When the Atlanta team initiated the stakeholder analysis process, they expected the interviews to confirm their assumption that urban reforestation would be the priority area of focus. Instead, interviewees considered the region's most significant environmental challenge to be the unsustainable management of local water resources. Most interview subjects expressed concern that the lack of coordinated efforts could have large-scale impacts on the environment. Respondents stressed the need for a more integrated approach to planning that would convene and coordinate people, organizations and communities representing a diverse set of perspectives and approaches. Other priority environmental concerns identified in the analysis included air quality, high pollen levels, residual heat, and the loss of tree canopy and green space due to poorly planned development and a lack of understanding about environmental issues.

After conducting the stakeholder analysis, Myriam and the Atlanta Chapter launched the Atlanta Metropolitan Conservation Planning process. They built on the relationships developed during the interview process and invited an even broader range of stakeholders to the table, including more leaders from the public health and social sector. The planning process was aimed at addressing the needs identified in the analysis, and equity and impacts on human well-being were central considerations.

As a result of the stakeholder analysis, collaborative planning with partners, a spatial analysis and a socioeconomic baseline assessment, Myriam and her colleagues decided to convene a coalition of partners to develop a comprehensive plan for the South River Watershed. This focus reflects the concerns of a wide range of actors related to environment, equity and well-being in the Atlanta region.

Step 5: Assess Existing Visions and Metrics.

In any urban setting, multiple visions for human well-being and nature conservation likely already exist and include associated metrics. It is thus important to ascertain whether there is a community-wide vision or retrofit plan and how progress is being measured. Similarly, there may be a "slot" in municipal planning for measuring impacts that match the metrics you are defining for your urban conservation program. At this point, it is a good idea to investigate what score cards are being used to assess impact and to consider whether the metrics that you plan to develop align with those currently being considered within the community. If your metrics go beyond current metrics used in the city, consider how you can integrate the new measures of success into planning processes. Sustainability Tools for Assessing and Rating Communities (STAR), for example, offers a free online framework developed for and by cities. This framework can be a starting place to get cities credit for their efforts to manage natural systems, as well as for positively impacting civic participation, local economies and other social benefits. To date, five of The Conservancy's urban network cities (Phoenix, Birmingham, Atlanta, Louisville, and Washington, D.C.) have received STAR ratings. Whole Measures for Urban Conservation also provides methods for introducing qualitative metrics.

Stormwater Bioswale. Seattle, WA. © Paul Joseph Brown

> **In our engagement in Philadelphia we found that appropriate engagement of first responders was key to facilitating the introduction of pervious pavement into city planning. Initially, firefighters were worried that the pervious surface replacing pavement could not bear the weight of the trucks. After a demonstration revealed that not only did the surface bear the weight, it allowed the water from firefighting to drain much more quickly, leaving them with a safer work area, they became enthusiastic supporters.**
>
> — Julie Ulrich

Step 6: Anticipate and Plan for Scaling.

Once potential scopes, visions and metrics for progress and success have been established, it is important to consider what scaling will look like for your program. There may be a business model in your community or in another urban community that could fund and perpetuate your approaches at a larger scale. It may be possible to contribute to existing implementation plans, enabling and enhancing the work of others through targeted science or community engagement. Community-based organizations may benefit from guidance on where and how to implement urban conservation for efficiency, equity and other benefits, and may wish to participate as a working partner in fundraising efforts.

Step 7: Balance Organizational Priorities with Community and Partner Priorities.

Consider the long-term strategic vision and objectives of your broader organization or chapter. What areas can be leveraged for urban conservation? If there is no existing support structure, form an urban advisory team to help you align internally, address specific questions, and offer guidance and direction during the process. In particular, integrate urban conservation with regional and landscape-level planning efforts to achieve connectivity at larger scales. Karen Firehock's Strategic Green Infrastructure Planning: A Multi-Scale Approach offers a six-step process for conservation and mitigation planning, including case studies in which region plans were translated to site plans. Consider where capacity gaps exist, how other organizations are working and where opportunities exist to scale up conservation practices and increase their impact.

Step 8: Balance Long-Term Investment with Immediate Opportunities.

Crafting a scope and plan of work inherently balances an ample vision with reality and feasibility. As you make these choices, it is important to remain in an ongoing conversation with the community about whether the approach is not only desirable but also feasible and viable. For this reason, the steps in our guiding frameworks, CbD 2.0 and Whole Measures to Urban Conservation (WMUC), are both iterative and synergistic. Primary and secondary sources for evidence and community engagement will help you assess the scope and feasibility of your plans. Be sure to return to your community partners to replace assumptions with information, ask any questions that you have, share the information you have learned so far and continue to explore outstanding issues.

In the story that follows, we see how the Maryland/DC Chapter is working to balance immediate opportunities while also building long-term relationships with communities and community-based organizations.

STORY FROM THE FIELD

WASHINGTON, D.C.

Building Relationships and Innovative Stormwater Retention Systems

© Karine Aigner

When Kahlil Kettering joined the Maryland/DC Chapter of The Nature Conservancy as their first Urban Conservation Director, he knew that his central focus would be implementing infrastructure that would be eligible for D.C.'s innovative stormwater retention credit trading system. At the same time, he faced the exciting challenge of building a robust urban program that would work on multiple levels and engage with communities and underserved populations in the area.

Starting an urban conservation program requires people to wear many different hats. Unlike many other new urban conservation directors, Kahlil had a very specific project when he started, related to D.C.'s new system of stormwater retention credits.

When it rains in the greater Washington, D.C., region, pollutants such as oil, heavy metals, pesticides and sediment run off into the Chesapeake Bay. The negative impacts of pollution, flooding and erosion can be minimized when stormwater infiltrates into the ground where it falls, rather than becoming surface runoff. In 2013, the city's Department of Energy and Environment established a novel system of tradable Stormwater Retention Credits. The stormwater retention credit program requires new development projects to retain higher levels of the storm-water runoff generated from their properties. Property owners have the option of installing stormwater retention onsite at new developments or purchasing up to 50% of their stormwater management requirements offsite, in the form of Stormwater Retention Credits.

In sites where stormwater retention is not possible due to limitations of cost, space or design, the credit market enables developers to meet their retention requirements offsite while achieving significant co-benefits for the city. It also allows the District to meet its own green infrastructure goals at a lower cost than from public land and financing alone. The Conservancy's Maryland/DC Chapter; NatureVest, the impact-investing arm of The Conservancy; and their external partner, Encourage Capital, together established an entity called District Stormwater, LLC. This entity will sell stormwater credits to developers generated by the stormwater retention projects that they develop within the boundaries of the city.

Kahlil is in charge of creating the conditions necessary for new stormwater retention infrastructure to be built. He is the "boots on the ground" connection to property owners and the project manager for the construction of stormwater retention systems. He scopes and develops the relationships and agreements necessary to build stormwater retention projects on private land. For example, Kahlil developed a relationship with the Catholic Archdiocese of Washington, D.C., a major landowner in the area, which has agreed to build stormwater retention infrastructure on some of its properties. He also builds relationships with developers to pitch them on buying credits when the stormwater retention projects are built.

The stormwater retention credit program has great potential to harness market mechanisms and nature-based solutions for environmental protection. As significant as this effort is, it is still only a part of the Maryland/DC Chapter's larger integrated strategy for urban conservation. Other efforts include building demonstration green infrastructure in areas with high pedestrian traffic to connect human health and well-being with nature; running a youth advocacy program

Stormwater Management Retrofit at First United Methodist Church. Washington, D.C. © Anacostia Watershed Society

"I was having lunch with the President of the Catholic Cemeteries of the Archdiocese of Washington, D.C., and he shared with me that his family has lived in Maryland along the Potomac River for several generations. He's seen how the river and the Chesapeake Bay have changed. He remembers being able to walk a few yards into the water and see sea grass and catch crabs and fish for dinner. Now when you walk out a few yards, you can't see anything. This has galvanized him to be a part of the solution and inspired him to work with us on a stormwater retention project to reduce the environmental impacts of pollution in the waterways."

— Kahlil Kettering

where high school students learn and practice advocacy skills on Capitol Hill; mapping out the best places to build nature-based solutions to reduce stormwater runoff and nuisance flooding that impacts residents; and building relationships with the community and community-based organizations so that The Conservancy can be an effective team player in the area.

Like many of his colleagues, Kahlil faces the challenge of multiple competing priorities and a finite amount of time. Building relationships in the community takes time, skill, presence and effort. The Maryland/DC Chapter has worked with Center for Whole Communities to help convene and facilitate meetings with community-based organizations like Washington Parks and People and Groundwork DC to create a dialogue and build relationships. Kahlil has also leveraged the North America Cities Strategic Small Grants program to support tree canopy expansion, stormwater retention and environmental education projects done by partner organizations in underserved communities.

Kahlil is hoping to develop a shared vision with community partners that will be the basis for strategic and coordinated action in the future. As he says, "We need to be more like a basketball team and less like a swim team. That way, when the city wants to plant trees, we know what folks want and where the trees can survive and be cared for." The success of the stormwater infrastructure project requires integrating the financial and legal mechanisms with community relationships that will promote the sustainability of the program by ensuring that the offsite mitigation projects have strong impacts and are welcome.

Step 9: Establish Clear Decision-Making Processes.

As organizations move into the implementation phase, it is critical for them to represent their plans clearly in their annual budgets. This documentation helps ensure that urban conservation is listed as a strategic priority for various organizations. It also contributes to monitoring, evaluation and learning, as well as fundraising and marketing. Many urban conservation teams have found that an internal advisory team can help prioritize actions. The North American Cities Network can also help to determine priorities. When working with an external partner, it is helpful to establish a legal Memorandum of Understanding or a contract.

Being transparent with community partners up front about project decision-making can help build trust and clarity. Engaging partners to contribute to that process at appropriate levels, based on viability and community interest, is a best practice for community engagement. More information about this approach may be found in the Whole Measures for Urban Conservation guidance in Appendix A.

Identifying strategic conservation strategies is a multi-step process that requires attention and collaboration. This process involves data gathering, community planning, defining a scope of interest, articulating benefits, assessing existing visions and metrics, planning for scaling, and balancing priorities and long-term vs. immediate opportunities.

After defining your program's conservation goals, it is important to develop a monitoring, evaluation and learning plan that will help to assess whether your work has been effective and allow for adaptive learning and management. The next section provides a general overview of the monitoring, evaluation and learning process.

Downtown waterfront. Louisville, KY. © Devan King/The Nature Conservancy

LEAF interns assessing tree health. New York City, NY. © Karine Aigner

Steps to Understanding

Monitoring, Evaluation and Learning

Urban conservation work is, by nature, highly integrated with human communities. The range and complexity of the ecological and social impacts of urban conservation can be challenging to measure and evaluate, and it is difficult to attribute them to the actions of an individual or institutional stakeholder. Urban conservation requires us to pay immediate attention to human well-being and community impacts and to use diverse methods to capture and describe them.

In this section, we highlight the importance of monitoring, evaluation and learning (ME&L) and provide some guidelines and resources for creating useful and effective ME&L strategies for urban conservation efforts. This section was not intended to be prescriptive, but to highlight a range of methods that can be used to capture information required for ME&L, depending on the context of our work. This range of options can capture a breadth of conservation, human well-being and equity-related impacts.

An ME&L program is the part of the adaptive management process that helps us understand whether our program achieved what it planned to do, whether it turned out as expected, and why or why not this was the case. Monitoring is the repeated measurement of a value that we expect to be affected by our work. Evaluation is the process of analyzing the information gained from monitoring in the context of our work plan, goals and broader concerns. Learning is the application of the results to improve our program going forward. Thoughtful ME&L provides transparency and accountability as well as a space to acknowledge mistakes, make adjustments and renew commitments.

Steps for Monitoring, Evaluation and Learning

1. Define your ME&L audience.
2. Identify the urban conservation scope and context.
3. Determine the appropriate level of stakeholder engagement.
4. Articulate goals and indicators.
5. Establish a baseline.
6. Integrate ME&L into programmatic work plans and budget.
7. Plan for collective learning and sharing.

Step 1: Define Your ME&L Audience.

The audience is crucial for shaping the kinds of questions and thus the type of information gleaned by ME&L programs. Donors and regulatory agencies often have a very specific set of information needs. Different members of a community may be interested in how a variety of aspects of people and nature react (or do not react) to the work that The Conservancy does. The process of selecting what to monitor, deciding how it will be evaluated and anticipating what we will learn from ME&L needs to be as deliberately inclusive as any other part of the planning process. When we ask community members what they want to learn, they may interpret it as an implicit promise to incorporate these values into the actual work plan, a commitment to measuring these values and/or a guarantee to take action if not everyone is satisfied with the outcome. For this reason, ME&L needs to be an integral part of crafting the strategic plan rather than an isolated process.

Step 2: Identify the Urban Conservation Scope and Context.

The process used and decisions made when developing a plan for urban conservation work both influence and can be informed by ME&L. Both the situation analysis and theory of change offer opportunities to foster a participatory process and recognize how a program's values have been influenced.

Evaluation needs will vary greatly depending on the individual goals, characteristics and constraints of each project. Both of our guiding frameworks, CbD 2.0 and Whole Measures for Urban Conservation (WMUC), offer complementary and synergistic guidance for this step. Urban conservation projects must include human well-being and equity-related impacts in addition to nature conservation, and evaluation of impact in these areas should be included in your evaluation plan. You may need to measure a few specific indicators to meet funder or regulatory criteria, as well as evaluating other cross-cutting indicators, such as community engagement or economic impacts on the community.

Step 3: Determine the Appropriate Level of Stakeholder Engagement.

Often the project manager or leader decides what will be evaluated and how. However, the project manager may not have a full understanding of the local conditions or may have too narrow a focus on organizational or funding-related criteria. These criteria are important, but the true potential of the ME&L program might not be realized if the work lacks a community-based perspective. A better approach is to use participatory methods to include stakeholders and community members in defining the problem and defining priority indicators, as in WMUC. This approach helps emphasize goals that are collectively defined and therefore likely to have more co-benefits for the community. Community engagement in evaluation work is a best practice, but it can be very time- and labor-consuming. It is important to consider the time and resources that are available to support your plan and to assess the availability and willingness of your internal team, as well as your community partners, to engage.

In addition, it is important to consider the perceptions of the people from whom you are collecting information. For example, conducting a focus group to hear the opinions of community representatives about our work and priorities may imply to some participants that their recommendations will be followed or that their community has been selected to benefit from the work. It is important to be transparent about your intentions when gathering data and to communicate to participants how the information will be used.

Step 4: Articulate Goals and Indicators.

There are several approaches to identifying appropriate indicators for an ME&L program in urban conservation. Here, we highlight one approach that fosters meaningful community engagement. Several alternatives are articulated in the Conservation Measures Partnership's Open Standards for the Practice of Conservation. We have adapted this system of criteria, expressed by the acronym SPICED, from the Equal Access Participatory Monitoring and Evaluation toolkit.

- Subjective: Indicators are identified from informants who have special insight into the urban conservation context. For example, if local families customarily harvest walnuts from public spaces, they might value walnut tree growth as an indicator.
- Participatory: Intended outcomes and indicators are co-developed by those most affected by the project, often community stakeholders and representatives. For example, you might assume that a community wants the most efficient stormwater runoff system, but actually stakeholders can tolerate limited flooding if it is associated with more attractive, park-like green/gray infrastructure.
- Interpreted and communicable: Intended outcomes and indicators are stated in terms that are relevant and accessible to stakeholders.
- Cross-checked and compared: Information resonates with other research, methods or informants. For example, if the loudest voice in a focus group advocated for "number of culverts removed" as the most important indicator of altering impervious surface, this criterion would be checked against the priorities of other stakeholders and opinions of technical experts.
- Empowering: Participating in the process gives stakeholders increased agency over their situation because they have more information about the urban conservation project and are involved in the process.
- Diverse and disaggregated: Intended outcomes and indicators are sought from people who identify with different groups. For example, when doing Whole Measures for a specific project, it is important to speak with stakeholders from varied racial, ethnic and class backgrounds who might have different perspectives.

We encourage program directors and new city leads to revisit the section on Our Guiding Frameworks and the Community Engagement section under Core Practices in this Guide, as both CbD 2.0 and Whole Measures for Urban Conservation strive to achieve this level of community engagement through all steps.

Step 5: Establish a Baseline.

A baseline is an important component of demonstrating that our work contributed to or led directly to the change that we observe. Establishing baselines is an accepted scientific and evaluation practice that also expresses what we value most from this program of work and how we will allocate monitoring and evaluation resources. An important first step when creating a baseline is to determine the intensity and level of rigor of a monitoring and evaluation plan.

In general, if substantial resources are available for monitoring and evaluation activities, then higher levels of rigor are possible. Yet in reality, it is not always necessary to adopt the most scientifically rigorous approach, and there are constraints that limit the design and analysis of qualitative or quantitative data. Often, tried and tested conservation strategies will have low enough levels of uncertainty in program implementation and impacts that there is no need to conduct more rigorous evaluation. High-cost, high-impact, high-risk and broad-scope strategies require more rigorous monitoring and measures. For additional guidance on this step, please see The Conservancy's working paper on Improving Conservation Practice by Investing in Monitoring Strategy Effectiveness. The information needs of stakeholders, community members and funders are a key factor for determining how much to invest in monitoring and evaluation. Urban conservation may present a new context for otherwise established conservation strategies, which may increase the need to prove the case through more rigorous monitoring designs.

Step 6: Integrate ME&L into Programmatic Work Plans and Budget.

Reaping the benefits of a ME&L program requires sustained funding and other resources over the lifetime of the project. In order to justify such an investment, it is helpful to consider the role that the data will play in the program, such as

- providing an evidence base for future urban conservation
- influencing key actors and decision-makers, or
- guiding adaptive management decisions.

Sometimes, a partner is already collecting the data for a ME&L program. In order to assess whether this is a reliable data source in the long term, it is helpful to consider whether

- the data source matches the information need
- the data are proprietary, or
- the data will be collected over a time period that matches the ME&L need.

Valid data sources can be quantitative or qualitative. They may include academic, institutional or traditional and cultural knowledge. The answers to the above questions may differ for each data source. For example, some quantitative ecological data may be the legal property of a developer, quantitative health data may be restricted to protect patients' privacy, and some traditional knowledge may have special protections. Data-sharing agreements can be set up in many cases; it is best to talk and think through these arrangements before locking in on them for the ME&L program.

In the following story, we see how The Conservancy approached ME&L in their restoration work in the Jamaica Bay Wildlife Refuge.

STORY FROM THE FIELD

NEW YORK, NY

Monitoring, Evaluation and Learning in the Jamaica Bay Wildlife Refuge

© Jonathan Grassi

In early 2014, The Nature Conservancy's New York City Program received a donation to help restore lands in Jamaica Bay, an 18,000-acre wetland estuary that provides critical habitat for wildlife and educational and recreational opportunities for New Yorkers. Emily Nobel Maxwell, New York City Program Director, decided with the team to focus part of their efforts on the Jamaica Bay Wildlife Refuge, part of the National Park Service's Gateway National Recreation Area. They have since planted 10,000 trees in the refuge as part of a restoration project at the Refuge.

Jamaica Bay Wildlife Refuge, which is composed of intertidal salt marshes, maritime forests and open water, serves as one of the most significant bird sanctuaries in the northeastern United States. The refuge is located within the boundaries of New York City, where it is accessible to 8 million people via public transportation, offers city residents recreational opportunities and is a prime location for birders. However, significant ecological challenges at the site have damaged the quality of wildlife habitat and diminished the visitor experience. An overabundance of invasive vines and common reeds have reduced the quality of the plant communities. Many species of canopy trees in the maritime forests were flooded by saltwater during Hurricane Sandy and died because they were not salt-tolerant.

In response to these challenges, The Conservancy, in partnership with the National Park Service and funded by the Jamaica Bay–Rockaway Parks Conservancy, developed a project to enhance habitat quality for migratory birds, as well as improving resilience to future sea-level rise, coastal flooding and saltwater intrusion. The partners have since cleared seven acres of invasive species, and 425 volunteers have planted 10,000 native trees and shrubs to create a healthier and more resilient environment for residents of all ages to enjoy. The goals for this project included site restoration through volunteerism, youth engagement and enhancement of the visitor experience.

To manage the restoration project, the New York City Program is following these steps for Monitoring, Evaluation and Learning:

1. **Define the ME&L audience.** First, the team selected the audience for which they would assess the ecological impacts of the restoration work. The primary audience was their partner, the National Park Service. Later audiences will include other managers of coastal parkland and maritime forests in the city and beyond, including NYC Parks, who have been consulted throughout the process.

2. **Identify the scope and context of urban conservation.** The Conservancy and the National Park Service collectively identified the following objectives for their restoration work in Jamaica Bay, targeting about 14 acres of the refuge:
   - Remove invasive species.
   - Plant salt- and flood-tolerant native vegetation in the restored areas.
   - Create viewsheds of West Pond and New York City from the upland trails.
   - Improve the quality and structure of habitat for migratory and breeding songbirds.
   - Improve and update interpretive signage describing the habitat and ongoing restoration efforts.

3. **Determine the appropriate level of stakeholder engagement.** Stakeholders should be directly involved in choosing the monitoring approach. In this case, stakeholders were a small group of individuals and organizations that had previous experience with ecological monitoring and previous experience with the site. New York City Audubon helped to determine and execute the bird monitoring, and butterfly monitoring was done according to the North American Butterfly Association protocol by Conservancy staff and interns, as well as NPS staff. External experts from the National Park Service, Natural Areas Conservancy, and U.S. Forest Service also provided input on tree health monitoring.

"While monitoring and evaluation may not seem like the most exciting parts of a project, because we measure what we value they are crucial components that should be incorporated from the outset and help demonstrate the true purpose of the work. A huge challenge in this realm is that it can be resource intensive, and thus working with partners to identify the most important traits to monitor is crucial. Narrative and anecdotal reporting, alongside numbers, can paint a livelier and more compelling picture as well, so evaluation can be thought of broadly in order to develop a range of ways to understand and describe the impacts of the projects. Creative approaches to evaluation further mobilize and support the engagement of all project partners."

— Emily Maxwell

Jamaica Bay Wildlife Refuge. New York City, NY. © Kevin Arnold

4. **Articulate goals and indicators.**

   A. **Vegetation**

      GOAL: Document the change in the structure and composition of the site pre- and post-restoration.

      GOAL: Track whether invasive species are being controlled and when further control efforts are needed.

      INDICATOR: Species composition (numbers and percentages)

   B. **Birds**

      GOAL: Demonstrate improved songbird habitat in the project area.

      INDICATOR: Number of bird species and individual counts

   C. **Soil**

      GOAL: Document changes in the soil chemistry and texture from the restoration project.

      INDICATOR: Organic matter and salinity

   D. **Butterflies**

      GOAL: Demonstrate benefits to pollinator communities from the restoration project.

      INDICATOR: Number of butterfly species and individual counts

   E. **Visitor Experience**

      Because no specific impacts of an improved visitor experience were defined, there was no monitoring plan for this program objective. Articulating measurable goals at the beginning of the effort would have improved this aspect of the project.

5. **Establish a baseline.** In 2015, surveys were conducted to establish an ecological baseline within the study area. This work included a vegetation survey documenting existing vegetative cover, a soil analysis, and bird and butterfly counts. The evaluations of forest health, species composition, soil properties and wildlife biodiversity provided the basis for restoration efforts and a point of comparison to measure the effectiveness of restoration efforts at the site. Alumni from the Leaders in Environmental Action for the Future (LEAF) internship program were hired to conduct vegetation surveys. Engaging LEAF alumni was a co-benefit of the project and is a good example of how project designers can find creative ways to create additional value beyond the primary purposes of an initiative.

6. **Integrate ME&L into programmatic work plans and budget.** Ongoing Monitoring, Evaluation and Learning was embedded at all project stages, and the related activities were included in the budget from the start of the project. Specific attention was paid to capturing data at the beginning, middle and end of the project. The ME&L process was also utilized as a tool for youth engagement, development and employment, all of which were co-benefits not subject to individual evaluation. For the first summer of monitoring after the first planting, a LEAF alumni crew was hired and trained in monitoring protocols. The NYC Program also contracted with NYC Audubon, who had core competencies outside The Conservancy's capacity, to conduct a bird count.

7. **Plan for collective learning and sharing.** Monitoring results are being shared on an ongoing basis with project partners. This effort has supported the adaptive management process, including changing the original project scope, specifically the number and size of trees planted, to increase the likelihood of efficacy. At the end of the project, a report will be shared with any and all interested managers of coastal parkland in the city and beyond.

Over the course of the project, the Monitoring, Evaluation & Learning process will help The Conservancy, the National Park Service and their stakeholders know how effective their restoration efforts have been in improving bird habitat and the ecological resilience of the site. This information will also feed into the adaptive management of the site. Through plantings and monitoring, the land managers at Jamaica Bay Wildlife Refuge are learning how to stabilize a coastal maritime forest, change a plant palette to survive a major storm event and manage increased regular saltwater intrusion. A lesson learned from this project was that without including specific indicators for 'improved visitor experience', it wasn't possible to measure if impact had been made in this area.

The engagement of the LEAF alumni brought some project elements, including employment and youth development, that added not only monitoring capacity to the team, but also vibrancy and enthusiasm for the effort. Having solid monitoring protocols that can be executed by young people and volunteers increases opportunities for engaging diverse stakeholders and expands the project impact.

How to Handle Monitoring That Involves Information about People

The U.S. Department of Health and Human Services maintains strict guidelines about collecting, maintaining and sharing information about people. Although these guidelines were created with a focus on medical research, they still apply to the work of conservation organizations, from asking people about their perceptions and preferences regarding conservation work to assessing improvements in health, safety and other factors. The basic intentions of these guidelines were to ensure that people's privacy is protected, no harm is done, participants feel respected, study participants have been selected in a reasonable way, they understand the implications of participating, no one feels pressured to participate and participants understand that they can withdraw from the study at any time.

Any study conducted by staff, partners or contractors of The Nature Conservancy is required to adhere to our **Standard Operating Procedure on Research Involving Human Subjects**. Work conducted through universities is typically reviewed by their institutional review board to ensure compliance, and the program manager is responsible for ensuring that these steps are followed.

Step 7: Plan for Collective Learning and Sharing.

Bird counters in Jamaica Bay National Wildlife Refuge. New York City, NY.
© Kevin Arnold

An important feature of an equity-oriented approach to ME&L is that we are not just extracting information from partners/stakeholders and communities; we are learning from them and sharing with them as well. Because some of the data and knowledge are sourced from the community, it is important to consider how information can be returned in a similar format. Some of the feedback from these partnerships should contribute to organizational learning and change the way that we approach the work.

An ME&L plan is integral to the success of an urban conservation initiative. In the urban context, it is important to start thinking about this early in the planning process and to consider how the ME&L program can address human well-being. Designing a participatory ME&L program has many benefits, so it is important to engage stakeholders as early as possible.

The next section will discuss how a plan of action and ME&L can be sustained through marketing and fundraising.

Community planting day. Atlanta, GA. © Aaron Coury

Sustaining Our Work in Cities

Fundraising, Marketing and Communications

Every urban conservation program has a different plan for marketing and fundraising. When you are developing a plan, it is best to create an interactive process with a leadership team to solicit feedback. After the plan has been approved by the local leadership team, it also has to align with The Conservancy's North America regional and global leadership. This alignment is important for cross-checking and collaboration. In addition, some regional and global functions have specialists who can provide technical assistance, advice and, in some cases, services to urban conservation

programs. Here we focus on two such services intended to help sustain conservation in cities: fundraising, and marketing and communications.

Many of our partners in urban conservation are community-based organizations with limited financial resources. For this reason, we need to approach fundraising and marketing and communications with a keen awareness of power and privilege dynamics, to avoid the risk of exacerbating inequity. It is also critical to share decision-making power, media attention, credit and resources with community-based partners as much as possible. When a large organization is writing grants to partner with community-based groups, the smaller groups should be included in the process as early as possible. Budget allocations should reflect the community partner's time, including direct payments as appropriate. Simultaneously, we need to invest in building and maintaining long-term relationships with community-based organizations and environmental justice groups. Here we describe specific steps that can lead to meaningful engagement and sustainable projects.

Fundraising

At the outset, we should approach fundraising for urban conservation with sensitivity by ensuring that we are not taking resources from existing community-based and other human well-being–oriented organizations. This will maximize our ability to inform decisions about program development and may go a long way toward creating the conditions for collaboration and partnership in urban conservation. As it is easy to inadvertently damage relationships with community-based organizations, any new urban conservation program should ask at the outset how we can use our fundraising reach to leverage resources for local partners as we develop our programs. For example, we can introduce funders who are interested in local aspects of this work to our smaller, community-based partners; the improved knowledge base and collaboration are beneficial to all participants. Re-granting is also an important mechanism for distributing funds to key local players, fulfilling our fundraising goals to support community-based components of our projects.

Budgeting staff time is an important part of setting up a new urban program. First, dedicated staff are needed to oversee the program, including an urban conservation associate or director to manage operations. The need for additional staff will depend on the type of urban program being created. If the new director is responsible for scoping development of the program, no other staff may be needed initially, but time from other staff should be allocated so that they can provide input as advisers. People who contribute to the program may include community organizers, scientists, community members with local knowledge, government specialists, conservation practitioners, marketers and fundraisers. Some programs include existing staff, such as youth and volunteer engagement and urban nature preserve managers, under the umbrella of a new urban program.

An initial budget should include some funds (e.g., $5,000 to $20,000) for emerging opportunities. A new urban program will inevitably discover meaningful opportunities to make a crucial contribution or achieve an early success, building confidence and credibility for the program. Bringing some funding to an initial partnership can help allay initial concerns that the new, larger organization will compete for funds and may open doors to creating much more meaningful conservation projects on the ground.

Budgeting to contract with community-based organizations is another important opportunity. It is important to avoid being overly transactional in relationships with community members and community groups. There is a fine line between paying an organization to do work in the context of a partnership and paying to have one's name attached to someone else's work. Urban conservation programs that develop meaningful relationships with communities and their organizations should ensure that these partnerships reinforce equitable power dynamics. We need to provide resources to any community group that is involved. When stakeholders contribute time to planning and strategic thinking, whether through Whole Measures or another planning/evaluation process, the budget should include funds to pay them for their time.

Other aspects of budgets for early-stage urban programs may be relatively minor and may include funding for some minor supplies, training and local travel. It is also worthwhile to budget for a newly hired city lead to visit another Conservancy urban program for on-site learning and relationship building with experienced urban conservation staff.

Setting work priorities

As fundraising gets under way, it is critical to align monetary goals and expectations with capacity across the different organizational levels. Strong relationships across different parts of the organization will increase the chance of success. As we develop funding strategies and campaigns, it is especially important to maintain focus on our long-term conservation goals. Urban conservation is a newer area of work, so it may be especially susceptible to pressure to undertake specific projects that could be very fundable and perhaps attract significant attention but which detract from our capacity to achieve more strategic outcomes.

Communicating local successes and challenges is key to enabling the funding of urban programs at higher organizational levels. Big, splashy impacts are always valuable, but funders and fundraisers also want to know about the subtler, incremental impacts that contribute to long-term local conservation in cities. This will be important to The Conservancy overall as we document why we are undertaking this new aspect of our mission.

Utilizing private funding sources

Urban conservation enables some specific fundraising opportunities, both to reach new funders and to form deeper connections with existing funders in urban areas. New funders can include the sector of donors and other funders who focus their giving on improving human well-being. As urban conservation seeks to improve conditions for people by deploying nature conservation strategies in urban environments, our urban programs can provide the first opportunity for a conservation organization to connect with these funders.

For example, the present partnership between The Nature Conservancy and Center for Whole Communities to create and resource the North America Cities Network was made possible by the generous contributions of The JPB Foundation. The foundation was explicitly motivated to help The Conservancy expand our thinking about how our conservation mission could improve the lives of people in low-income urban neighborhoods. We were fortunate to attract the foundation's interest in partnering with us to establish and develop our urban programs as we developed the case that we could improve human welfare through conservation.

Some individual donors and foundations, particularly corporations, are focused on or even bound to fund only local projects. As cities are often centers of wealth in addition to being population centers, many existing conservation donors and other funders already live in urban locations. These funders are likely to take an interest in nearby projects, even if they are already funding faraway projects. When urban programs have a volunteer component, corporate workdays for employees can be another way to build relationships with an entity that may develop into a funding relationship.

Utilizing government funding

It is unlikely for public funding to be used to initiate an urban conservation program, but it can be a key funding source for projects in an existing program. Many agencies at the federal, state and local levels provide grants for various aspects of urban conservation. The opportunities vary with location and program focus. In most locations in the United States, public grants can be accessed to support the following types of projects:

- Nature-based solutions, especially to reduce stormwater impacts, from the U.S. EPA, related state environmental agencies and, potentially, local stormwater agencies.

- Urban tree planting, from the U.S. Forest Service and state departments of natural resources, and through associated organizations like the National Forest Foundation.
- Environmental justice, from the U.S. EPA.
- Restoration of urban natural areas and creation of habitat for urban wildlife (e.g., plantings for migratory birds or butterflies), from the U.S. Fish and Wildlife Service and state departments of natural resources and through associated organizations such as the National Fish and Wildlife Foundation.
- Coastal habitat restoration, from the U.S. National Oceanic and Atmospheric Administration and state coastal zone management programs.
- Conservation education and outreach, potentially from any of the above sources, which frequently have goals related to community engagement.

Within The Conservancy, program staff rather than development staff typically write government grant proposals. Pursuing these grants requires close coordination between these departments for planning and budgeting.

Government granting programs frequently encourage partnerships. Pursuing these grants through a partnership can be an excellent way to bring funding to community-based organizations and other local nonprofits, which often lack the administrative resources required to manage government grants.

Coalition building

Coalitions and meaningful partnerships are as essential in fundraising as in all other aspects of urban conservation. Approaching funding collaboratively is one of the key ways to "make the pie bigger" for everyone involved in an urban conservation effort. Please refer to the section on Community Engagement (under Core Practices) to review meaningful engagement practices. This type of funding relationship is neither new nor unique to the urban conservation situation, so it builds on our history and core strengths as a convener and collaborator.

Urban conservation programs operate in a more complex landscape with more potential partners than do traditional wilderness conservation projects. Many of the principles that apply to funding new projects in other landscapes are applicable here. Our standards should include practices such as openness about our goals, willingness to modify our proposals based on local knowledge and partner needs, developing shared proposals and agreements collaboratively and making them binding, and helping smaller partners develop new funding relationships. Additional principles unique to the urban environment may well emerge as these programs develop.

Marketing and Communications

Marketing and communications are an important strategic component of any new urban conservation program. Developing a marketing plan for your program raises awareness and increases the visibility of your work, helping to meet your objectives. It is also a crucial part of engaging effectively with stakeholders and partners and demonstrating the success of work in cities. It is critical not to use community members to advance your marketing purposes in a transactional manner that focuses on the desired result without ensuring that the process is respectful. Briefing marketing and communications team members on cultural sensitivity can help them to work with community members in a respectful manner. Good community engagement for marketing and communications requires commitment and needs to be incorporated into planning so that the needed time, resources and buy-in are available.

Nature Works Everywhere school garden. Washington, DC. © People's Television

Determining objectives and audiences

Establishing tangible marketing objectives is the first step in developing an effective communication strategy for urban conservation programs. This step helps identify needs, set priorities, align resources, secure commitment and track accomplishments. Such objectives should be clear and specific. Marketers often apply the SMART (specific, measurable, achievable, realistic and time-bound) criteria for developing objectives.

The next step in developing the communications plan is to identify target audiences. Key stakeholders and community members are a great place to start. To prioritize the remaining stakeholders, map them by rank according to criteria chosen by the city program. It is easier to do this analysis with two criteria, so you can highlight the differences between audiences. Working with internal stakeholders is a crucial part of program success. This requires leveraging internal resources to build a new skillset at the organization. Developing a new skillset isn't effective if it only exists among a few dozen people actively engaged in urban work; it needs to tie in other complementary conservation programs (e.g., water, climate, policy). It isn't possible to work at a meaningful scale without institutional buy-in and relationships with fundraising and marketing staff. All of these factors are vital parts of program sustainability.

One important piece of advice is to avoid targeting the general public. Targeting such a broad audience is equivalent to failing to target anyone. It is impossible to find generic messages that resonate with everyone. The result will be watered-down messages that are ineffective and that do not stand out in today's crowded marketplace of ideas. You must target a specific, definable audience and tailor the message to this group.

Once state chapters have clearly identified marketing objectives, target audiences and messaging, city leads can collaborate with marketing teams to identify the best messages, tools and outlets to reach those audiences. To reach external audiences, marketing teams use a wide range of tactics:

- Media coverage in newspapers, magazines and websites raises awareness among wider audiences, drives traffic to program websites and can increase credibility.
- Digital media, such as a website, Facebook and Twitter, keeps audiences informed and serves as a platform for calls to action.
- Printed materials, like fact sheets, brochures and direct mail, are effective tools for reaching members and donors and can be repurposed for distribution at events and meetings.
- Videos, photography and infographics and other visual information or data present complex information quickly and clearly to a wide range of audiences and are valuable assets for media and partnership engagement.
- Signage, banners, exhibits and collateral materials are also helpful tools that can be used to increase visibility for city programs at events.

Once marketing objectives, strategies and tactics have been clearly identified, the next step is to assess available resources and staff capacity. Often, marketing time and expenses are not included in program planning and budgets. Marketing tools like printed brochures, photography and graphic design for new programs are usually additional expenses that can burden already-approved state marketing budgets. It is also important to allot funding to communication support for writing content, media relations and fundraising, which can be time-intensive tasks for new programs. Consider working with marketing teams to develop initial communication budgets. Depending on the tactics, including as little as $5,000–$10,000 in a grant proposal budget can ensure that marketing is able to execute marketing objectives and allows advance planning for staff time.

Developing messages

Messaging narratives for new urban conservation programs provide a starting point. They are not necessarily intended to be included word-for-word in communications materials. Instead, they give helpful guidance to communications (and fundraising) staff without limiting their ability to be creative and nimble in their outreach. Certain phrases, especially the ones most relevant to a particular program, are repeated often and become a critical part of that program's messaging. For our work in cities, phrases like "nature-based solutions" have tested much better for public outreach than more traditional terms like "green or natural infrastructure."

In addition, staff can incorporate the regional language that has proved to be most effective for their individual key stakeholders. When developing messages for a new city program, it is important to address three questions in the main narrative:

- Why is urban conservation important now?
- What is the goal of urban conservation?
- How does the program intend to reach its goals?

Supporting messages, or sub-narratives, are intended to focus more tightly on the aspects of urban conservation that are relevant to the specific program. Supporting messages provide details about specific program work, highlighting impacts, scale and results, as well as covering any focal objectives such as clean water and air, cooler cities and safer coasts.

In the story below, we learn how the Cities Network developed a community-centered strategy for their Video Story Series.

STORY FROM THE FIELD

NORTH AMERICA CITIES NETWORK

Making a Video Story Series

© Anne Casale

The North America Cities Network created the Video Story Series to highlight the work taking place on the ground across the network. The three-minute shorts are intended to span a diversity of projects and partners and are told from the community's perspective. The first video of the series, Planting Success in Louisville, was released in 2015. Based in Louisville, Kentucky, the story is told from the perspective of local councilwoman Cheri Bryant Hamilton and highlights the community's need for more trees to help reduce the urban heat island effect and air pollution in the city. The video tells the story of The Conservancy's role and presence as a new local stakeholder, working with partners to restore neighborhood trees and leading efforts to study the long-term impacts of urban forests on air quality and human health.

Emy Rodriguez, North America Cities Associate Manager, was the creative lead on the project. Emy drew from her background as a writer and producer of short videos, as well as her experience and connections in documentary filmmaking, to bring the project together in collaboration with Cities Marketing Manager Rocio Johnson and Reel Thing Productions. The video has received over 6,000 views, and after it was screened at a private foundation board meeting, it inspired a $2 million gift to support tree planting efforts. In this interview, Emy shares how and why the video was produced and why the team chose the approach they did.

Q **Can you talk about the original idea to do a story series for the North America Cities Network?**

A The architects of The JPB Foundation grant had the foresight to set aside funding to support storytelling as an important component of the conservation work, so we knew we had funding to create at least one North America Cities video. The idea for the Story Series itself came from our desire to elevate empowering community-centered stories that would reflect the overall intentionality of the Cities Network, as well as the diversity of places and programmatic areas of work that we were engaged with.

I felt strongly that the best way to represent our work in cities was to hear directly from the communities it was affecting—show up and allow sufficient time to listen and capture the struggles, hopes and dreams of people living in cities. I wanted to break from the mold and hear directly from folks about their personal experience with urban conservation and what it has meant for them and their community, so their stories could inspire and motivate others. These three-minute shorts are meant to serve as a jumping-off point to get people talking and asking the detailed questions about how they, too, can get involved with the work.

Q **What new approach did you use to communicate about work on the ground in the Louisville video?**

A From my work in the film industry, I have seen the power of film to elevate stories. I've also learned about what gets through to people and what doesn't. Universal themes such as the desire for clean water, clean air and the well-being of future generations can cut through people's differences and ultimately serve to bring people together and inspire change.

I think the most effective stories touch on the experience of being human. Instead of focusing on water pollution as the theme, you have to tell the story of the river and the kid who fishes there. An engaging story is able to capture and keep the audience's attention. It's usually concise and follows a simple storyline. Rather than making a video that focused on The Conservancy as the primary protagonist, I wanted community members to be the main characters, and show

Planting Success in Louisville video shoot. Louisville, KY. © Devan King/ The Nature Conservancy

how The Conservancy was working to use conservation in support of their hopes and dreams.

In our process for creating the Story Series, we are mirroring and modeling the kinds of practices that our city leads are engaged with as they work across differences with other stakeholders and community members.

Q **Can you talk about the behind- the-scenes work on this video and the next ones in the series, featuring Birmingham and Chicago?**

A I knew from the outset that we needed a good videography team to bring the community voice into the narrative. I hired Suzan from Reel Thing Productions to be the director/videographer. She gets close to the people she's filming and really taps into their personal narratives. She has done that in every documentary film that she has made. I thought that her method was the right one for capturing the authenticity of community voices.

Creating the videos is a team effort that takes a lot of planning, pre-production and post-production work, as well as coordination with our Cities marketing team, city leads, local marketing staff and partners. Identifying the audience and developing key messaging are iterative and critical parts of the process. When you only have three minutes to tell a story, you have to work hard to simplify the messaging as much as possible to get to the heart of the story. I worked closely with Rocio Johnson and Eric Aldrich on our Cities marketing team and chapter marketing colleagues to develop key messaging, as well as with Chris Chandler, Francesca Gross and John Legge. They were all critical in piecing together the shoot agenda, identifying story leads within the community, and coordinating the on-site filming.

Q **What have you learned as you continue to develop the story series?**

A One of the main lessons for the team has been that you cannot be prescriptive in your storytelling approach. You can't expect that a formula that worked successfully in one community will produce the same results or even resonate in a completely different setting. We have learned the importance of trying to apply best practices, such as allowing sufficient time to build trust so that the kinds of authentic stories we want to tell can show up—while remaining as flexible as possible in our approach so that we can adapt to different perspectives and capture diverse stories.

Guidance for Capturing Authentic Stories through Film

- Make short, engaging videos.
- Don't attempt to describe every conservation intervention in detail.
- Take the time to understand your audience and create clear and simple messaging for the video.
- Identify possible story leads within the community, and start the conversation with them as early as possible. This will help build trust and general ease so that they feel more comfortable showing up as their authentic selves on camera.
- Be careful to depict the community with respect and do not create a narrative that is disempowering.
- Provide stipends to community story leads to compensate them for the time that they spend filming.
- When you are representing a collaborative project, make sure to bring in the main stakeholders and give credit where credit is due. Sharing the final video product and extra footage with partners can also strengthen collaborative relationships and lead to greater buy-in of the final product.

Pedals and Petals: A Community Planting and Bike Ride at Ping Tom Park. Chicago, IL. © Laura Stoecker

> **Messaging, like conservation programming in cities, should be informed by the community. A city lead once mentioned that a community in Washington, D.C., preferred to be identified as high potential rather than underresourced. This example shows how messaging should be used as a general guideline to help avoid alienating language rather than as a steadfast rule.**
>
> — Rocio Johnson

Messaging research and results informing messaging for cities

In spring 2015, marketing staff conducted a competitive analysis to assess how nonprofits communicate about conservation in cities. This research looked at 10 major nonprofit organizations promoting work in urban environments and ranked them on certain criteria. The outcome highlighted the importance of creating high-level messaging to reach multiple audiences. When they are crafting materials for the public, nearly all organizations use language that is accessible to all of their audiences, not just audiences in policy or development who are most familiar with industry terminology. Organizations that used language which was accessible to a variety of audiences had more media coverage and generated more engaging content for their owned channels, which increases their capacity to connect with a broader, and often younger, audience.

The analysis also found that it was important to frame urban conservation work through local storytelling. The organizations that were most successful in telling their stories were able to localize the details and provided tangible, first-hand impacts and

viewpoints. Some were able to emphasize city pride, a particularly important concept. These localized narratives were more compelling than general trends and statistics that are harder to personalize. It was also key to elevate the profile through high-visibility spokespeople. Effective use of influential, credible spokespeople who are established in the public arena and trained on the messaging elevates the work, strengthens the message and establishes the organization as a leader in the area.

Measuring the impact of urban conservation marketing and communications

Marketing and communications have traditionally measured certain outputs to gauge a campaign's effectiveness. These outputs include important and easily accessible metrics, such as the number of times the work was mentioned in newspapers, the number of times people visited the webpage and the number of people attending events. More meaningful outcomes look at action taken as a result of communication initiatives. For example, we might ask, "How many people who visited the webpage or attended the event became donors?" or "Did the local stormwater ballot initiative pass after we promoted the petition?"

The Barcelona Principles, from the International Association for the Measurement and Evaluation of Communications

1. Goal setting and measurement are important.
2. Measuring the effect on outcomes is preferred to measuring outputs.
3. Measure the effect on business results when possible.
4. Media measurement requires quantity and quality.
5. Advertising Value Equivalencies are not the value of public relations.
6. Measure social media.
7. Transparency and replicability are paramount to sound measurement.

Such outcomes can only be effectively measured when clear objectives are established early in the process, adequate time and resources are built into the campaign, and benchmarks are available to measure progress. In an effort to standardize the measurement of outcomes, the public relations industry adopted a set of seven voluntary guidelines, known as the Barcelona Principles, to measure the efficacy of communication campaigns. Although these guidelines do not provide step-by-step guidance on implementation, they reflect the growing importance of measuring outcomes in order to be truly effective at communications.

In order to have productive discussions of outcomes with marketing and program staff, it is necessary to think long-term. In marketing and communications, as in other aspects of urban conservation, it takes time to change attitudes and see results. It is important to commit the right amount of time and resources to match the desired outcomes. Sometimes, just the fact that a conservation organization is working to foster meaningful engagement in an urban space is an outcome in and of itself.

Community-wide planting event. Louisville, KY. © Devan King/The Nature Conservancy

Conclusion

Cities are hubs of activity and are the intersection of dense human settlements, built infrastructure and natural systems. Our conservation work in cities presents profound opportunities to use nature-based solutions to solve the most fundamental human well-being problems while also improving ecosystem integrity in and near urban areas. Whether it's planting trees to combat air pollution and the urban heat island effect, convening communities to plant urban gardens, or designing and implementing green infrastructure to decrease flooding and improve the health of the water cycle, urban conservation simultaneously provides effective solutions to a variety of problems and improves the quality of life of city residents.

By listening, partnering and collaborating with communities that are often underresourced and marginalized, we have an extraordinary opportunity to distribute conservation benefits more equitably, improving the lives of millions of people while enhancing urban natural resources.

The guiding principles of urban conservation require that we understand the needs and challenges of both people and nature before developing nature-based solutions, that we improve conditions for human well-being and that we develop broad coalitions of partners and stakeholders. By using an intentional collaborative approach, applying the principles of environmental justice, implementing effective community engagement practices, focusing on comprehensive planning, and integrating ME&L methods, the conservation practitioner will be able to successfully enter the urban conservation arena. With our planning tools, technical skills and resources, and the experience we have gained thus far, the North America Cities Network has a remarkable opportunity to continue bridging the gap between traditional conservation practice and communities in cities. The measure of the Cities Network's success will be the degree to which it equitably improves the well-being of city residents and the urban environments in which they live.

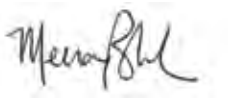
Whole Measures for Urban Conservation

2017

There is no power for change greater than a community discovering what it cares about.

— Margaret J. Wheatley

Whole Measures for Urban Conservation (WMUC), based on Center for Whole Communities' Whole Measures, was produced in partnership with The Nature Conservancy as part of the launch of the North America Cities Network. Led by Center for Whole Communities, a team of Conservancy staff from the Cities Network developed the rubric and provided key input for the guidance portion of the document. *WMUC* includes four primary areas of measurement and is a reference point for leaders interested in prioritizing benefits to low-income communities and advancing justice and equity in their work. While this document serves as a primary appendix to the *Field Guide to Conservation in Cities*, it is designed as a stand-alone document that may be used and reproduced independently.



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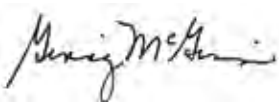

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INTRODUCTION

Whole Measures for Urban Conservation

The complex layers of community, infrastructure and natural systems in cities present new challenges and opportunities for conservation work. Focusing on the human impacts of conservation strategies must be central to how we define success in conservation work in cities. The *Whole Measures for Urban Conservation (WMUC)* framework presented here provides a foundation for a highly integrated, whole-systems approach to urban conservation. It is intended to guide planning and evaluation of urban conservation projects and programs through the lens of socioeconomic impacts and equitable outcomes. It dedicates special attention to the social impact areas of justice and fairness, economic vitality, community engagement and community resilience.

What Is Whole Measures?

What organizations and communities measure reflects what they value and determines what they pay attention to. Traditionally, conservation practitioners measure success in dollars, acres and biological diversity, and do not often consider factors related to community well-being. *Whole Measures for Urban Conservation (WMUC)* seeks to broaden the definition of success for urban conservation to include support for equitable outcomes that improve human well-being in cities. The framework offers a flexible approach to planning, implementing and measuring the changes we seek in our communities and organizations. The Whole Measures framework comprises a set of scoring guides or rubrics that apply across different areas of socioeconomic impact. *WMUC* is also intended to support a participatory process in which conservation practitioners work in partnership with diverse constituencies to plan and evaluate urban conservation work.

The process of working with Whole Measures is often just as valuable to community impact and organizational learning as the conservation project outcome.

Benefits of Using the Whole Measures Framework

Whole Measures supports holistic planning and evaluation efforts in a manner that is participatory and empowering for both project leaders and stakeholders. Here are some major benefits of using Whole Measures:

Supporting collaboration and creating alignment:

- Whole Measures provides a structure and format for engaging dialogue between different organizations and the communities in which they work.
- Conversations guided by Whole Measures can foster more effective, reciprocal and collaborative relationships.
- Engaging internal and external stakeholders with the rubric creates a structure for discussions that center on key potential socioeconomic impacts of urban conservation strategies.

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Planning for and measuring impact:

- Whole Measures helps organizations align their program priorities, decision-making, resources and activities with their overall vision and values.
- Using participatory methods to develop program objectives and scaled measures of success related to urban conservation and equity can support both planning and evaluation.
- Stakeholders can use the rubric to qualitatively evaluate the impacts on a scale from negative to highest positive impact at different phases of project or program cycles.

Entry points:

Once a decision has been made to use the Whole Measures framework, the next step is to determine the appropriate entry point, given the nature of the project. You can focus on program planning, community engagement or program evaluation, or a combination of the three. These are outlined in Figure 1.

Figure 1. Three Entry Points for Using Whole Measures

Program Planning	Community Engagement	Program Evaluation
Identify priorities Engage internal organizational dialogue Engage stakeholder dialogue Support collaboration and alignment	Identify priorities Create alignment Engage dialogue (external) Invite collaboration	Guide selection of priority areas for evaluation Create shared language for measures of success Measure impacts

When to Use Whole Measures in the Program Cycle

What we pay attention to in our work is usually what grows. Therefore, the ideal entry point for Whole Measures is as early as possible in the project cycle. This allows the planning benefits of Whole Measures to help define the project cycle from the beginning. In The Nature Conservancy's Conservation by Design process, when we do a full mapping/situation analysis we consider all potential avenues and then focus our energies strategically. Similarly, with Whole Measures, we take time up front to identify the full spectrum of potential benefits and objectives, which allows us to be more strategic in using our resources. It also acknowledges areas that we hope to grow into—which then prepares us to recognize opportunities that may emerge during the implementation phase.

If it's not possible to start Whole Measures at the beginning of a process, it can still be used effectively at various points in a program's life span: at the beginning, after program activities have begun, and after they have been completed. Depending on where you are in the project cycle, you can use Whole Measures to look at program planning or evaluation needs. At any stage in the process, it can be a useful framework for evaluation and meaningful community dialogue.

How Whole Measures Works

Whole Measures refers to both a process and a set of rubrics. The process involves meeting with stakeholders to have a dialogue about impacts on communities. The rubrics identify criteria for success and describe various levels of performance along a spectrum from negative to highest impact. Rubrics are often a focal point of a Whole Measures process.

For example, a rubric created for this Whole Measures guidance document, shown in Figure 2, would include an **objective** and a **spectrum of impacts** describing a scale of possible outcomes.

Figure 2. Example of a Rubric

Objective: Clearly and effectively explain how to use Whole Measures in a way that supports its use and implementation.
Negative – Guidance is unclear and unhelpful and results in confusion that discourages people from using Whole Measures.
Neutral – Guidance does not affect the readers' understanding of how to use Whole Measures.
Modest – Guidance gives readers a general sense of how to use Whole Measures, sparks their interest, and affects their thinking, but they do not use it as a community engagement or planning tool.
Strong – Guidance is clear, compelling and helpful enough that readers use the framework for planning, evaluation or community engagement.
Highest Impact – Guidance is clear and helpful enough that readers implement Whole Measures with confidence and success and create effective case studies demonstrating the effectiveness and utility of Whole Measures to other practitioners of urban conservation.

This spectrum of impacts is used to score how well the objective was achieved. It can also be used by the rubric developers to have a discussion with a potential implementer about her perspective on Whole Measures, what she needs out of this guidance, and what she thinks the objective should be. This discussion could help the developers to have a better understanding of the needs of their stakeholders. For example, in order to maximize stakeholder participation in the *WMUC* rubric development process and prior to writing the steps, the rubric developers had a dialogue with working group members about their values and needs in relation to this project.

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Using Whole Measures

Working with the rubrics within Whole Measures creates an opportunity to have substantive dialogue with stakeholders that explores values, priorities, objectives and impacts. These rubrics can be used as is, but they will work best if you *adapt and customize them to reflect your program or project*. Ideally, you will identify the objectives that are most important to your program, and then define different levels of performance against which to measure your performance. In other cases, you will write your own objectives, using the ones in the template as a reference point or for inspiration.

The amount of time and resources you have to invest in a Whole Measures process will determine how you use the

framework in your planning and evaluation work. Some general options, ranging from a limited level to a higher level of engagement, are presented here:

1. **Use Whole Measures as a program planning tool.**
   a. Initial framing and thinking—use concepts and framework to engage internally.
   EXAMPLE: When having an internal meeting or planning session, refer to the Whole Measures rubric to see where your ideas for conservation projects fall on the spectrum, or fill in objectives that are important to your program.
   b. Initial framing and thinking—use concepts and framework to engage externally with partners, community or stakeholders.
   EXAMPLE: In a multistakeholder planning process in Atlanta, Urban Conservation Program Associate Myriam Dormer convened a diverse group of stakeholders around water quality issues in the city. She included a presentation on Whole Measures in the kickoff to frame the process's intentional focus on equitable impacts.

2. **Use Whole Measures to get stakeholder feedback about your conservation plan.**
   a. After your plan has already been drafted, you can use the rubric as a reference point in dialogue with stakeholders.
   EXAMPLE: Convene community stakeholders to a meeting where you use the rubric as a reference point to discuss your conservation plan and how it might engage the community or meet community needs, and ask for feedback from participants.

3. **Use Whole Measures to qualitatively evaluate your program impacts internally and/or with stakeholders.**
   a. Use the rubric as a launching point for community engagement for planning or evaluation.
   b. Customize the rubric by writing objectives specific to your program needs. Use them to plan for engagement or evaluation, either internally or with external stakeholders.
   EXAMPLE: In Chicago, Director of Urban Conservation John Legge and Director of Urban Stewardship and Engagement Karen Tharp created two separate sets of Whole Measures rubrics that outlined the program objectives for two of their programs. They then hosted half-day meetings for each project facilitated by Center for Whole Communities with stakeholder groups to discuss the rubrics and to obtain stakeholder feedback, evaluate the programs and strengthen relationships.

4. **Form a diverse stakeholder Working Group to develop Whole Measures for the program as a partnership with shared leadership.**
   a. Engage with the community from the beginning of the project, including the framing and early steps.
   b. Use Whole Measures as a process to convene partners and to collectively design the process and plan and evaluate the work as part of a participatory stakeholder process that is co-led in partnership with other groups.

Understanding the Whole Measures Rubrics

Each rubric focuses on one of four socioeconomic impact areas: Justice and Fairness, Economic Vitality, Community Engagement, and Community Resilience. The last rubric is a blank worksheet for developing original objectives and is available at nature.org/wholemeasures.

Each impact area has a general statement of intent and several objectives, which were developed by a multidisciplinary group of people working to articulate what equitable outcomes in urban conservation can look like.

For each objective, a spectrum of impacts is defined, describing a range of outcomes that includes negative, neutral, modest, strong and highest impact. At the end of each spectrum of impacts is a column for numerical ratings.

Justice and Fairness

CONSERVATION FOR ALL

OBJECTIVES		MEASURES (OF SUCCESS) OR METRICS	
		NEGATIVE (-3)	NEUTRAL (0)
1.1	Consider and prioritize conservation projects that provide conservation benefits for underresourced communities (e.g., improved air or water quality, tree canopy cover, stormwater management, reduction of heat island effect).	Conservation projects that are likely to have negative impacts on underresourced communities are given high priority despite knowledge of negative impacts (e.g., decrease in access to public transportation, job loss, loss of housing or increased flood impacts). Strategies to avoid, reduce or mitigate negative impacts are not considered.	The potential impact of conservation projects on underresourced community members is considered, but projects that provide benefits to those communities are not prioritized.
1.2	Provide equitable and ready access to natural areas for urban dwellers (e.g., parks, waterfronts, trails and preserves).	All programming is envisioned outside urban areas and continues the trend of "fortress ecology," restricting people's access or stewardship opportunities. Urban natural areas or natural infrastructure are not stewarded appropriately, resulting in exclusion of urban residents, loss of community pride, increase in crime and/or loss of biodiversity.	Program protects high-biodiversity urban natural areas, or develops green infrastructure or programs, but does not increase access for urban dwellers. Motivated volunteers are welcomed but no outreach is done to welcome others.
1.3	Acknowledge urban communities' relationships to nature, past and present, in framing and communicating urban conservation projects.	Framing and communication around urban conservation projects explicitly deny urban communities' relationships to nature, both past and present.	Project makes no mention of existing relationships between urban communities and nature. Communication and framing of the project emphasize that urban conservation projects will bring nature to the urban community—thereby implying that outside experts must bring environmental benefits to urban communities.
1.4	Demonstrate accountability to the community for creating community benefits through urban conservation projects.	Urban conservation projects are detrimental to the community and have no accountability to the community for negative impacts.	Potential opportunities to provide community benefits are identified or considered, but not selected. There is no accountability to the community for doing so.

"Peace cannot exist without justice, justice cannot exist without fairness, fairness cannot exist without development, development cannot exist without democracy, democracy cannot exist without respect for the identity and worth of cultures and peoples."

—Rigoberta Menchu

Statement of Intent: Prioritize conservation initiatives that foster equitable outcomes for historically underrepresented and underresourced communities.

MEASURES (OF SUCCESS) OR METRICS			RATING
MODEST (+3)	STRONG (+5)	HIGHEST IMPACT (+10)	
Conservation projects that result in some direct quality-of-life improvements for underresourced communities are given additional weight when prioritizing strategies. Siting conservation projects in underresourced communities is considered alongside projects with remotely generated benefits.	Conservation projects that are likely to result in clear, measurable, positive impacts on health and other components of well-being in underresourced communities are prioritized. Conservation projects are implemented in underresourced communities that result in quality-of-life improvements for community members.	Highest priority is given to conservation projects targeting problems in underresourced communities. Projects are designed and implemented in response to the community's self-identified needs, problems and priorities. Projects successfully create measurable improvements in human well-being.	
Program protects high-biodiversity urban natural areas and/or begins to introduce natural resources amenities and programming. These opportunities provide access for a wide range of urban dwellers to connect, steward, and/or find meaning in the spaces, while also fully protecting biodiversity values. Other ecosystem services (e.g., air quality benefits from tree canopy) are considered in project development.	In addition to achieving modest indicators, program also protects or develops natural areas or aspects of natural infrastructure that are especially well-situated to increase access for urban dwellers to connect with nature while also supporting biodiversity in the area. Invites urban dwellers to connect to these natural areas.	In addition to achieving strong indicators, program seeks and uses input from surrounding urban communities in identifying priority projects and actions for increasing local access and connection to nature and other benefits, with particular emphasis on community members who have historically had low levels of access to natural areas.	
Framing and communication acknowledge existing relationship between urban communities and their environment, but ignore a history of community disenfranchisement, dispossession, or disconnection from the environment, i.e., the project acknowledges the positive connections between nature and people (environmental benefits), but not the history of injustice or exclusion (environmental harms).	Framing and communication acknowledge existing and historical relationships between urban communities and their environment. Urban conservation project leadership and communication describe the history of dispossession for urban communities, as well as expressing visions and strategies of connection and restoration that reflect community thinking and experience.	Framing and communication acknowledge existing and historical relationship between urban communities and the land. Urban conservation project leadership and communications describe the history of dispossession and loss for urban communities, as well as sharing elevating visions and strategies of connection and restoration. These visions are representative of the community itself and counter the dynamic of dispossession and loss.	
Urban conservationists actively engage in discussion with communities about what types of benefits the community desires from the urban conservation project.	Based on discussion with community leaders and organizations, community benefits agreements are developed. These agreements detail the benefits that the conservation project will provide for the community.	Based on discussion with community leaders and organizations, community benefits agreements that include a formal accountability mechanism are developed and adopted.	

DEFINITIONS

Underresourced: lacking in financial or infrastructural resources. Underresourced communities include communities facing poverty and many communities of color. Many communities are underresourced because of historic patterns of marginalization.

Well-being: a state of existence that is good and satisfactory, associated with health and happiness. Components of human well-being that can be positively or negatively impacted by conservation initiatives include living standards, health, education, work and leisure, governance, social cohesion, security and equity.

Economic Vitality

OBJECTIVES		MEASURES (OF SUCCESS) OR METRICS	
		NEGATIVE (-3)	NEUTRAL (0)
2.1	Project supports long-term economic vitality through the preservation or creation of green jobs, the support of sustainable economic activity, or the provision of ecosystem services.	Project creates significant negative economic consequences (e.g., loss of jobs from the community or region).	Produces little or no effect on job creation or economic activity.
2.2	Connect job opportunities generated through urban conservation projects with historically underrepresented job-seekers from the region where projects are sited.	Project results in a net decrease in access to jobs in the local community. No efforts are made to hire local job-seekers through outreach, recruitment or training. All capacity to plan and implement the project is sourced from outside the region or community.	Some intention to hire locally may be expressed during project planning, but no effort is made to connect community members with job opportunities created by urban conservation projects.
2.3	Quantify and communicate the economic value of the ecosystem benefits of natural systems and conservation projects to communities.	Project creates the impression that conserving natural systems is harmful to local economic vitality.	No understanding is developed of the economic value of the ecosystem that has been created, conserved or restored.
2.4	Create new opportunities for local community members to expand or start businesses in or near the conservation project.	Project does not create any business opportunities and has a negative effect on business retention and development.	Project only creates employment related to its own implementation. It has no effect on business retention and development.

"The surest path to safe streets and peaceful communities is ... ecologically sound economic development. And that same path can lift us to a new, green economy—one with the power to lift people out of poverty while respecting and repairing the environment."

—Van Jones

Statement of Intent: Contribute to the economic vitality of cities through conservation initiatives.

MEASURES (OF SUCCESS) OR METRICS			RATING
MODEST (+3)	STRONG (+5)	HIGHEST IMPACT (+10)	
Stimulates the local or regional economy to some degree through green job creation, attraction of economic activity to the area, or the provision of cost-beneficial ecosystem services.	Measurably stimulates the local or regional economy through green job creation or attraction of economic activity to the area and is recognized by the public for doing so. Increases awareness that urban conservation/restoration can strengthen the economy. Provides economic services (such as stormwater management) that reduce municipal and business costs and therefore support the economy.	Measurably stimulates the local or regional economy through green job creation, attraction of economic activity to the area, and/or provision of ecosystem services and is recognized by the public for doing so. Increases public awareness that urban conservation/restoration can strengthen the economy. Creates community partnerships that plan and advocate for projects that meet both economic and conservation needs; contributes to an increase in the flow and equitable distribution of financial resources in the community.	
Urban conservation leaders partner with other organizations to do local outreach to recruit and hire members of low-income or historically underrepresented communities.	In partnership with other organizations, training is provided to local job seekers from historically underrepresented or underresourced communities. Hiring efforts include effective outreach, and jobs are made available to members of the community that pay at least a living wage.	Through training and outreach, quality jobs are made accessible to historically underrepresented and underresourced members of the community to people from the region at or above the living wage. A community workforce standard is adopted to guarantee that a certain percentage of jobs will be filled by local people from the region for urban conservation projects.	
Information about the value of ecosystem services created, restored or conserved in the project is quantified and made available to the public.	The links between the project and economic vitality are identified, quantified and presented to the community in a clear, understandable and compelling manner.	Awareness and education work results in increased and widespread public understanding about the economic values of the project, thereby building a better understanding of the value of conserving natural systems to the economic vitality of the city.	
Project creates short-term opportunities for existing businesses during project implementation, improves economic vitality of existing businesses in vicinity of project, and has a positive impact on business retention and development.	Project creates short-term opportunities for existing local businesses during project implementation, improves economic vitality of existing businesses; has a positive impact on business retention and development, and attracts new businesses in vicinity of project in a way that stimulates the local economy.	Project increases vitality of region in vicinity of project and spurs creation of new businesses that directly support the health of the local economy. The project has a measurable positive causal effect on business retention and development.	

Community Engagement

OBJECTIVES		MEASURES (OF SUCCESS) OR METRICS	
		NEGATIVE (-3)	NEUTRAL (0)
3.1	Cultivate reciprocal and supportive relationships with community-based organizations.	Program staff disregard and do not engage with existing community-based organizations. Project weakens relationships with public partners and/or communities served. Project competes with and/or takes away resources from existing community-based organizations or networks.	Relationships and trust with community-based organizations are not positively or negatively affected.
3.2	Engage authentically and respectfully with diverse community stakeholders.	Program staff do not engage with stakeholders. Work results in stakeholder exclusion and causes the community to distrust the program staff.	Some demographic research and stakeholder analysis is conducted. The engagement strategy does not look at history or contextual dynamics and only the usual/easy stakeholders are consulted. There is no time, or there are insufficient resources, to engage meaningfully. Barriers for some groups to engage are not acknowledged. If conflict emerges or excluded parties request access to the project, the need may be acknowledged but not corrected.
3.3	Share decision-making process and authority with the community.	Program staff make no effort to inform or involve community members, leaving them unaware and uninvolved in the decision-making process.	Program staff make some effort to inform community members about the process and engage them in the work but are not influenced by their opinions.

Statement of Intent: Work with communities to design and implement responsive conservation projects that address community needs.

MEASURES (OF SUCCESS) OR METRICS			RATING
MODEST (+3)	STRONG (+5)	HIGHEST IMPACT (+10)	
Collaborative relationships are developed and maintained with community-based organizations. Funding relationships and capacity are leveraged to direct new and increased funding to community organizations.	Project develops strong and respectful relationships, based on mutuality, trust and respect, with community-based organizations that serve underresourced or historically marginalized communities. Funding relationships and capacity are leveraged to direct new and increased funding to community organizations.	Relationships between underresourced or historically marginalized community members and urban conservation groups are developed. Thought and effort are given to sustaining these relationships over time, and these relationships are leveraged to support both social justice and conservation outcomes. Funding relationships and capacity are leveraged to direct new and increased funding to community organizations.	
Stakeholders are consulted but there is little to no information sharing, or only a one-way communication strategy that does not incorporate stakeholder input. The project includes good intentions to perform history and social impact indicator research, but the work is not completed. Linguistic and other barriers to engage or get involved are recognized but adequate resources are not dedicated to provide access and understanding. Conflict may arise and is not addressed.	Stakeholders participate and get involved. There is good communication of program intentions with a diversity of stakeholders, including those who have been historically marginalized. Engagement plan harvests information but does not significantly impact the course of work or include groups in key areas of decision-making. Marketing and communication efforts are translated and diversified but not democratic in vision or messaging. Conflict is addressed. History is researched and incorporated into programming.	Those historically marginalized and most highly impacted by lack of access to nature or the impacts of structural inequality are central in dialogue and decision-making. Communication, opinions and proposals flow in both directions and there are ample resources to invest time and translate materials in a way that acknowledges cultural differences. Collaboration includes mutual support and transparency—the organization is willing to change as a result of engagement. Marketing and outreach allow communities and stakeholders to speak for themselves in formats that are relevant to their community. Resources are allocated to enhance and sustain leadership for those traditionally underrepresented. If conflict arises, it is addressed in productive ways.	
Project informs and engages some members of the community and helps them play a more active role in developing, implementing and stewarding urban conservation projects.	Project informs and engages diverse cross-sections of community members and shares decision-making with them. Helps community members play a more active role in developing, implementing and stewarding urban conservation projects. Makes the results of community discussions public and readily available.	Project engages fully with one or more community organizations as well as a diverse cross-section of community members to make project decisions through a structural mechanism, such as an advisory board with power to affect the director of the project. Helps community members play a more active role in urban conservation initiatives along with ongoing stewardship. Makes results of community discussions public and readily available.	

"If you have come to help me, you are wasting your time. But if you have come because your liberation is bound up with mine, then let us work together."

—Lilla Watson

Community Resilience

	OBJECTIVES	MEASURES (OF SUCCESS) OR METRICS	
		NEGATIVE (-3)	NEUTRAL (0)
4.1	Support social cohesion and community social goals (e.g., decreasing crime; improving public safety, public health, or education) through urban conservation projects.	Urban conservation project results in diminished social cohesion or connectivity and has a negative impact on community social goals such as public safety or public health (e.g., the conservation project causes a traditional community gathering space to be replaced with a conservation project that reduces opportunities for the community to gather).	Project has no impact on social cohesion or connectivity. Does not consider relationship of urban conservation to social needs in communities.
4.2	Address potential climate change and/or disaster impacts in the design or planning of urban conservation projects (e.g., floods, droughts, heat events, storms).	Project exacerbates existing conditions or creates new ones, leading to increased climate change or disaster vulnerability.	Project reviews some risk assessment data but does not attempt to address potential climate and disaster impacts in its design or planning.
4.3	Foster community co-benefits that support human well-being in conservation projects.	Natural resource management or conservation project decisions have negative impacts on human well-being in the surrounding area.	There are no links or correlations between conservation work and human well-being in the surrounding area.
4.4	Implement conservation projects that support accessible community housing for underresourced individuals.	Project diminishes access to affordable housing in the community (e.g., decreases condition or availability of housing, increases property value to displace low-income community members, deters construction of affordable housing).	Project does not consider the community's affordable housing needs. However, conservation efforts do not reduce existing affordable housing.
4.5	Implement conservation projects that support improved transportation options or maintain existing alternative transportation options that are accessible to underresourced communities.	Project results in diminished sustainable transportation opportunities within the community (e.g., conservation project results in the loss of bus stops in a neighborhood).	Project planning does not consider the community's transportation needs.

"Ecologists and biologists know that systems achieve stability and health through diversity, not uniformity." —Paul Hawken

Statement of Intent: Implement conservation projects that support and improve community social, physical, and ecological resilience and well-being.

MEASURES (OF SUCCESS) OR METRICS			RATING
MODEST (+3)	STRONG (+5)	HIGHEST IMPACT (+10)	
Project considers the social cohesion and social goals of the community during planning. Builds relationships to explore how social needs such as public health and public safety might be served by conservation work.	Project identifies and acts on opportunities to incorporate community social goals such as public safety, education or public health into conservation projects, drawing on existing community social networks to do so.	Project creates active community partnerships to plan and advocate for projects that meet the community's social and urban conservation goals (e.g., partnerships between conservationists and social activists in public health or education).	
Project reviews relevant risk assessment data and addresses at least one potential climate or disaster impact in the design and planning stage.	Project reviews relevant risk assessment data. Identifies and acts on opportunities to engage communities in addressing past and potential disaster and climate impacts through urban conservation projects in their neighborhoods. Creates active community partnerships to strengthen and maintain community climate change and disaster-resilient design and planning efforts.	Project reviews relevant risk assessment data, including community knowledge. Creates active community partnerships to address past and potential disaster and climate impacts. Uses these partnerships to strengthen and maintain community climate change and disaster-resilient design and planning efforts that focus on the needs of historically underrepresented communities. Implements urban conservation measures that improve community resilience to climate change and disasters.	
Co-benefits are identified within a natural resource management plan or conservation program.	The urban conservation plan results in improved human well-being. A direct positive correlation between the health of the ecosystem and the well-being of humans can be demonstrated as a result (e.g., the more diverse and robust the tree canopy, the greater the cardiovascular health of the community).	Research and evaluation documents the positive relationship between human well-being and ecological outcomes. Inclusive process design and implementation results in a binding agreement to ensure community co-benefits. Outreach and education buttress the lessons learned. Stewardship relationships and capacity are built to sustain the co-benefits beyond one organization's involvement or program cycle.	
Project considers and identifies opportunities to support affordable housing goals. Increases the awareness that natural system creation/ restoration and affordable housing can be mutually supportive.	Project increases awareness within the conservation field that conservation and affordable housing are not mutually exclusive. Identifies and acts on opportunities to incorporate community housing goals into specific conservation projects, bringing in partners with such expertise as needed. Does not threaten the presence of affordable housing in communities that have received urban conservation benefits. Takes the risks of gentrification into account and supports measures to protect affordable housing access in these areas.	Project creates active community partnerships to advocate, plan for and implement projects to meet both housing and conservation goals of the community. Improves the affordable housing options in communities that have received urban conservation benefits. Natural systems are used to provide ecosystem services that benefit affordable community housing. Conservation measures contribute to the aesthetic and environmental quality of the community. Partnerships that support the development and implementation of community land trusts in these neighborhoods protect the availability of affordable housing.	
Project considers the transportation needs and goals of the community. Builds relationships to explore how urban conservation work can support transportation needs.	Project identifies and acts on opportunities to incorporate more energy-efficient, affordable, pedestrian-friendly and accessible transport options into conservation projects, bringing in partners with such expertise as needed.	Project creates more opportunities for the creation of alternative transportation options and increases quality of existing alternative transportation options. Leverages active community partnerships to plan, advocate for and implement projects that meet both the transportation and conservation goals of the community.	

DEFINITIONS

Resilience: an ability to recover from or adjust easily to misfortune or change.

Social cohesion: the willingness of members of a community to work together for survival and prosperity. Co-benefits in this context refer to additional community or social benefits above and beyond the traditionally defined conservation impacts of an urban conservation project.

NOTE: *Housing and transportation are highlighted in this rubric as two key examples to consider in planning urban conservation projects in support of community resilience and well-being in cities. While it may not be the work of each and every urban conservation project to directly address community housing and transportation needs, these projects can—at the very least—consider negative impacts, and—at best—engage in active partnerships that collectively create the conditions to meet community housing and transportation goals.*

Impact Area: _____

(Examples of socioeconomic impact areas used include: Justice and Fairness, Community Resilience, Economic Vitality and Community Engagement.)

OBJECTIVES		MEASURES (OF SUCCESS) OR METRICS	
		NEGATIVE (-3)	NEUTRAL (0)
____.1			
____.2			
____.3			
____.4			
____.5			

This blank rubric is a space for collaboratively identifying an area of measurement and serves a reference point for prioritizing benefits to low-income communities and advancing justice and equity in conservation. For more information about Whole Measures, please visit the Center for Whole Communities website at wholecommunities.org.

Statement of Intent: _____

_____

MEASURES (OF SUCCESS) OR METRICS			RATING
MODEST (+3)	STRONG (+5)	HIGHEST IMPACT (+10)	

DEFINITIONS

NOTES

Whole Measures Process Guidelines

Figuring out how to get started with Whole Measures is sometimes the hardest step. To make it easier, this section gives general guidelines for the various steps to engage in a Whole Measures process. It is important to remember that Whole Measures can be customized to the needs of each program's specific context. You can tailor this process to the specific capacity, goals and objectives of your program. With Whole Measures, process is of utmost importance because it is a way of building reciprocal and collaborative relationships with stakeholders.

STEP 1: FORM A DESIGN TEAM.

Enlist a small design team of three to eight people who bring different perspectives. If the team is internal to your organization, it might include members from different departments, areas of expertise, gender, tenure, ethnicity, etc. If your team includes members from outside your organization—which we encourage—you will also want to look for people who bring complementary perspectives, such as members of community-based organizations, municipal leaders, and environmental justice organizers. This initial step may require some relationship building and outreach.

STEP 2: CHOOSE AND MAP YOUR STRATEGY.

We recommend doing this step in collaboration with your design team.

- Read through the general guidelines and review the rubric source materials carefully.
- Determine your strategy for using Whole Measures. Do you want to use it for program planning and/or evaluation, community engagement, to collect information for a situation analysis, or some combination of all of these?
- Develop a process timeline.
- Conduct an initial analysis of important stakeholders, with special attention to groups that have been underrepresented in conservation work in the past.
- Develop a plan for stakeholder levels of involvement (both internal and external). What do you have the capacity to effectively do? Do you have resources and stakeholder commitment to a more robust participation throughout the process? Are you willing and able to share decision-making with the group? In addition, be sure to establish the level of engagement in which your partners and stakeholders are interested, and which they have time and financial capacity to support. We encourage a moderate to intensive level of engagement wherever possible. Often this may mean taking more time and seeking funding to support your efforts.

Limited Community Engagement	Moderate Community Engagement	Intensive Community Engagement
• Design process internally. • Create initial draft internally. • Get stakeholder feedback. • Refine and finalize internally.	• Design process internally. • Create initial draft internally or externally. • Collaborate with stakeholders to refine the rubric. • Finalize internally.	• Include community members in design team. • Draft rubric collaboratively with community stakeholders. • Refine and finalize with community stakeholder input.

STEP 3: FORM A WHOLE MEASURES WORKING GROUP.

Use the following guidelines with either a Moderate or Intensive level of community engagement.

- Invite a diverse set of project stakeholders (6–12 people) with an array of perspectives and experiences who will work together to engage with Whole Measures. It is important to ensure that different perspectives are brought into the dialogue (different ages, socioeconomic backgrounds, ethnicities, races).
- Share timeline and define outcomes and scope of the work of the Whole Measures Group, such as gathering feedback, collaborating on developing objectives, performing evaluation and/or co-creating a process and program.

STEP 4: CONVENE WORKING GROUP.		
Limited Community Engagement	Moderate Community Engagement	Intensive Community Engagement
N/A	• Make the rubric template and guidance available for review before convening the group. All members should spend time familiarizing themselves with the framework of Whole Measures. • Share examples of rubrics that have been developed for other programs. • Develop initial working draft rubric with a focus on your program strategy. This could be the full rubric or a streamlined version, depending on the level of engagement you have agreed on with your stakeholders and partners.	• Make the rubric template and guidance available for review before the group meets. All members spend time familiarizing themselves with the framework of Whole Measures. • Share examples of rubrics that have been developed for other programs. • Engage working group in small group/large group discussion of the rubric, its purpose, relevance, benefits and limitations.

STEP 5: REFINE AND FINALIZE THE RUBRIC.		
Limited Community Engagement	Moderate Community Engagement	Intensive Community Engagement
• With your design team, develop your rubric. Use *WMUC* as a guide and select objectives and definitions of success that are based on your conservation strategies and goals. • Share drafts with stakeholders and gather input along the way. • Finalize your rubric internally and prepare to select performance ratings.	• Engage working group in small group/large group discussion of the rubric, its purpose, relevance, benefits and limitations. • Using the objectives in the initial draft document, engage in small groups to refine the rubric so that it fits the project, organization or community. • Be willing to change and adapt based on stakeholder perspectives, evidence and input. • Integrate outcomes and input from working group sessions and finalize the rubric internally.	• Select proposed fields of measurement (e.g., Justice and Fairness, Economic Vitality) and engage the group in the development of objectives and definitions of levels of impact from negative to highest. • Be willing to change and adapt based on stakeholder perspectives, evidence and input. • Iterate over 2–3 meetings, drafting and testing group-wide. • The design team takes the results of iterative process and finalizes rubric by consensus if possible. Be sure to agree on a timeline for decisions and a fallback decision-making process just in case consensus is not reached by the agreed-on deadline (e.g., by vote, or select two to three members of the design team to decide).

STEP 6. COLLECT AND UTILIZE RESULTS.

- If using rubrics for evaluation, let each member of the evaluation team rate the overall level of impact for this objective and associated outcomes. Narrative ratings may also be used.
- Work through the rubrics to assess the collective judgment of the project's performance across each socioeconomic impact area. Seeking to understand the perspectives and judgment that different people bring to their assessments will open up new understanding and learning and form a more effective basis for moving ahead as a group.
- Summarize and share results with all who have contributed to the rubric development process. Based on the collective understanding of the project's outcomes, create a plan to respond to the current degree of impact in a way that will move the project closer to the highest degree of intended impact.

  Possible uses for results:
  - Program and organizational learning
  - Reports and fundraising
  - Community education and outreach
  - Contributing to the body of knowledge
  - Developing objectives for program improvement

Process Tools and Tips for Whole Measures

Facilitating Group Discussions

Use the "Dialogue" process to enhance engagement.

- In the Dialogue process, each person in the group has an opportunity to express his or her perspective while the remainder of the group gives their full attention, without immediate interruption or feedback. Using Dialogue can invite the engagement of the whole group and incorporate the perspectives of people who tend to speak up less often.

Invite differing perspectives.

- It is helpful to encourage and invite differing perspectives in Whole Measures processes. In discussions, it can often be more comfortable to spend time on areas of natural alignment. Take time instead to explore those areas where there is a wide range of individual responses for any given practice or field of practices. In ranking objectives, averages are less interesting and perhaps less useful than exploring widely divergent responses. Keep in mind that information about the differences in responses across people and groups may be very important and useful.

Build agreement during the discussion.

- Structure group discussions of the rubric to promote learning; develop a stronger shared understanding of the project's outcomes, strengths and weaknesses; and point to opportunities for improvement. Come to explicit agreement on key themes and lessons learned. It is helpful to explore those areas where there is a wide range of individual responses for any given practice.
- Ask questions about why participants in the process hold different views regarding the program or project. Seeking to explore the perspectives and judgment that different people bring to their assessment will open up new understanding and learning and form a more effective basis for moving ahead as a group.

Determining Your Decision-Making Strategy

When determining how to engage in a Whole Measures process, it is important to consider the level of stakeholder involvement that you would like to have in your decision-making process. Figure 3 shows a progression of methods that range in level of ownership and accountability and stakeholder involvement.

Figure 3. Levels of Stakeholder Involvement in Decision-Making

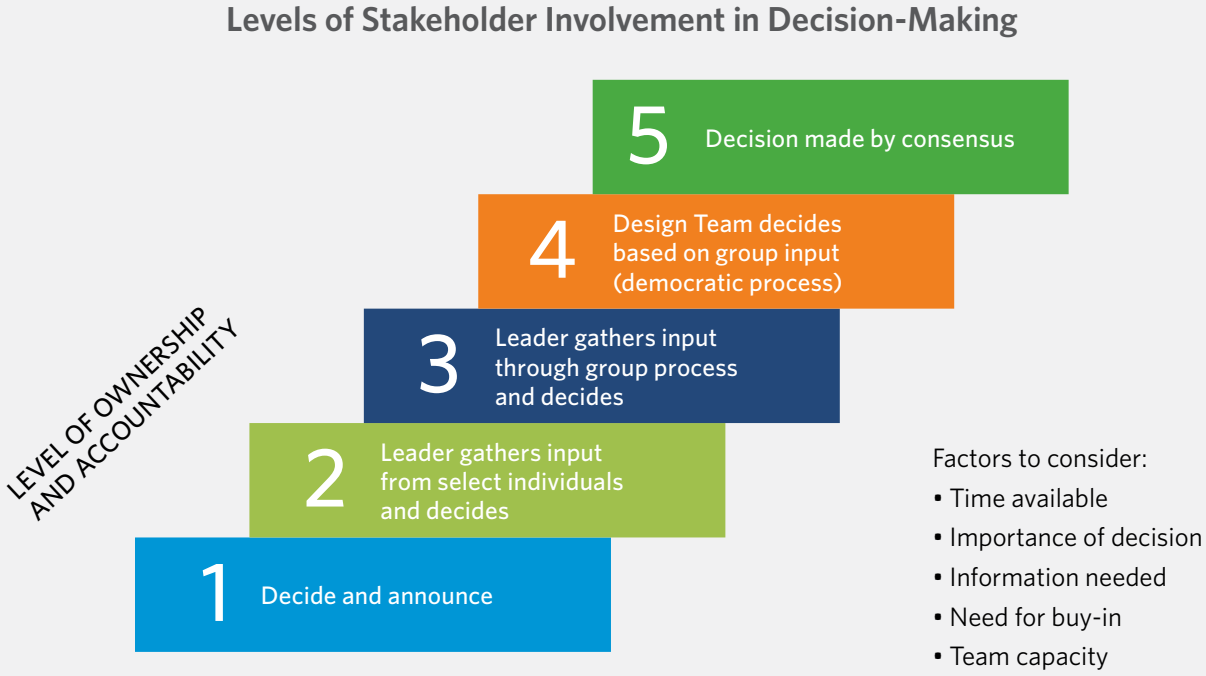

Figure 3. Level of Stakeholder Involvement

Using this chart as you plan your Whole Measures process can help you choose a strategy that best fits your objectives and resources. You can choose a higher level of stakeholder engagement, such as steps 4 and 5, if your timeline is flexible, you are making an important decision, you need information from the community, or you have the capacity on your team. If you are working alone, must move quickly, and it's a decision that does not need much community input, you can choose to limit your decision-making strategies to levels 1 and 2.

Conclusion

Whole Measures for Urban Conservation was designed to help practitioners of urban conservation include considerations of justice and fairness, economic vitality, community engagement and community resilience in their work. The Whole Measures framework and the rubrics represent an opportunity for meaningful engagement with communities, to collaboratively create goals and objectives, and to evaluate our successes. Whole Measures is a starting point and can be adapted and customized because every process, community and project has its own distinct circumstances and considerations. Whole Measures is by its very nature a collaborative process. If you know others in your network who have used Whole Measures, reach out to learn about their experiences, and share your ideas, challenges and successes.

If you are interested in viewing additional resources about Whole Measures, visit the Center for Whole Communities website at wholecommunities.org to find a guidebook for Whole Measures. This guidebook contains valuable guidance and diverse rubrics that were collaboratively developed to reflect the values and needs in different fields of practice.

APPENDIX B

Advice from the Field

Our city leads shared their responses to the following question: What advice would you give a new urban conservationist?	
Build relationships.	Go slow. Keep your ears open and mouth shut. Don't feel like you have to rush to the starting line and rush to the finish line. Rushing doesn't work out well with relationship building. Focus on relationships in the community. We don't want to do anything alone: long-term success won't be one person or organization. It's a collective process, and it takes a lot of time and energy. Learn from getting it wrong, and going back and saying "I got it wrong," and then working to make it better. That's where the magic comes from.
Listen to the community.	When you get started, listen, talk, network and volunteer. If you solve the puzzle technically and only then talk to people, it's really difficult. People don't like it when you come and tell them what you've done for them.
Co-create a vision with the community.	You must have a desire to be with the community to co-create a vision of nature that works for them. You must invest yourself in the community and its values so the work becomes a reflection of the community.
Choose an initial entry point.	For people starting out from scratch, it can be overwhelming. Don't try to take on everything. Carve out some areas to focus on initially. For folks entering existing programs, try to step back and look at the big picture, not only what your chapter has asked you to focus on.
Get to know your city.	Get to know your city if you don't already, and don't assume that The Conservancy knows your city. Find out how you are going to find out. Once you do, use your instincts to chart a course (which may not be what your chapter is asking you to do).
Develop relationships internally and externally.	You have to be humble and you have to be curious. Go on field trips with the land stewards, understand how the development team works, develop some allies internally and outside the chapter. Call and ask questions. Ask people about their thoughts. See it as an opportunity for The Conservancy to grow through new inputs and cross-pollination.
Choose your project carefully.	Take time to understand what is going on and be intentional about what you can do. Really take the time to suss out the situation, the opportunities and gaps. Ask yourself, what am I best situated to take on? Choose just a few things and be careful not to over-promise. It's important to understand that people in the community may have different connotations about you and The Conservancy and what you are trying to do.
Find an early win.	The urban work is new for a lot of folks and chapters. As much as everyone says "take your time and plan and take risks," in this organization it's important to have some wins or successes. Even if it's something small like a tree-planting, share an email with a photo from your work with your staff and colleagues to build support within your chapter.
Balancing competing needs.	Especially for new urban leads, you will have to manage the ongoing tension between finding your early win that will connect you and building credibility, which involves taking your time with the whole.

Align with chapter priorities.	Every state or chapter is so specific. Be tuned in to your chapter priorities and how you can contribute. As much as possible, do planning processes for your program that give a sense of objectivity.
Use the Cities Network as a resource.	No matter where you come from, you might feel isolated to a certain extent. It's normal when doing urban work at The Conservancy to ask "Do I belong here? What's happening?" The Network is a family of people who are wrestling with the same questions and looking at cultural and institutional change, and you can benefit from their perspective.
Remember the process.	The process is important, and you need to have patience with it. You will feel pressure to perform, and you might feel like people at your chapter are wondering if you are dilly-dallying in community meetings. Be prepared to stand strong in your process, and be ready with a concise description and talking points about the value of the process.
Understand your budgeting process.	Try to understand how much you can control your budget and what the budgeting process is at your chapter. Don't be afraid to ask those questions at the beginning. Keep trying, even if at first the answers seem fuzzy. Be bold about saying, "this is how much I think this program is going to cost to run; is this right?" Put it in front of the people who can make that move.

Community planting day. Bridgeport, CT. © Andrew Benson/The Nature Conservancy

APPENDIX C
Glossary of Terms

Adaptive management	A structured, iterative process of systematically testing assumptions to learn, adapt and improve decision-making in the face of uncertainty. Adaptive management encompasses the design, management and monitoring of a strategy. (Source: CbD 2.0 Guidance document)
Biodiversity	The variability within and among all living organisms and the ecological complexes in which they occur. Biodiversity includes ecosystem or community diversity, species diversity, genetic diversity and the ecological and evolutionary processes that sustain it. (Source: CbD 2.0 Guidance document)
Bioswale	A stormwater runoff conveyance system that provides an alternative to storm sewers. Bioswales can absorb low flows or carry runoff from heavy rains to storm sewer inlets or directly to surface waters. They improve water quality by enabling the first flush of stormwater runoff to infiltrate and filter large storm flows. (Source: Natural Resources Conservation Service)
Brownfield	Real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant. (Source: Environmental Protection Agency)
CbD 2.0	Conservation by Design version 2.0, a planning framework developed by The Nature Conservancy. It presents an updated approach to the five phases of a conservation process, divided into a series of 14 steps, and is based on the Open Standards for the Practice of Conservation. It reflects The Conservancy's mission and vision to implicitly include people. (Source: The Nature Conservancy)
City	A settlement of people marked by a concentrated population in a single geographic area. The majority of countries use a single characteristic or a combination of administrative, population size or density, economic and urban characteristics (e.g., paved streets, water-supply systems, sewage systems, electric lighting) to define a city. A settlement is considered a city when its population surpasses 200 to 50,000 inhabitants (depending on the definition used). (Source: United Nations Department of Economic and Social Affairs)
Co-benefits	Additional benefits that occur beyond the direct goal of an intervention (e.g., if trees are planted with the goal of reducing the temperature in an urban area, they may have the co-benefits of improving air quality, increasing the aesthetic value of the neighborhood and helping people feel more connected to nature).
Community	A group of people living in the same place or having a particular characteristic in common.
Community engagement	"The process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people... It often involves partnerships and coalitions that help mobilize resources and influence systems, change relationships among partners, and serve as catalysts for changing policies, programs, and practices." (Source: Centers for Disease Control and Prevention, *Principles of Community Engagement*, Second Edition, 2011, p. 3).
Community of color	A community whose members belong to non-dominant racial and ethnic groups.
Convener	An individual or group responsible for bringing people together to address an issue, problem or opportunity. In the context of collaborative leadership, the convener usually brings together representatives from multiple sectors for a multi-meeting process, typically on complex issues.

Diversity	A mix of people who represent different identities and groups, including different genders, races, ethnicities, ages, sexual orientations, learning styles, educations, economic classes and abilities.
Driver	A generic term for an element of a conceptual model that includes direct and indirect threats, opportunities and stakeholders. Also known as a factor or root cause in Open Standards. (Source: CbD 2.0 Guidance document)
Ecosystem service	A benefit that nature provides to people. Ecosystem services can be material benefits (such as food, water and employment) or intangible benefits (such as spiritual values and intellectual satisfaction) and can contribute to any component of human well-being. (Source: CbD 2.0 Guidance document)
Environmental justice	Equal distribution of environmental risks, hazards, investments and benefits, without direct or indirect discrimination, at all jurisdictional levels. Environmental justice also implies equal access to environmental investments, benefits and natural resources; access to information and justice in environmental matters; and participation in decision-making. (Source: Steger, Coalition for Environmental Justice, 2007)
Equity	The fair or just treatment of people.
Evaluation	An assessment of a program's impact. (Source: CbD 2.0 Guidance document)
Framework	Broad overview, outline or skeleton of interlinked items that supports a particular approach to a specific objective and serves as a guide which can be modified as required by adding or deleting items. (Source: Business Dictionary)
Frontline community	A community that has been directly burdened by harmful impacts, that can collectively name the ways it is burdened, and that is organizing for action. (Source: Moore and Russell, *Organizing Cools the Planet*, 2011)
Goal	A broad primary outcome, which may not be strictly measurable, and which is achieved over the long term (e.g., improving water quality).
Gray infrastructure	A system that manages wastewater, drinking water and combined sewer systems by relying on conventional engineering practices, including systems of pipes, holding tanks, pumps, water tunnels and wastewater treatment plans to manage stormwater and sewage.
Green infrastructure	A system that uses vegetation, soils and other elements and practices to restore some of the natural processes required to manage water and create healthier urban environments. At the city or county scale, green infrastructure is a patchwork of natural areas that provides habitat, flood protection, cleaner air and cleaner water. At the neighborhood or site scale, stormwater management systems that mimic nature soak up and store water. (Source: Environmental Protection Agency)
Greenprint	A strategic conservation plan that recognizes the economic and social benefits provided by parks, open space and working lands. Through the development of a greenprint, stakeholders help to identify, map and prioritize areas that are important to the conservation of plants and wildlife, water resources, recreational opportunities and working landscapes. A greenprint reflects local shared priorities and culture. (Source: The Nature Conservancy's Conservation Gateway)
Implementation	The process of putting a plan into effect.
Inclusion	A state or organizational culture in which differences are respected and valued and people of diverse identities are supported.

Indicator	A measurable variable that can be used to describe the state of a system or to measure current conditions. For example, ecological indicators communicate information about ecosystems and can measure the impacts of human activity on ecosystems.
Initiator	An individual or group who begins the project.
Invited partner	An individual or group who is invited to participate and provide input into a process, often due to their expertise.
Iterative process	A process that is initiated and repeated, in which each cycle brings it closer to the desired goal. Iterative processes emphasize learning and integrating feedback throughout the journey to achieve a desired goal, target or result.
Learning	A stage in the adaptive management cycle that involves documenting and sharing learning from monitoring and feedback, as well as creating an environment that is conducive to learning.
Logic model	A systematic and visual way to present and share your understanding of the relationships among the resources that you have to operate your program, the activities you plan, and the changes or results you hope to achieve. (Source: W.K. Kellogg Foundation, 2004)
Marginalized community	A group that is confined to the lower or peripheral edge of a society and that is denied involvement in mainstream economic, political, cultural and social activities. Marginalization or social exclusion deprives a group of its rightful share of productive resources and ability to utilize its maximum potential for prosperity. Groups that appear to differ from perceived norms are often marginalized by the mainstream culture. (Source: Reference.com)
Measure	An expression of the results of monitoring and analysis in the context of outcomes and management decisions. (Source: CbD 2.0 Guidance document)
Metric	A standard of measurement by which efficiency, performance, progress or quality of a plan, process or product can be assessed. (Source: Business Dictionary)
Monitoring	The act of collecting information over time to provide data on a project's status. (Source: CbD 2.0 Guidance document)
Natural infrastructure	A feature of an ecosystem that enables it to provide essential services to water utilities, businesses and communities, such as flood control, water purification or water temperature regulation. To ensure that ecosystem functions and their associated benefits continue, communities can strategically secure networks of natural lands, working landscapes and other open spaces as natural infrastructure. (Source: World Resources Institute)
Nature-based solution	An action to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits. (Source: International Union for Conservation of Nature)
Objective	A measurable step taken as part of a strategy, which requires specific action, is measurable and tangible, and occurs over a mid- to short-term time frame.
Permeable surface	A porous surface that allows water to penetrate and drain through, often used to decrease stormwater runoff and to filter pollutants.

Privilege	A social theory that confers special rights or advantages only to a particular person or group of people. The term is commonly used in the context of social inequality, particularly with regard to age, disability, ethnic or racial category, gender, sexual orientation, religion and/or social class. Privilege can also be emotional or psychological, regarding comfort and personal self-confidence, or having a sense of belonging or worth in society.
Rain garden	A depressed area in the landscape that collects rain water from a roof, driveway or street and allows it to soak into the ground. More complex rain gardens with drainage channels and amended soils are often referred to as bioretention systems. (Source: Environmental Protection Agency)
Results chain	A diagram that depicts the assumed causal linkage between an intervention and desired impacts through a series of expected intermediate results. (Source: CbD 2.0 Guidance document)
Return on investment (ROI)	A performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. In conservation strategies, return on investment assesses the increase in the conservation outcomes per unit cost of the conservation action. (Source: CbD 2.0 Guidance document)
Rubric	A matrix that contains evaluative criteria which describe various levels of performance along a spectrum.
Situation analysis	An assessment that identifies and weighs the key challenges affecting primary interests in a place or problem, including the political, socioeconomic, institutional and ecological factors creating impacts or threats, driving change and providing opportunities for conservation intervention. (Source: CbD 2.0 Guidance document)
Stakeholder	Anyone who has an interest in an issue, whether that interest is financial, moral, legal, personal, community-based, direct or indirect.
Stormwater retention credit	A form of credit generated by properties when they engage in voluntary green infrastructure that reduces stormwater runoff. In Washington, D.C., property owners trade their credits in an open market to others who use them to meet regulatory requirements for retaining stormwater. The revenue creates incentives to install green infrastructure that protects rivers and provides other benefits. (Source: D.C. Department of Energy and Environment)
Storymap	A form of storytelling that uses a combination of maps, graphics, images and text to tell a place-based narrative.
Strategy	The set of actions or interventions followed by a project in order to achieve a desired impact for nature and people. (Source: CbD 2.0 Guidance document)
Strategy mapping	Spatial representation of the impact of different candidate strategies, based on the distribution and status of conservation targets, human well-being targets and threats, and mapping of the conditions that enable intermediate results. (Source: CbD 2.0 Guidance document)
Systemic change	Creating or strengthening the social, economic, political and cultural systems that comprise and sustain a socio-ecological system. (Source: CbD 2.0 Guidance document)

Theory of change	The sequence of events that is expected to lead to a particular desired outcome. It shows a causal pathway from the current to the desired situation by specifying what is needed for goals to be achieved and articulating underlying assumptions that can be tested and measured. (Source: CbD 2.0 Guidance document)
Transactional	Being focused on outcomes and endpoints to the extent that one's capacity to build quality relationships is undermined or the importance of the process is diminished.
Underresourced community	One that lacks financial or infrastructural resources. Such communities are facing poverty and include many communities of color. Many communities are underresourced due to historic patterns of marginalization.
Underserved community	One that lacks access to adequate services and facilities.
Urban area	A concentration of the population in a particular geographic setting. Every country has its own definition of an urban area. The U.S. Census Bureau defines "urbanized areas" as those containing 50,000 or more people and "urban clusters" as those containing 2,500 to 50,000 people.
Urban conservation	Active management of the natural resources and systems of a city to preserve, maintain and restore their functions; deliver a wide array of benefits to protect biodiversity and equitably enhance the well-being of city residents.
Urban heat island	A phenomenon caused by the lack of trees, vegetation and green open spaces in urban areas, combined with dense, hard surfaces of concrete and asphalt. Heat is generated by everyday activities, such as idling traffic, air conditioning of buildings and homes, and other activities. The landscape factors trap this heat and create a feedback loop that further exacerbates high temperatures. (Source: The Nature Conservancy, "Nature Can Help Cities Survive Extreme Heat")
Urbanization	The increase in the proportion of the population living in urban areas, or the process by which a large number of people becomes permanently concentrated in relatively small areas, forming cities. (Source: *Glossary of Environment Statistics, Studies in Methods*, Series F, No. 67, United Nations, New York, 1997)
Walkshed	The walkable area from any point, usually defined by a range.
Well-being	A state of being in which one's needs are met, one can act meaningfully to pursue chosen goals and one enjoys a satisfactory quality of life. Human well-being is a complex state that can be defined by multiple components, including access to basic sustenance, health, education, work and leisure, governance, social cohesion, security and equality. (Source: CbD 2.0 Guidance document)
Whole Measures (WM)	A holistic and collaborative values-based framework that can be used for planning, qualitative evaluation and community engagement. Whole Measures emphasizes equity, community well-being and community input. It was developed by Center for Whole Communities.
Whole Measures for Urban Conservation (WMUC)	A collaborative framework jointly developed by The Nature Conservancy and Center for Whole Communities to be used for equity-centered planning, evaluation and community engagement in the context of urban conservation.

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