THE FINDINGS AND RECOMMENDATIONS OF THE

HEALTHY PARKS PLAN

FOR TRAVIS, BASTROP, & CALDWELL COUNTIES

St David's Foundation

The Trust for Public Land

asakura robinson

TBG

Acknowledgments

Over 2,000 people participated in the Healthy Parks Plan, from local community members stopping to participate in intercepts in the park, to university professors who reviewed our online survey, to local public sector and nonprofit staff who guided our mapping and community engagement as members of the Steering Committee and Technical Advisory Team. This was a collaborative effort from start to finish, and it would not have been possible without the outpouring of support from the community. In addition to these community participants, this plan was made possible through the generous support of St. David's Foundation. We are grateful to the foundation for their vision to create the healthiest community in the world, and their prescience in recognizing parks as a part of that vision.

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The Trust for Public Land is a national nonprofit organization dedicated to creating parks and protecting land for people, ensuring healthy, livable communities for generations to come. Since 1972, The Trust for Public Land has helped protect more than three million acres in all 50 states.

Asakura Robinson is a planning, urban design, and landscape architecture firm which strengthens environments and positively impacts communities through innovation, engagement, stewardship, and an integrated design process. Our employees are leaders in social and environmental design.

TBG is a design firm with over 100 visionary minds — a critical combination of 30-year industry veterans paired with dynamic young talent who collectively compose, calculate and anticipate the tendencies of living systems. From five offices, TBG's disciplined designers and their strategic partners together refine earth into art, allowing complex sites to evolve. One firm, many voices, together reshaping land to become purposeful landscape architecture.

St. David's Foundation is a health foundation funding in a five-county area surrounding Austin, Texas. Through a unique partnership with St. David's HealthCare, a Malcolm Baldrige award-winning hospital system in Central Texas, the Foundation reinvests proceeds from the hospital system back into the community, with a goal of building the healthiest community in the world.

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A Message From St. David's Foundation

St. David's Foundation is the keeper of a big vision -- to help make Central Texas the healthiest community in the world. Through our lens, parks are community assets that help people get and stay healthy. We recognize that parks play other community functions and speak to other worldviews too. And that's what we love about them. Parks are defined places that require a triad of public-private-community partnership and can be many things to many people.

St. David's Foundation has a history of funding a range of healthy parks projects, large and small, from playgrounds to trails to community organizing. Each has been implemented with joy, inevitable challenges, and each contributes to a culture of health in Central Texas. But the reality is that park need far outpaces the resources we have available to invest.

The Trust for Public Land's Parkscore tells us that Austin ranks in the middle of our nation's 100 largest cities in terms of meeting community park need. People who live here know that while parks are beloved, much more could be done to design, program, and maintain them to maximize their usage and health benefits. Further, St. David's Foundation understands that park need is experienced differently in rural communities than it is in urban areas.

In the face of seemingly infinite park need that cannot be met by the public sector alone, how do we as a regional health funder make strategic decisions? This was our question when St. David's Foundation made a grant to the Trust for Public Land to develop the Healthy Parks Plan for Travis, Bastrop, and Caldwell Counties over a 15-month stakeholder and community engaged process.

The products of that process – this report, the parks decision support tool, quantitative and qualitative community findings, and the design standards for healthy parks – will help St. David's Foundation make smarter, more strategic parks investments. They will be used in conjunction with and are not substitutes for our longstanding community relationships.

Because these tools and resources have practical utility and offer inspiration beyond St. David's Foundation's internal use, we share them. Our intent from the get-go has been to make them easily available to all doing related work.

To those who informed this plan – whether you served on an advisory committee, answered a phone poll, or took the online survey – St. David's Foundation thanks you. We know "if you build it, they will come" is a hollow promise. We can only maximize the full potential of healthy parks, with equity, when we engage Central Texas's current and future park lovers.

Earl Maxwell
CEO
St. David's Foundation

Executive Summary

Parks provide enormous health benefits. They can provide opportunities for physical activity, give people a place to relax and be social, and make the environment healthier. While many stakeholders are aware of some of the health benefits provided by parks, they have major questions about how best to provide those benefits to their communities.

Where are the areas with the greatest need for the benefits provided by parks? How could our existing and future parks do more to support health? What park improvements do local residents need to get the greatest benefits from their parks? The Healthy Parks Plan for Travis, Bastrop, and Caldwell Counties helps local stakeholders answer these questions.

How do you want to use this report to make parks healthier in your community?

Before getting started, I'd like a little more information about the study area.

- The Healthy Parks Plan study area consists of three Central Texas counties; Travis, Bastrop, and Caldwell. The area covers over 2,500 miles and is home to 1.3 million people.
- Roughly half of the residents in the study area (52.3%) live within a 10-minute walk of a park.
- The study area has faced rapid population growth in recent decades. While the majority of this growth has been concentrated in Travis County (which grew by 302.7%), Bastrop County had the fastest growth rate (374.2%).
- The area's rapid population growth has put an enormous amount of pressure on its housing stock. Rising costs for housing have had devastating impacts on low income communities, causing large scale displacement, particularly in Austin, with many residents moving further east into Travis County as well as to Bastrop and Caldwell Counties.
- Opportunities for physical activity are lacking for many residents, particularly in Bastrop and Caldwell Counties, where roughly 39% of the population lacks access to exercise opportunities. These counties also generally have worse health outcomes than Travis County.
- Travis County has the most positive health outcomes of the three counties as well as the greatest access to physical activity opportunities. However, demographics play a major role in determining health outcomes and physical activity, with African American and Hispanic residents more likely to experience many negative health outcomes than their non-Hispanic white counterparts.
- Climate factors pose major health risks to local communities. Although heat has always been a major health threat in Central Texas, the problem is getting worse as global temperatures rise. In addition to acute health problems such as heat stroke, heat also deteriorates air quality and increases wildire risk. The risk of flooding (while always present) is also increasing, due to both the greater level of development and changes in precipitation patterns.

I want to build new parks, but I am not sure where they are most needed.

The Healthy Parks Plan utilized Geographic Information Systems to identify the areas where parks could do the most to improve health. The plan's GIS analysis was organized into five mapping topics. While these topics are combined to create an Overall Results map, they are also useful independently, as they pertain to park objectives.

- **The Park Access Map** demonstrates where new parks could have the greatest impact on park access.

- **The Community Health Map** shows where additional parks could help address community health issues.
- **The Socioeconomic Vulnerability Map** shows where there are underserved populations who may have greater need for the health services provided by parks.
- **The Heat Islands and Air Quality Map** indicates where to focus urban tree planting.
- **The Flooding and Water Quality Map** shows where flood zones will provide the most promising opportunities for park land.

The highest overall priority areas are well distributed throughout the region, but generally align to eastern Travis County, as well as the more developed areas of Caldwell and Bastrop Counties (Luling, Lockhart, Smithville, Bastrop, and Elgin) and the smaller, unincorporated areas around Prairie Lea and Fentress in Caldwell County; Cedar Creek, Camp Swift, and McDade in Bastrop County; and Del Valle and the unincorporated area around Blue Bonnet Acres in Travis County.

To learn more about the project's GIS approach and view mapping results, please read the Geographic Priorities section.

The project's Decision-Support Tool allows users to zoom in to their own community. In addition to viewing these results as well as a vast amount of related data, the tool allows users to query for potential park sites (e.g. vacant, publicly owned land in high-need areas), sketch potential park projects, and measure the impact of those projects.

The Decision-Support Tool is available to the public at the URL here*: **http://web.tplgis.org/healthyparksplan/***

I am trying to design a new park, or improve the design of an existing park. How can we use design to improve health and meet community members' needs?

The health benefits provided by parks are substantial and diverse. To ensure parks have the greatest possible impact on local health, it is important to understand both the scientific literature on the topic, as well as community vision.

Healthy Parks Design Guidelines

There is a growing body of research on the ways in which outdoor recreation can improve health. The Healthy Parks Design Guidelines summarize scientific findings on the relationship between parks and health in a way that is easy to understand and can be implemented in local parks. The guidelines provide a science-based breakdown for how to design parks to maximize health benefits, and organize these benefits into 3 toolkits:

Physical Health Toolkit

Parks are an important tool public health professionals, planners, and city policy-makers can use to encourage active behavior. Studies have shown a positive correlation between access to open space and physical activity, one of the best ways to fight obesity, heart disease, diabetes, and other health problems. Proven tools to improve physical health through parks include amenities like athletic fields, trails, playgrounds, and fitness equipment.

Mental Health Toolkit

Research has shown that parks relieve stress and enhance mental health by providing opportunities for contact and connection with nature. While much research connects the benefits of camping or long-term exposure to completely natural environments, even "nearby nature" available in local parks in urban and rural settings improves health, wellness, and productivity. Gathering in green spaces provides the compounded benefit of social connectedness and stress-relieving benefits, especially in socially isolated populations like the elderly. A few examples of park-based tools to improve mental health include elements like social gathering spaces, mature trees, and water features.

Environmental Health Toolkit

Ecosystem services are the many benefits provided by our cities' natural systems, such as clean air and water, flood management, and crop pollination. Public health and well-being also benefit from the services these natural systems provide. For example, poor environmental conditions, such as air pollution and high temperatures from urban heat islands, can negatively affect human health by triggering asthma and heat stroke.

Parks and open space can be designed to include elements, such as trees and native plants, to help create environmental conditions that are hospitable to human health. Park features that have been proven to improve environmental health include things like mature trees, community gardens, and green infrastructure.

The complete Healthy Parks Design Guidelines are located on page 47.

Community Priorities

Making parks healthier requires an understanding of community members' needs. Through an extensive community engagement process that reached over 2,000 residents, The Healthy Parks Plan learned about the barriers that keep people from using parks for health, and how best to overcome them. Some key takeaways include:

- The greatest barrier to physical activity in parks is the lack of amenities.
- The top requested active amenities are splash pads/water features, paved paths, playgrounds/ play structures, community gardens, fitness zones/ exercise equipment, and swimming pools.
- The top requested supporting amenities included restrooms, drinking fountains, and picnic shelters.
- Parents and their children generally visit parks together. However, parents have difficulty exercising because they are watching their children. Clustering exercise opportunities for parents (e.g. tracks and fitness equipment) near activities for children (e.g. playgrounds and sports fields) would help to address this challenge.
- Opportunities to make parks healthier for people with disabilities include accessible amenities (such as trails, pools, adaptive sports facilities, playgrounds, and exercise equipment) and locating these amenities in a way that is visible and inclusive.
- Shade is the most important feature that helps people to relax in the park, with a preference for the natural shade created by trees.

To view a complete summary of the project's community engagement results, see the Community Priorities section.

This is a lot of information. I'm not really sure how to get started using it.

No problem! The Getting Started section lays out a simple framework for using this plan. It explains how to use the report to develop local priorities for healthy parks, how to choose locations for new parks or select existing parks for improvement, and how to make informed decisions about the types of improvements that would do the most to make parks in your community healthier. This section also contains information on which school sites would have the greatest impact as schoolyard parks, includes a list of initial high priority projects to help communities get started, and provides examples of how 3 local park sites could be improved to increase the health benefits they provide in their communities.

Preface

Why Parks for Health?

Local parks provide enormous community health benefits. However, these benefits are seldom distributed uniformly throughout an area; and both access and level of need can vary greatly across a region. The Healthy Parks Plan for Travis, Bastrop, and Caldwell Counties aims to improve community health by expanding access to the benefits of parks. Parks enhance community health by:

Improving Mental and Physical Health

Parks provide mental and physical health benefits by creating opportunities for physical activity and social gathering, reducing stress, and improving immune system function.[i] Close-to-home green spaces have been shown to reduce the prevalence of heart disease, depression, asthma, diabetes, and other chronic health conditions.[ii]

An event at Gus Garcia Park in Austin. Image credit: Asakura Robinson.

Increasing Community Cohesion and Combating Isolation

Close-to-home parks and green space increase community cohesion by bringing community members together.[iii] Parks have also been found to increase social capital; their presence increases levels of mutual trust and willingness to help others, a trait known as collective efficacy.[iv] Higher levels of collective efficacy are associated with lower rates of asthma, premature mortality, assaults, and homicide.[v]

Improving Air Quality

Air pollution poses a substantial health risk to urban communities, causing 200,000 premature deaths and 16,000 preterm births in the U.S. each year. Urban trees provide an estimated $3.8 billion of air pollution removal services each year—removing health-threatening pollution such as nitrogen dioxide, sulfur dioxide, ozone, and particulate matter.[vi]

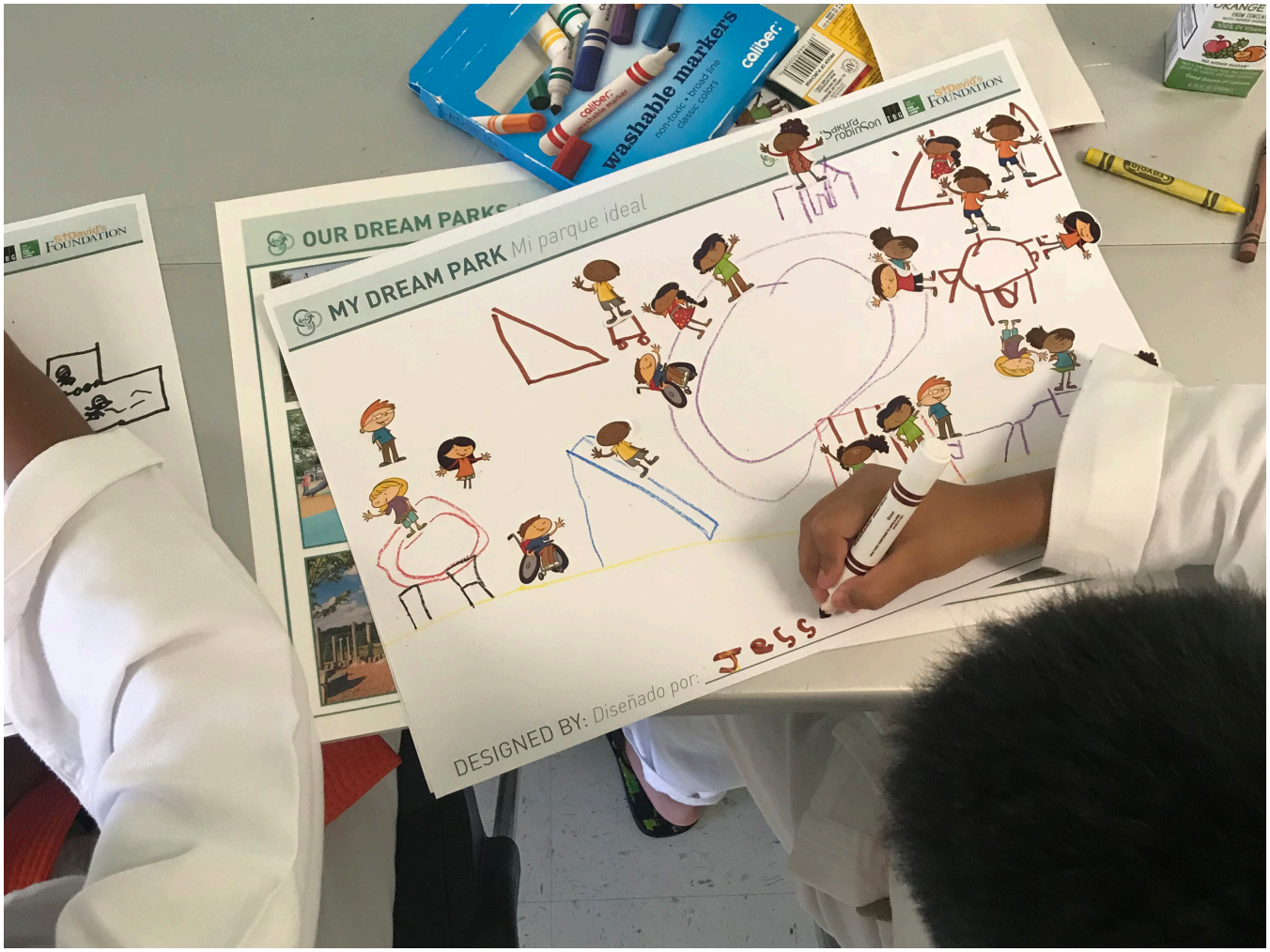
Reducing Climate Hazards

Parks also reduce the harmful impacts of climate change, such as flooding and rising temperatures. Each year, extreme heat kills over 600 people in the U.S.[vii] In a phenomenon known as urban heat island effect, temperatures in cities are warmer than surrounding rural areas. Trees and other vegetation help combat the impacts of urban heat islands by creating shade, breaking up heat-retaining surfaces like pavement, and through the cooling effects of evapotranspiration.[viii]

Parks and green infrastructure features like bioswales and rain gardens can also help prevent flooding by allowing water to soak into the soil rather than running off into streets or storm sewers. A 2014 survey identified over 5,000 acres of parkland in 48 major cities that had been modified in some way to control stormwater.[ix]

Creating Healthy Parks in Central Texas

Travis, Bastrop, and Caldwell Counties face major health challenges. While low-income urban residents struggle with food deserts and the risk of displacement, rural communities face high rates of obesity and diabetes and limited access to recreational opportunities. Local parks provide enormous community health benefits. In the three-county study area, roughly half the population does not live within walking distance to a park. By incorporating community vision, the leading health data, and input from local stakeholders, this project informs future park planning in ways that will maximize health benefits, improve equity, and help stakeholders take advantage of the most promising local opportunities. By directly engaging communities with the greatest need, the plan learns how to meet residents' needs by discovering what a healthier park means to them.



A children's activity at an engagement event. Image credit: Asakura Robinson.

Project Approach

Image credit: Blake Gordon

The Healthy Parks Plan

The Healthy Parks Plan for Travis, Bastrop, and Caldwell Counties is an effort to create a shared vision for building healthier communities through parks. The plan incorporates scientific data, technical analysis, and community engagement results to answer key questions about the people, parks, and environment in the three counties.

Community Engagement

Community engagement was at the heart of the Healthy Parks Plan process. Only by hearing directly from community members could the project team understand barriers to park use and priorities for the area's parks and trails. In order to hear from as many residents as possible, a variety of in-person and remote engagement strategies were employed. These are described below.

For a full discussion of community engagement results, see the Community Priorities section on Page 19.

Speak-Outs

Speak-outs involved interactive tabling at existing community events. Speak-outs allowed the planning team to share the project, meet residents, and get input from residents who would be unlikely to attend community workshops. Speak-outs were conducted at 20 public events, reaching 15-40 people at each event. For a full list of speak-out venues and results, see Appendix 1, In-Person Engagement Summary.

Community Workshops

Community workshops were public events held throughout the study area. Five community workshops were conducted. Each workshop included up to five interactive activities to engage community members in key project questions and issues. Workshops were held at different locations throughout the three counties to maximize the racial, cultural, and socioeconomic diversity of voices and the project's reach. Spanish language translation was available at each of the workshops. About 50 community members participated in community workshops. For detailed community workshop summaries, see Appendix 1.

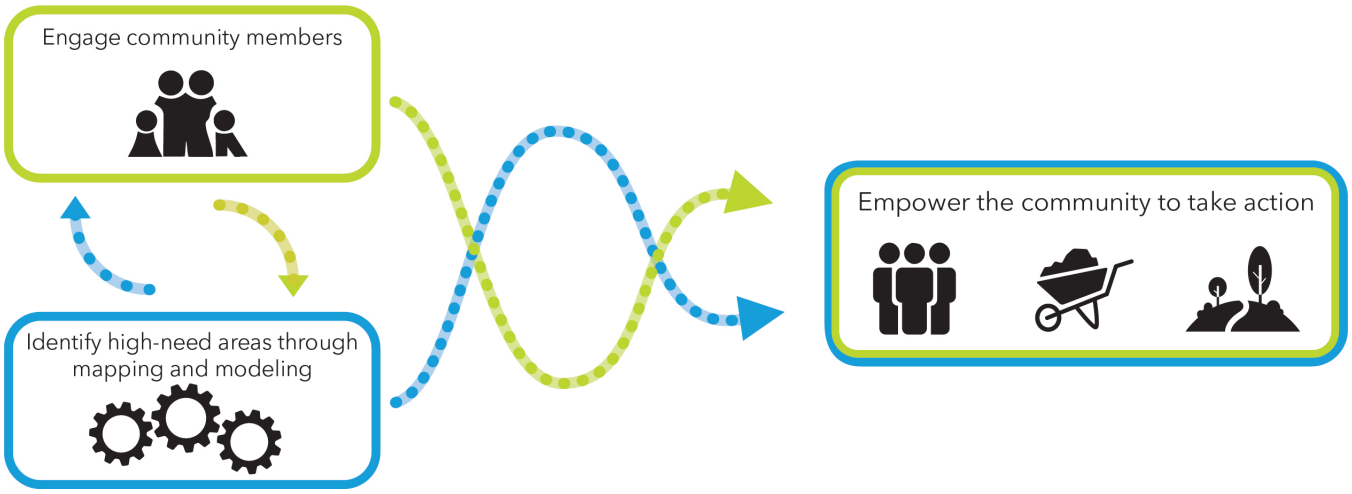


Figure 1: Model of the Healthy Parks Plan Approach

Focus Groups

Five focus groups were conducted. The focus groups were similar to the community workshops, but addressing specific park-related topics with targeted groups of key stakeholders. These events were topic-specific, with sessions focused on Travis County Cultural and Arts Divisions, Travis County Chamber of Commerce, Bastrop County Cultural and Arts Divisions, Bastrop County Chamber of Commerce, Bastrop County Neighborhood and Housing Focus Group, Caldwell County Faith Based Organizations, and Travis County Real Estate/Developers. For detailed focus group summaries, see Appendix 1.

Intercept Surveys

Intercept surveys involved interviewing residents at public spaces throughout their community. While several intercept surveys were conducted in local parks, interviews were also conducted in non-park locations (e.g. Lockhart HEB, The Mexican Consulate in Austin) to reach people who are not regular park users. Ten intercept surveys were conducted, reaching 11-20 community members at each location. For detailed intercept survey summaries, see Appendix 1.

Telephone Poll

The Healthy Parks Plan phone poll was conducted by John Wilson Research (a professional polling firm) in July and August of 2018 and collected input from a demographically and statistically representative sample of 800 residents. Respondents provided information about the frequency of their visits to local parks, barriers to greater use, detailed information regarding their park activities, and their priorities for future park investment. For a detailed telephone poll summary, see Appendix 2.

Online Survey

The online survey allowed residents to share thoughts about current parks in the area, and where to focus future improvements. Draft survey questions were revised and edited by two university professors serving on the project's steering committee. The survey was available in English and Spanish from May 2018 through February 2019 and received 866 responses. Roughly half of these responses were solicited via social media and email blasts, while the remaining half were collected in the field (primarily around South and East Austin) by facilitators carrying iPads from the local engagement firm Cultural Strategies. For detailed online survey results, see Appendix 3.

Steering Committee

Over 50 local experts participated in the project's Steering Committee. This group was tasked with reviewing engagement strategies and preliminary results and providing guidance on the project's approach. Three in-person steering committee meetings were held over the course of the project. Specific steering committee responsibilities included framing the project's guiding principles,"ground truthing" the overall approach, assisting with community input, helping to build public support, and developing implementation strategies. Steering Committee participants represented public sector organizations (e.g. City of Lockhart, Bastrop County, Texas Parks & Wildlife Department), the academic sector (e.g. University of Texas, Dell Medical School), and non-profits (e.g. Nature Conservancy, Bastrop County Cares, Community Advancement Network, Go! Austin/¡Vamos! Austin (GAVA)).

A steering committee of local experts guided the process. Image credit: TPL.

Interviews

Twenty-five community leaders and key stakeholders participated in interviews for the Healthy Parks Plan. Input from interviews helped inform other community engagement efforts and provided important context throughout the planning process. The interviews covered a range of topics relating to parks, health, equity, the arts, and other community issues. Interviewees hold expertise in community organizing, government, parks, and health, and represent organizations spanning the public, non-profit, private and academic sectors. The questionnaire was crafted to gauge broad personal and professional perspectives on quality of life, the park and trail systems, community health, arts and culture, and environmental change in the study area. For detailed interview summaries, see Appendix 4.

Image credit: Asakura Robinson.

Mapping and GIS

Geographic Information Systems (GIS) serve an integral role in the Healthy Parks Plan. GIS analysis was crucial to identifying the areas within the study area with the greatest park need. Because parks provide so many interconnected benefits, the GIS analysis addressed much more than simply the existing locations of parks.

The project team used GIS software that allowed them to map and model data related to demographics and socioeconomic vulnerability (factors including poverty rates and linguistic isolation), environmental resources (such as trees and green space), environmental risks (like urban heat islands and flooding danger), and community health (especially rates of health outcomes like cardiovascular disease). The plan's GIS analysis was organized into the following mapping topics, each of which is discussed in more detail in the Geographic Priorities: Spatial Data Analysis Results section:

- Park Access
- Community Health
- Socioeconomic Vulnerability
- Heat Islands and Air Quality
- Flooding and Water Quality

Many datasets were collected for each of these mapping topics. These datasets were weighted based on their importance, and then "stacked" to create a topic-specific map. These topic area maps were "stacked" to create overall recommendations about the areas with the greatest need in an Overall Results Map. For a detailed list of the GIS data used and analysis methods, see Appendix 5.

The Healthy Park's Plan's GIS process was guided by a group of local experts who served as a Technical Advisory Team (TAT). Through webinars and in-person meetings the TAT guided the analysis by helping to (1) compile a list of relevant criteria to map, (2) collect the best available data, and (3) review results to ensure they accurately reflect on-the-ground realities. This mapping process was iterative, with regular review from the advisory team, followed by revisions based on that input.

The Decision-Support Tool

In addition to the static PDF maps which are available in this report (see Geographic Priorities: Spatial Data Analysis Results on page 31), all Healthy Parks Plan GIS data is available in an online Decision-Support Tool (DST). In addition to viewing the Healthy Parks data, users are able to locate potential parks based on individual priorities, sketch possible projects, and measure their likely benefits. These DSTs have become a consistent feature in The Trust for Public Land's Planning Projects, and several real-world examples of how these tools can be used already exist.

- **Planning Projects**: In Los Angeles a DST is being used to inform the city's general plan and to examine socioeconomic vulnerability and its overlap with urban heat island impacts. In New Orleans, partners are using the decision-support tool to site campus projects and create a strong connection between health and equity.

- **Prioritizing Projects**: DSTs can help find high priority lands for conservation work and protecting open space. In New Mexico, Bernalillo County has adopted a DST as part of the planning process for acquiring lands for open space. Each proposed acquisition has to meet certain community-determined criteria to move forward.

- **Funding Projects**: In New Orleans, the Sewerage and Water Board uses the DST to create requirements for RFPs. In other cases, tools can provide organizations seeking funding a quick way to gather the necessary information for compelling grant applications.

- **Democratizing Data**: The DST helps democratize data—especially for small organizations that do not have in-house GIS capabilities. In Los Angeles, the small nonprofit From Lot to Spot uses a DST to identify the best places to turn vacant lots into parks.

The Healthy Parks DST and user guide can be accessed at: http://web.tplgis.org/healthyparksplan/

Research

Study Area Overview

As an initial step in the Healthy Parks Plan process, the project team conducted a current conditions analysis of the study area with the aim of providing relevant context related to topics such as health, parks, and demographics. A summary of key findings is located in the Study Area Overview section.

Design Guidelines

In order to understand the ways in which a park can support health, a review of the existing scientific literature on the topic was conducted. The review utilized peer-reviewed research to identify proven strategies to make outdoor space healthier. This research is summarized in The Healthy Parks Plan Design Guidelines section. These guidelines help stakeholders answer the question "How can we make our parks healthier?" by providing evidence-based methods to improve health with parks, and divides these strategies into toolkits to improve physical, mental, and environmental health.

Concept Design

Conceptual designs were developed for three parks in high need regions of the study area. Two of these parks are existing and one is in the early planning stages. These designs provide examples of how the results of this project can be employed. GIS analysis results were employed to locate parks in high need areas, and following feedback from stakeholders to identify specific parks, the Healthy Parks Design Guidelines and community engagement results were employed to prioritize amenities and make design decisions. By integrating the various results and tools generated from the process, the designs provide an example of how stakeholders can use the Healthy Parks Plan to improve parks in their own community. These conceptual designs are viewable in the Getting Started section.

Study Area Overview

Introduction

With a population of 1.3 million people spread over roughly 2,500 square miles, the three-county study area holds a wealth of cultures and outdoor experiences. While Travis County has become known for its rich cultural diversity, innovative spirit, and rapid growth, the small towns and ranches of Caldwell County maintain a sense of tradition, while Bastrop County, a historically rural county experiencing rapid growth, is in some ways a middle ground between the two. These differences create a diverse set of health conditions and needs. The counties are united, however, in their appreciation of great outdoor spaces. From the remote pine forests of Bastrop State Park, to the history preserved in Luling's Zedler Mill Park, to Barton Springs in Austin, residents value their parks. Using parks to improve community health is therefore a natural fit for the area.

Travis is the largest of the three counties both by area (1,023 square miles) and population (1,199,323 residents) with the majority of this population (883,430 residents) living within the City of Austin. Caldwell, the most rural of the three counties, is the smallest in area (547.2 square miles) and population (41,161), and is the least dense, with a population almost evenly split between rural and urban. With a population of 84,761 and an area of 888.2 square miles, Bastrop County, though historically rural, is growing quickly as a result of Austin's rapid growth.

Demographics

The three counties in the study area have a relatively similar ethnic make-up, being composed primarily of white and Hispanic populations, with percent compositions of African American and Asian populations ranging in the single digits (see Table 1). Both Caldwell and Bastrop have become steadily more diverse in recent decades, primarily due to the growth of the area's Hispanic population.[x] While Travis County has also experienced growth in its Hispanic population as well as in its Asian community, its African American population has been steadily decreasing. Whether this decrease is the result of a deliberate move to suburban communities deemed more desirable or the result of displacement due to rising costs has become a debated topic. All three counties are experiencing quickly aging populations.[xixii] In Travis County for example, the population that is age 65 and over is expected to experience an 85% increase between 2016 and 2030 (compared to an overall population increase of 19%).[xii]

Travis is also the most affluent of the three counties, with a median household income of $70,068 and only 12.2% percent of the population living in poverty. Caldwell County has the largest Hispanic population (49.8%) as a percentage of the whole, has the lowest proportion of non-Hispanic whites (41.8%), and is the poorest county, with a median household income of $49,533. In Caldwell County, 15.3% of the population live in poverty and 17.3% receive Supplemental Nutrition Assistance Program benefits. Bastrop County stands out as the county with the highest proportion

Table 1 :
Demographics[xiv]

	Bastrop County		Caldwell County		Travis County		Project Area	
	Total	Percent of County	Total	Percent of County	Total	Percent of County	Total	Percent of Total Project Area
Hispanic	27,528	35.2%	19,853	49.8%	387,357	33.7%	434,738	34.3%
Non-Hispanic White	42,621	54.4%	16,667	41.8%	570,282	49.7%	629,570	49.7%
Black/African American	6,108	7.8%	2,782	7.0%	90,819	7.9%	99,709	7.9%
Asian	689	0.9%	46	0.1%	70,373	6.1%	71,108	5.6%
Age: 19 and under	22,020	28.1%	10,945	27.5%	295,051	25.7%	328,016	25.9%
Age: 20-64	45,769	58.5%	23,615	59.3%	756,042	65.8%	825,426	65.2%
Age: 65 and over	10,497	13.4%	5,288	13.3%	97,083	8.5%	112,868	8.9%

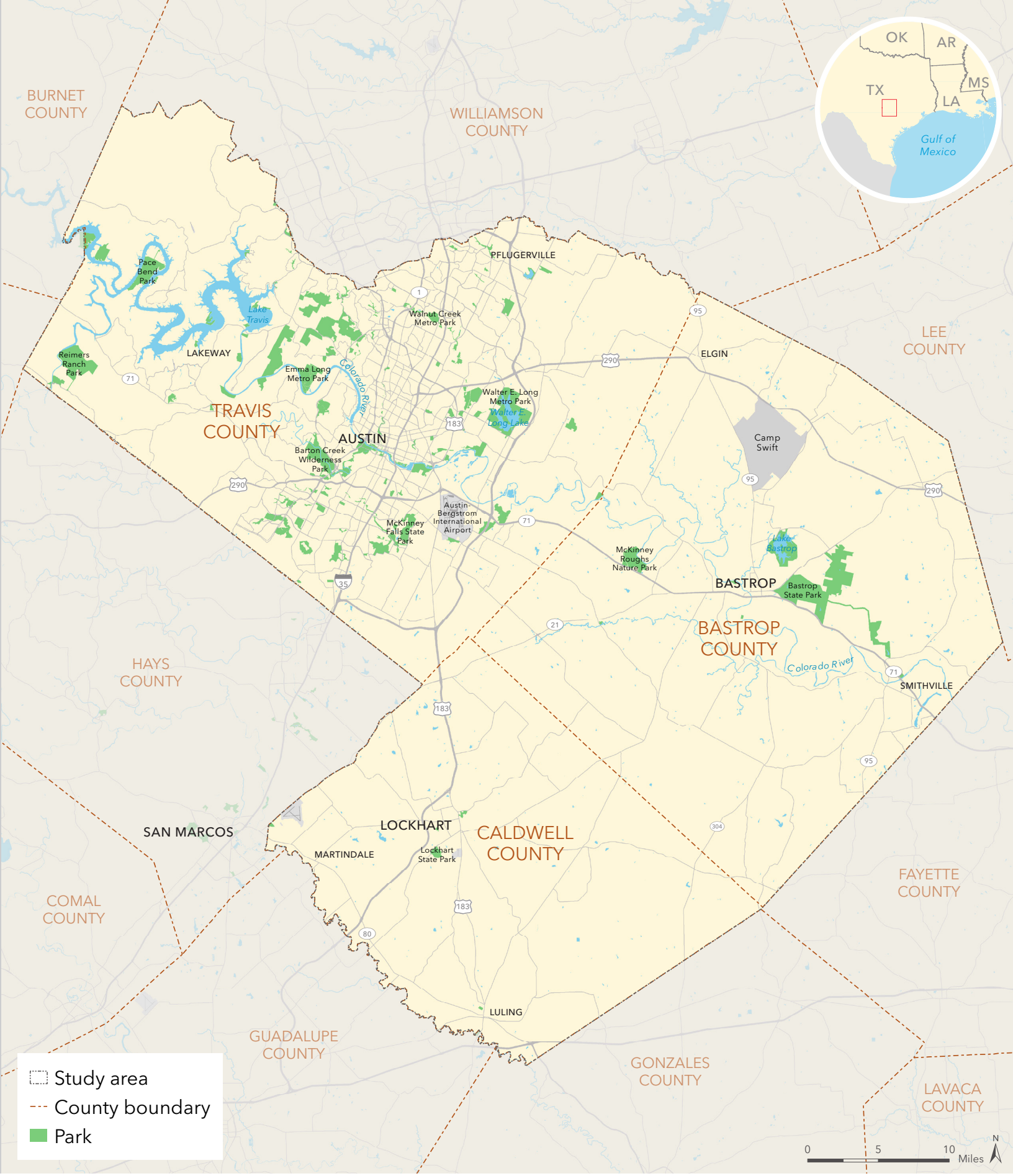


Figure 2: Study Area Map

of non-Hispanic whites (54.4%), as well as the oldest population, with a median age of 38.3 years. Notably, Bastrop also has the highest percentage of children (28.1%). A sharp divide also exists in education between the three counties. In both Bastrop and Caldwell Counties, around 20% of adults over the age of 25 do not have a high school diploma, compared to only 12.6% in Travis.[xv]

Interstate 35 has long served as a dividing line separating the affluent, predominantly white, western Austin from lower income minority communities in the east. This "Eastern Crescent" holds the majority of the county's predominantly Latino neighborhoods, as well as its few predominantly African American neighborhoods (see Figure 3). Although the "Eastern Crescent" name generally refers to the City of Austin, this predominantly Hispanic area extends into Caldwell and Bastrop Counties, where the Hispanic population is largely concentrated along the border with Travis County. Many of these residents live in the unincorporated portions of these counties in relatively isolated 'micro-communities' (e.g. Stony Point) and commute in and out of Austin every day for work.

Austin is attempting to confront displacement through its Anti-Displacement Task Force. Some of the task force's recommendations included increasing public financing for affordable housing, lobbying the state to remove Texas' prohibition on inclusionary zoning, adopting a "Right to Remain and Right to Return" policy, a Tenant Opportunity to Purchase policy and more stringent enforcement of fair housing laws.[xxi] The University of Texas' 2018 study of gentrification in Austin, "Uprooted", noted the clear displacement danger to low income communities of color. The study provided recommendations such as attempting to disincentivize demolition of affordable housing for redevelopment, tax breaks to apartment owners providing affordable housing, and prioritizing community members at risk of displacement on waiting lists for affordable housing units.[xxi] The City took a major step forward when it passed a $250 million affordable housing bond in 2018.

Economics and Growth

Economic conditions vary widely within the study area. While Travis County's employment is heavily rooted in the professional, scientific, and technical services sectors, employment in both Bastrop and Caldwell depends heavily on the construction, retail trade, and healthcare and social assistance sectors. The fact that Austin serves as the state capital and the home of a major public university has helped to create a relatively stable economy. It has also benefited from the rapid economic growth occurring in many of the other major cities in Texas. Austin also has a major tech presence, with growing employment from companies such as Apple, Facebook, Google, and Amazon.

Table 2:
Socio-Economic Indicators[xvi]

	Bastrop County		Caldwell County		Travis County		Project Area	
	Total	Percent of County	Total	Percent of County	Total	Percent of County	Total	Percent of Total Project Area
Households: Total	25,822	100.0%	12,664	100.0%	437,831	100.0%	476,317	100.0%
Households: Total as Percent of Project Area	-	5.4%	-	2.7%	-	91.9%	-	100.0%
Households: Median Income	55,808	-	49,533	-	64,422	-	-	-
Households: Income below 50K	11,483	44.5%	6,422	50.7%	171,012	39.1%	188,917	39.7%
Households: Below Poverty	3,080	11.9%	1,939	15.3%	56,408	12.9%	61,427	12.9%
Households: Receiving SNAP/Food Stamps	3,134	12.1%	2,186	17.3%	38,749	8.9%	44,069	9.3%
Education: Age 25 and over, no high school diploma	10,076	19.4%	5,309	20.9%	90,921	11.8%	106,306	12.6%

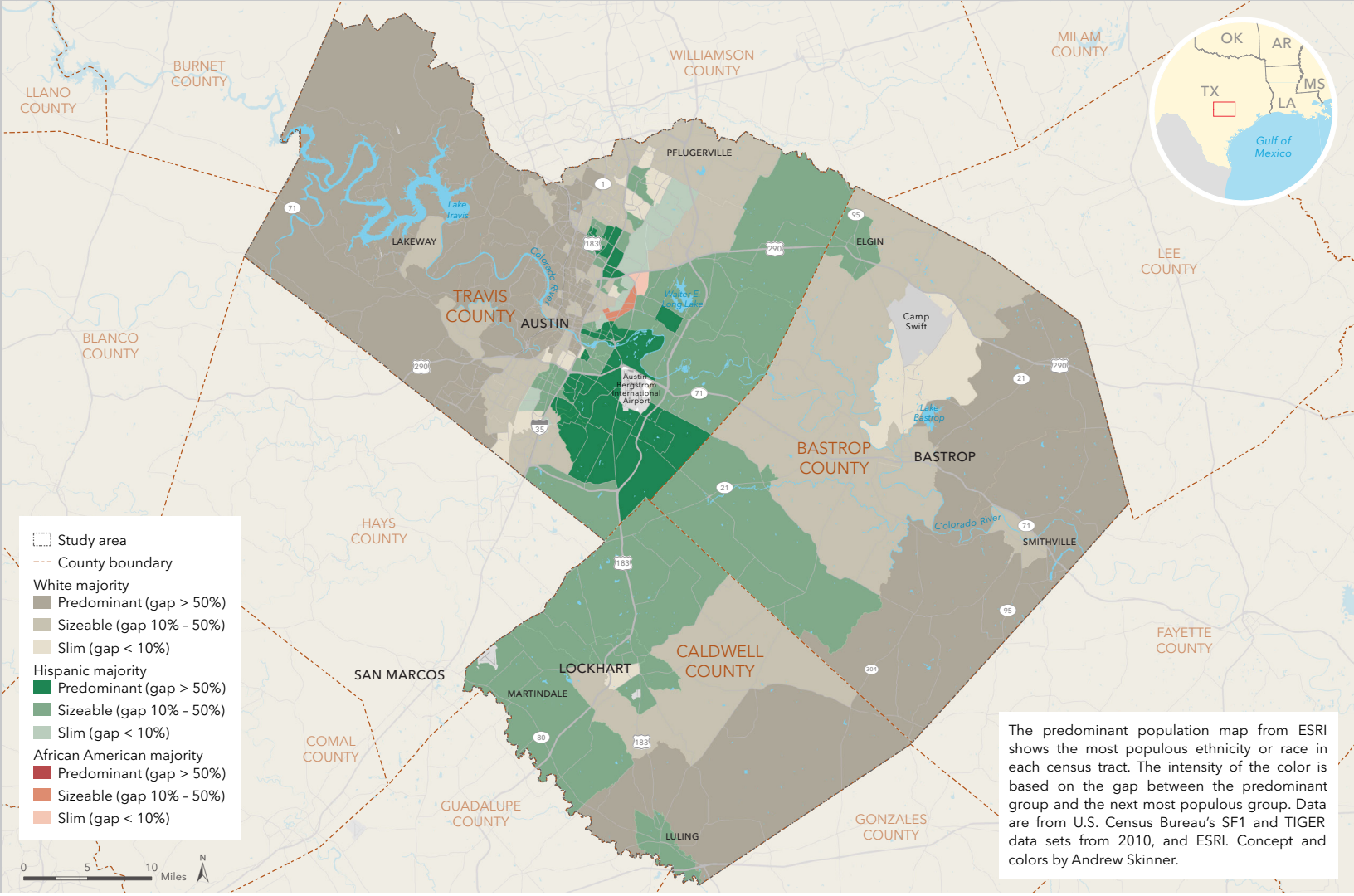


Figure 3: Predominant Population Map

Through the lens of a simple county-by-county comparison, Travis County appears only as an area of relative economic prosperity and high levels of educational attainment. However, large disparities exist within the county, and large pockets of poverty exist within the City of Austin, largely impacting minority communities. While the poverty rate among white residents is 13.8%, this number is 23.8% for residents who identify as Hispanic or Latino alone.[xvii]

The study area has faced rapid population growth in recent decades, growing by 293.3% between 1970 and 2016 (in comparison to only 58.6 % in the U.S. overall in the same period). While the majority of this growth has been concentrated in Travis County (which grew by 302.7%), Bastrop had the fastest growth rate (374.2%). Employment growth has largely exceeded population growth during this period, with employment growing by 543.4% overall. Much like the area's population increase, this growth has been largely concentrated in Travis (546.6% growth) and Bastrop (441.7% growth) while Caldwell has lagged behind at 139.2%. Large pay differences also exist between the counties. Average earnings per job were nearly twice in Travis County ($66,506) what they were in Bastrop ($35,334) and Caldwell ($33,105) Counties.

Figure 4: Austin's 1928 Comprehensive Plan led to segregation between white residents living in west Austin and minorities living in East Austin.

Despite the area's economic growth, a great deal of economic segregation still exists, roughly following the East-West dividing line of Interstate 35. Austin is frequently listed as one of the most economically segregated cities in the country. The area's rapid population growth has put an enormous amount of pressure on its housing stock. Rising costs for housing have had devastating impacts on low income communities, causing large scale displacement, particularly in Austin, with many displaced residents moving further east into Travis County as well as to Bastrop and Caldwell Counties. East Austin's white population has increased by 442% from 2000 to 2010, while its African American and Hispanic populations have seen decreases of 66% and 33% respectively. Austin's growth has rapidly increased the rate of housing development in its neighboring areas, particularly in western Bastrop County communities such as Elgin and Cedar Creek. Although the increase in housing costs has been most pronounced in Travis County, over 40% of households in all three counties are rent-burdened (devoting over 30% of their household income to rent).[xx]

Community Health

Health outcomes and factors vary greatly throughout the study area (see Table 3). While Travis County ranks 8th in health outcomes and 10th for health factors among Texas' 254 counties, Bastrop County ranks 80th in health outcomes and 150th in health factors, and Caldwell County ranks 130th for health outcomes and 134th for health factors.[xxii] On a county-by-county comparison, Bastrop and Caldwell Counties face a higher prevalence of adult obesity, diabetes, fatal injuries, age-adjusted mortality, and lower access to healthy foods, exercise opportunities, and health services.[xxiii]

In contrast, Travis County stands out as a relatively healthy area. The county surpasses Texas averages on most major health outcomes and beats national averages on many of these.[xxiv] Austin has been suggested as one of the healthiest cities in the country. These county and city-level metrics, however, miss large disparities occurring on the ground. Large health disparities exist along demographic divides, with African American and Hispanic residents more likely to experience many negative health outcomes than their non-Hispanic white counterparts. While adult obesity among non-Hispanic white residents of Travis County sits at 19.4% (well below the state average of 29.6%), adult obesity is 41.7% for the county's African American residents at 36.5% for Hispanic residents.[xxv]

Table 3:
Health Outcomes and Factors by County[xxvi]

	Bastrop	Caldwell	Travis
Poor or Fair Health (Adults)	18%	23%	14%
Physically Unhealthy Days (Average in The Past 30 Days)	3.7	4.1	3.1
Mentally Unhealthy Days (Average in The Past 30 Days)	3.8	3.7	3.3
Adult Obesity	34%	27%	21%
Diabetes Prevalence (Age 20 and Above)	10%	11%	7%
Injury Death Rate (per 100,000)	83	65	57
Premature age-adjusted mortality (Deaths below 75 per 100,000)	380	400	250
Child Mortality Rate (per 100,000)	30	40	40
Frequent Physical Distress (14 or More Poor Mental Health Days per Month)	12%	13%	10%
Frequent Mental Distress	11%	12%	10%
Access to Exercise Opportunities	61%	61%	93%
Physically Inactive (Over Age 20)	21%	29%	16%
Food Insecurity	13%	13%	16%
Limited Access to Healthy Foods	11%	8%	7%
Particulate Matter (Average Daily PM 2.5)	9.2	9.1	10
Long Commute (over 30 minutes) - Drives Alone	54%	52%	34%

Physical Activity

Opportunities for physical activity are lacking for many residents, particularly in Bastrop and Caldwell, where roughly 39% of the population lacks access to exercise opportunities. This lack of recreational opportunities is increasingly being discussed in relation to negative health outcomes. For example, Seton's 2012 Bastrop County Community Health Needs Assessment concluded that the lack of recreation outlets was one of the top priorities that must be solved in addressing obesity, the county's most significant health challenge. Likewise, the 2013 Austin/Travis County Community Health Improvement Plan recommended increasing park access as a means of improving health, specifically recommending increasing access to school grounds through joint use agreements.

Within Travis County, demographics play a heavy role in determining physical activity. While only 9.7% of adults making over $50,000 annually reported no participation in physical activities or exercise, this number is 34.7% for those making under $25,000 a year. Similarly, for non-Hispanic white adults this number sits at 15.3%, compared to 34.5% for African Americans and 31.8% for Latino/Hispanic adults. These racial inequities in physical activity seem to disappear when examining physical activity among children, as this number is roughly the same for white (12.4%) and Latino/Hispanic students (13.6%) and is slightly lower for African American students (10.0%).[xxvii]

Health Services

Accessing health services remains an issue throughout the study area. In Caldwell and Bastrop Counties, a shortage of primary care physicians creates long travel times and wait lists, causing a high prevalence of preventable hospital stays (106.9 per 1,000 medical enrollees in Caldwell County). The high uninsured rate (27.3 %) in Caldwell County compounds this problem. In addition to a shortage of doctors, Caldwell and Bastrop Counties lack sufficient mental health providers and social workers.

Although Travis County does not experience the same lack of health care providers, transportation to medical services remains a barrier. This is particularly true in the outlying communities of Travis County, such as Del Valle, Manor, and Pflugerville. However, even within the City of Austin long bus waiting times can be a problem. Additionally, walking distances to bus stops and a lack of sidewalks make transportation challenging for community members with low access to private transportation. These challenges disproportionately effect the elderly, poor, and the disabled.[xxx]

Table 4:
Health Services[xxix]

	Bastrop	Caldwell	Travis
Population to Primary Care Physician Ratio	3,660:1	3,380:1	1,180:1
Population to Mental Health Provider Ratio	1,880:1	1,580:1	420:1
Percent Uninsured (Below Age 65)	21%	23%	16%
Other (Non-Physician) Primary Care Provider Ratio	2,955:1	2,573:1	1,253:1

Climate Risk

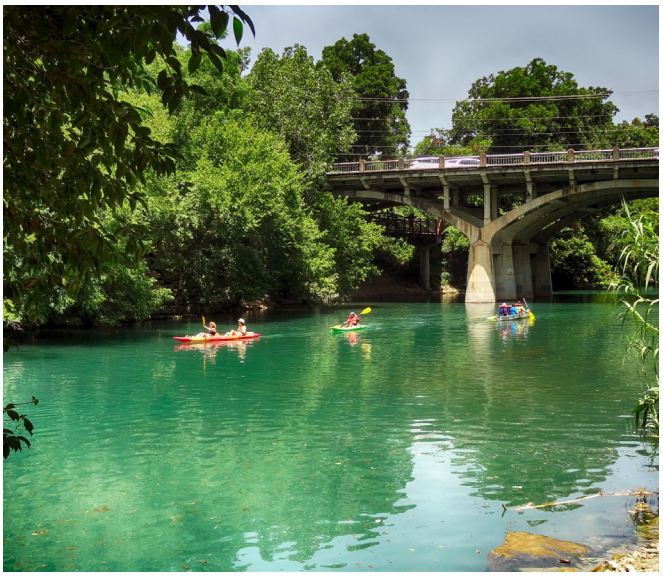
Flooding

Flooding has long been a consistent and major hazard throughout the region, as Central Texas is the most flash flood-prone region in North America. However, in recent years the frequency of floods appears to be accelerating, due to both increasing development and rising precipitation occurring in shorter periods of time. Three 100-year floods have occurred in just the five years between 2013 and 2018 (Halloween in 2013, Wimberley in 2015, and Hill Country in 2018).[xxxi] Even in the years without 100-year floods, flash floods pose a significant risk throughout the study area, with flooding of the Colorado River in Bastrop and Travis and the San Marcos River in Caldwell frequently leading to evacuations and shelter-in-place orders.

The City of Austin has responded by building new stormwater infrastructure, supporting local green infrastructure campaigns, as well as buying parcels in flood prone areas, such as Onion Creek, Oak Park, and Oak Acres.[xxxii] Since 1999, $150 million has been spent buying 848 properties within the Onion Creek neighborhood. [xxxiii]

Heat

Heat has always been a major threat in Central Texas. However, temperatures appear to be rising. 2018 was the third hottest year on record, with 51 days in the triple digits, substantially higher than the area's annual average of 14 days.[xxxiv] Urban heat poses major health risks to residents, particularly those without access to air conditioning, and those with physically demanding outdoor jobs. Between May 1 and September 23 of 2018, Austin experienced four heat-related deaths and 819 heat-related illness cases.[xxxv] Eight of the 10 hottest years on record have occurred since 2000. In addition to acute health problems such as heat stroke, heat also deteriorates air quality and increases wildfire risk. The area's most devastating fire, the Bastrop County Complex Fire occurred in 2011, following the region's hottest summer on record. The fire killed two people and burned 1,673 homes.[xxvi]



Barton Creek offers natural water access without leaving the City of Austin. Image credit: Pallasart.

Parks

Park access and the ability to provide park and recreation services varies greatly within the study area. All of the incorporated cities in the study area provide some access to public parks. Some of the area's most notable urban parks include Zilker Park, which hosts the annual Austin City Limits Music Festival; Zedler Mill Park in Luling, which preserves a historical mill and provides river access; and Elgin Memorial Park, which hosts a new recreation center with a myriad of fitness facilities and also serves as an emergency shelter in the event of disasters.

The study area also hosts many opportunities for nature-based recreation. The Texas Parks and Wildlife Department manages four state parks in the area: Bastrop State Park, Buescher State Park, McKinney Falls State Park, and Lockhart State Park. Water recreation also plays an important role throughout the three-county study area, both for urban and rural residents. A dammed section of the Colorado River in the heart of Austin, Lady Bird Lake, offers opportunities for water-based recreation as well as the popular Ann and Roy Butler Hike-and-Bike Trail, which provides access to Barton Springs, one of the region's most popular opportunities for swimming in a natural setting.

To the west, Lake Travis and Lake Austin provide other opportunities for water-based recreation, although almost all of the shoreline around Lake Austin is privately owned, which greatly limits public access. In Bastrop and Caldwell Counties, the Colorado and San Marcos Rivers provide opportunities for boating, fishing, and swimming. The Lower Colorado River Authority (LCRA) is also a major provider of recreational water access in the area, managing Jessica Hollis Park, McKinney Roughs Nature Park, Lake Bastrop South Shore Park, and Lake Bastrop North Shore Park.

Park Access

52.3% of residents in the study area have access to a park within a 10-minute walk of their home. Park access does not appear to vary greatly by demographic groups within each county, and generally appears slightly higher for lower income groups (see Table 6), likely due to living in higher density neighborhoods.

Park access varies greatly by county. While park access in Travis County sits at 56.5%, this number is 12.9% in Caldwell and 11.2% in Bastrop. While part of this difference is explained by the rural nature of Bastrop and Caldwell Counties, it is likely also due to a lack of capacity to increase park access. Within the City of Austin, various public sector organizations (e.g. Austin Parks and Recreation Department, Travis County Parks, Texas Parks and Wildlife) and nonprofits (e.g. Austin Parks Foundation, Keep Austin Beautiful) devote resources to maintaining and improving park access. In Bastrop and Caldwell Counties, the list of park and recreation providers is far more limited. Although each of the incorporated cities in these counties do maintain local parks, neither Bastrop nor Caldwell Counties maintains a parks and recreation department. This is a significant challenge, in that roughly half the population of Caldwell County and approximately 75% of Bastrop County live in unincorporated communities. In Bastrop County, large amounts of the area's growth are occurring in these unincorporated areas. However, the county is showing strong signs of recognizing and addressing the issue. In recent years Bastrop County has agreed to maintain three local parks that were built as part of development efforts, and several elected officials and county staff are actively pursuing strategies to develop new parks.

Table 5:
Park Availability by County

	Bastrop County	Caldwell County	Travis County
Number of Parks	44	21	763
Park Acres	10,789.4	529.1	42,348.5

Recent Efforts to Improve Park Access

Many communities in the study area have completed recent park master plans, including Elgin (2011), Pflugerville (2011), Bastrop (2015), Travis County (2016), and Lockhart (2018). The Austin Parks and Recreation Department is in the process of drafting an updated Long Range Plan for Land, Facilities and Programs (LRP) titled, "Our Parks, Our Future 2018-2028" to replace their 2010 Long Range Plan. Austin's Cities Connecting Children to Nature Initiative has also helped to raise awareness of the importance of outdoor recreation, approaching the issue from the standpoint of children's health. Several important results have come out of this effort, including a mapping framework for identifying high need areas (The Nature Equity Score), the Cities Connecting Children to Nature Implementation Plan, the Austin Children's Outdoor Bill of Rights, and a Green School Parks effort focused on creating nature-rich environments on school campuses in areas of Austin with low Nature Equity Scores.

In November of 2018, the City of Austin approved $221 million for parks and open space ($149M for Parks and Recreation and $72M for Open Space Acquisition as a component of the Flood Mitigation proposition) as well as $20 million for sidewalks and $3 million in urban trail funding.

Stewardship plays an important role in maintaining parks and open space throughout the study area, with groups like the Lockhart Lions Club, Texas Master Naturalists, and the Austin Park Foundation's Adopt-A-Park Program and It's My Park Day volunteer event contributing money and time to maintaining local parks.

Zedler Mill Park in Luling provides access to the San Marcos River and a piece of history. Image credit: TPL.

Table 6:

10 Minute Walk to a Park Facts

Demographic Category	Bastrop County		Caldwell County		Travis County	
	# Served	% Served	# Served	% Served	# Served	% Served
Total Population Served	9,737	11.2%	5,581	12.9%	711,613	56.5%
Age 19 and Younger	2,477	11.1%	1,574	13.1%	182,100	55.1%
20-64 Years Old	5,591	11.0%	3,150	12.6%	462,416	57.5%
Over 64 Years Old	1,678	12.5%	856	13.4%	67,099	54.1%
White	6,863	11.1%	3,920	12.2%	479,242	56.1%
Black	1,078	17.5%	422	15.9%	62,187	59.0%
Asian	94	12.8%	47	11.5%	51,594	59.9%
Hispanic Origin	3,391	10.2%	3,211	14.2%	239,604	55.9%
Under 75% Median Household Income	1,538	12.4%	750	15.6%	114,343	59.1%
75%-125% Median Household Income	753	10.7%	301	13.1%	49,167	57.5%
Over 125% Median Household Income	1,201	11.2%	809	11.6%	122,216	56.3%

Community Priorities

Engagement Results

Introduction

Community engagement was central to the Healthy Parks Plan process. As described in the Project Approach section, community workshops, focus groups, speak outs, a phone poll, an online survey, and interviews with local stakeholders were conducted between February 2018 and February 2019. The goal of the engagement process was to maximize participation and ensure that underrepresented and underserved voices were heard. The information and recommendations in this chapter are based on input from over 2,000 of community members.

Major Takeaways

Current Park Use Trends

- One-third of community members use parks daily or weekly, another third use parks frequently, and the final third seldom or never use parks.
- The primary reason why people don't visit local parks is that they are too busy to do so.
- Park use varies significantly by demographic group, education, and income, with respondents with higher education levels and incomes using parks more often than those with less education and lower incomes.
- Community members who have lower incomes, lower levels of educational attainment, or who are Hispanic, are more likely to use parks for active recreation than their white, more educated, or higher income counterparts.
- Both park use and park satisfaction are higher in urban areas than in rural communities.
- Park use is very low for older residents, particularly in rural areas. Two-thirds of those age 65 and over in Bastrop and Caldwell seldom or never use the parks.

Increasing Physical Activity

- The greatest barrier to physical activity in the park is the lack of amenities.
- The top requested active amenities are splash pads/water features, paved paths, playgrounds/ play structures, community gardens, fitness zones/ exercise equipment, and swimming pools.
- The top requested supporting amenities included restrooms, drinking fountains, and picnic shelters.
- Parents and their children generally visit parks together. However, parents have difficulty exercising because they are watching their children. Clustering exercise opportunities for parents (e.g. tracks and fitness equipment) near activities for children (e.g. playgrounds and sports fields) would help to address this challenge.
- Opportunities to make parks healthier for people with disabilities include accessible amenities (such as trails, pools, adaptive sports facilities, playgrounds, and exercise equipment) and locating these amenities in a way that is visible and inclusive. Stakeholders also requested improved maintenance, an online database where community members could learn which parks provided specific accessible amenities, and a larger cultural shift that embraces the principles of Universal Design.

Supporting Mental Health

- Beautification was the most highly requested improvement for making parks better places to socialize.
- Shade is the most important feature that helps people to relax in the park, with a preference for the natural shade created by trees.

Bringing Communities Together

- The most highly requested park events and programs included special events (e.g. movies in the park, fairs, concerts, etc.), fitness classes, and environmental education.
- Art in parks should attempt to foster a sense of neighborhood ownership and belonging by celebrating local cultural diversity and community identity.
- Schools are important community anchor points, particularly in rural communities. Schoolyard parks could provide a low-cost opportunity to increase park access.

Nature playgrounds are a great example of an active park amenity that keeps children engaged. Image credit: Architonic.

How are community members using parks now?

Overall Park Use

To understand how best to improve local parks, it is necessary to understand how community members are currently using them. Overall, 36% of phone poll respondents said that they use the parks daily (10%) or weekly (26%) and another 30% use parks frequently. One-third (33%) say that they seldom (25%) or never (8%) visit parks.[1]

County-Specific Trends

Park use is significantly higher in Travis County than in Bastrop and Caldwell Counties. While 38% of the respondents in Travis County use parks daily or weekly, only 22% use the parks that frequently in Bastrop and Caldwell Counties. Less than one-third (32%) of the respondents in Travis said they seldom or never use the parks and recreation areas. In contrast, the majority of the respondents seldom or never use the parks and recreation areas in Bastrop (50%) and Caldwell (52%) Counties. This trend holds true for children in the three counties. In Travis County, 47% of children visit the parks and recreation areas daily (13%) or weekly (34%). Roughly one in four children seldom (17%) or never (5%) go to a park. Park use among children is significantly lower in Bastrop and Caldwell Counties, where only 34% of the children visit the parks and recreation areas daily or weekly and 32% of children seldom or never go to parks. Satisfaction with parks also varies by county. While 82% of phone poll respondents in Travis County are satisfied with the parks and recreation areas, in Bastrop and Caldwell Counties, the satisfaction levels are about 10% lower (71%).

1 The statistics on current park use trends presented in this section are derived entirely from the Healthy Parks Plan phone poll, unless a separate source is specified. For detailed phone poll results, see Appendix 2.

Demographic Trends

Park use varies significantly by demographic group, education, and income, with respondents with higher education levels and incomes using parks more often than those with less education and lower incomes. This difference was particularly pronounced in Travis County. For instance, of the phone poll respondents in Travis County with a high school education or less, 41% seldom or never use the parks compared to 26% of respondents with a college education. Similarly, 39% of the respondents with incomes below $50,000 said they seldom or never use parks compared to just 22% among those with incomes over $100,000. These disparities likely explain why park use is lower in Eastern Travis County, where 37% seldom or never visit parks, than in the generally more affluent Western Travis County, where 27% stated that they seldom or never use parks. Similarly, for children in Travis County, 33% of the children from low education homes and 38% of the children from low income homes seldom or never visit the parks and recreation areas, compared to 11% from high education families and 12% for high income families.

The majority of park users (two-thirds) use parks for both active and passive recreation. However, strong demographic trends did emerge related to recreation type. Community members who have lower incomes, lower education levels, or who are Hispanic are more likely to use parks for active recreation than their white, more educated, or higher income counterparts. Forty percent of Hispanics engage in mostly active pursuits compared to 29% of white respondents. Forty-six percent of those with a high school education or less are more likely to engage in active pursuits than passive pursuits compared to 28% among those with a college education.

Age-Related Trends

A consistent trend throughout engagement was the strong connection between the personal park use of parents and the park use of their children. That is, parents who go to the parks frequently tend to have children who do too. This is due in part to the fact that parents have high park use because they are taking their children to the parks and recreation areas. However, it also indicates that parents who value the parks are passing along these values to their children.

There is also a strong relationship between age and park use, particularly in rural areas. A majority of phone poll respondents in Bastrop and Caldwell ages 50 to 64 seldom or never visit parks, and about two-thirds (65%) of those age 65 and over seldom or never use parks.

Trends by Community Type (Urban & Rural)

Park use is highest in urban areas. This is apparent not only when comparing park use in the more urban Travis County to the more rural Bastrop and Caldwell Counties (see County-Specific Trends above), but also within Travis County. Only 29% of urban Travis County residents reported using parks seldom or never, compared to 41% of their small town and rural counterparts.

What are the greatest barriers to using parks for health?

"People work long hours and commute. They want to spend free time with family."

-Interview Participant

"People are trying to meet their basic needs. Fitness is not a top priority."

-Interview Participant

Barriers to Park Use

According to phone poll results, the most common reason why people seldom or never visit parks is that they are too busy (38%). There is a tendency for lower education and lower income groups to be more likely to say that they don't use the parks because they are too busy. In East Travis County, for example, 45% say they don't use the parks because they are too busy, compared to only 31% in Western Travis County.

Parents in Travis County were unlikely to list their own busy schedules as a barrier to their children's park use, and were more likely (28%) to say that their children were "Not Interested / There Is Nothing They Enjoy" or because they "Have More Interesting Things to Do" (23%). In Travis County only 16% of the parents say that their kids seldom or never use the parks and recreation areas because they are too busy to take them. This was not the case for parents in Bastrop & Caldwell Counties, who were almost twice as likely to say that they are too busy to take their children to the park (30%). This may be due to the longer commute times faced by parents in these counties, as many of them are commuting into Austin each day, as well as the greater distances needed to travel to visit parks.

Barriers to Physical Activity in the Park

When asked on the online survey about barriers to physical activity in the park, the top three responses were all related to amenities: "Lack of restrooms", "The facilities and equipment I want to use are not present", and "Lack of water fountains." During the project's in-person engagement, community members repeatedly mentioned that they go to the park for their children, and don't necessarily associate parks with their own fitness. Many also mentioned that they would be more likely to exercise in the park if there were someone to watch their children, or if they could exercise while watching them.

What are the most needed park amenities?

"There needs to be a diversity of opportunities in a park for all of the things you might be interested in, not just grassy lots."

-Interview Participant

Amenities play a major role in supporting physical activity in parks. When provided with a list of 18 possible answers to the question "Are there things that keep you from being physically active in the park?" the top three responses were all related to active or supporting amenities: "Lack of restrooms", "The facilities or equipment I want to use are not there" and "Lack of water fountains".

Splash pads were the top requested active amenity. Image credit: Christopher T. Martin.

What are the top requested active amenities?

Active amenities provide direct opportunities for community members to be physically active. These facilities are important for supporting health. On the online survey, "The facilities or equipment I want to use are not there" was the second most common barrier to physical activity in the park with 26% of the responses (behind only "Lack of restrooms").

The top requested active amenities included:

- Splash pads/water features
- Paved paths
- Playgrounds/play structures
- Community gardens
- Fitness zones/exercise equipment
- Swimming pools

What are the top requested supporting amenities?

"If you want to do exercise, you also need water fountains and bathrooms."

-Intercept Survey Participant, Mexican Consulate, Austin

Although supporting amenities do not directly provide opportunities for physical activity, their presence may be necessary to enable park users to take advantage of those opportunities.

For example, of a list of potential barriers to physical activity in the park, "Lack of restrooms" topped the list (32%), while "Lack of water fountains" came in third (25%).

The top requested supporting amenities included:

- Park restrooms
- Park drinking fountains
- Picnic shelters (including places to cook)

What would make parks better for socializing?

Beautification

Parks can help combat the negative health impacts of social isolation by providing a free venue for social interaction. Although the amenities that facilitate socializing were highly requested (e.g., "More seating" with a 43% response rate and "More picnic areas" with a 40% response rate), the most highly requested improvement was "Beautification (such as trees, plants, or art)" with a response rate of 47%. For more on the importance of vegetation and art, see "What would make parks better places for relaxing?" and "How could artwork in parks support community cohesions?"

For a science-based review of how parks can support mental health, refer to the Healthy Parks Design Guidelines.

What would make parks better places for relaxing?

Shade

"I don't go to the park because it's too hot. I work in the heat all day, why would I want to spend more time in the sun?"

-Intercept survey participant, Lockhart HEB

When asked what park features help community members to relax, shade emerged as the most critical feature with a 72% response rate on the online survey, even beating out safety (with a 70% response rate). The importance of shade, trees, and vegetation for cooling is confirmed by the question's third highest response, "Lots of plants and trees."

Interview and intercept survey participants also highlighted heat as a major barrier to park use and physical activity, noting that the lack of shade within parks prevents physical activity for much of the year. One intercept survey participant reported driving 15 minutes twice a week to take her children to a more distant park because of the lack of shade in her own neighborhood park.

For community members, shade is the most important feature for relaxing in the park. Image credit: TPL.

What types of programming would bring people to the parks?

Special Events, Fitness Classes, and Environmental Education

"Programs can bring awareness that spaces exist and the types of ways that they can use the space."

-Interview Participant

"Activation and providing programming make it faster and less expensive to achieve health and exercise related goals."

-Interview Participant

Programming and events activate parks, bring people together, and provide opportunities for education and physical activity. In the phone poll, "More events and activities" was the second highest recommendation for improving parks and recreation, behind only requests to build new parks and trails. Interview participants felt strongly that to reach the low-income communities with the greatest need, these programs must be free of charge.

The most highly requested types of events and programming were:

- Special events (e.g., movie in the park, fairs, concerts, etc.)
- Fitness classes
- Environmental education

How could parks be more accessible to people with disabilities?

Opportunities for Physical Activity

"As a person with disabilities I need accessibility and good trails. My wheelchair only takes me to the grocery store without problems. Parks are different. If I wish for something in a park, it is nice trails. That is the only way I'll be active."

-Intercept survey participant at Brookshire Brothers Grocery in Smithville

- **Trails** were identified as a major need. In addition to wide, wheelchair-accessible paths, participants noted that trail systems should be legible, with a clear understanding of how to get from one point to another. This is particularly important for people with visual impairment.
- **Pools** were identified as a major opportunity to increase physical activity, noting that they can provide a more accessible way to exercise, particularly when accompanied by lifts and accessible programming. Hearing impaired people would also benefit from a strobe light in the event of evacuation.

Fitness classes were one of the most highly requested types of programming. Image credit: It's Time Texas.

- **Adaptive sports facilities** were identified as a need in the region. Interview participants stated difficulty finding locations to host events, and listed Houston as an example to which Central Texas should aspire.

- **Accessible playgrounds** are lacking in the study area. In addition to physical accessibility, interviewees noted the importance of clear boundaries within play areas. One stakeholder noted, "For children with sensory disabilities, there needs to be a clear entrance and exit. It lets parents relax."

- **Accessible exercise equipment** was requested by stakeholders; although there is a growing presence of fitness equipment in parks, participants requested more accessible equipment.

Basic Maintenance and Upkeep

The lack of basic supporting amenities and park upkeep were identified as some of the greatest barriers to park use for people with disabilities. Participants identified the need for accessible tables, restrooms, and signage (e.g., high contrast text, large character sizes, sans serif font, and tactile lettering), well-marked accessible parking, and greater maintenance of paths and curb cuts.

Visible and Inclusive

"There needs to be accessible trails that provide the same opportunities as other trails. If there is a great view, there should be an accessible trail to get there."

-Interview Participant

Accessible fitness equipment would make physical activity more universally available. Image credit: Allana Wesley White.

Interview participants felt that accessible amenities should not be separated from other opportunities. One suggestion included adding accessible fitness equipment along the hike and bike trail in Downtown Austin, citing the importance of visibility and inclusiveness. "You're part of the community. It would combat stereotypes about people with disabilities not being active. Once you remove those barriers, people will start to realize this is part of our society."

Better Access to Information

"We need one place with all the info on where the ADA options are. There needs to be one hub with accessibility info. A lot of the time they make something accessible but no one hears about it."

-Interview Participant

Participants also identified the lack of a central hub for park accessibility information as a major barrier. As old parks are given upgrades to make them more accessible, community members are not always aware of these changes, and an earlier negative experience may be enough to discourage them from returning. An online information hub would allow people to better plan their recreational excursions, and make them aware of updates related to accessible features in local parks.

Culture

"We need a cultural shift. Accessibility can't just be a box you check."

-Interview Participant

A culture of "doing the minimum" was identified as a major barrier to improving accessibility in parks. Stakeholders felt that a deeper commitment to the principles of Universal Design would benefit everyone. Participants noted that nature-based recreation sites such as campgrounds and hiking trails are particularly likely to adopt a minimalist approach to accessibility.

Locating exercise opportunities for adults near activities for children would make it easier for adults to exercise while their children play. Image credit: Rebecca Weaver.

How could park design encourage physical activity?

Multigenerational Parks

"It would be nice to do an exercise class at the park if someone were able to watch my kids"

-Intercept Survey Participant, Lockhart Walmart

A consistent theme throughout the engagement process was the belief that parents and children should be able to exercise in the park together. The phone poll results demonstrate that parents and their children are usually using parks together. However, the project's in-person engagement results demonstrated that many adults see parks primarily as places for children's programs or for social time and relaxation (e.g., grilling and river activities) rather than their own fitness. Additionally, some adults mentioned the need for childcare as a barrier to exercising in the park.

Many community members suggested that if adult fitness programs or equipment were located in close proximity to children's sports fields and playgrounds, it would make it easier for adults to exercise while their children played. Interview participants also emphasized this point, suggesting walking loops surrounding playgrounds. Some also noted that if more playgrounds were fenced, particularly in parks located near busy streets, parents would feel more relaxed and be more likely to exercise themselves.

Other suggestions to make parks more multigenerational included ensuring activities for the elderly (e.g. walking loops) and for older children (e.g. skate parks), as well as programming available to adults and children.

How could artwork in parks support community cohesion?

Celebrate Local Culture and Diversity

"Most of our public art seems kind of silly."

-Interview Participant

"There is a profound disconnection between arts-based programming and public parks. The most vibrant art scene are the murals in East Austin. It has nothing to do with parks."

-Interview Participant

"The trails are not culturally neutral. People feel like, 'Those are not our trails'. A bunch of white guys on the trail sends a signal."

-Interview Participant

Parks have the potential to improve social capital and increase community cohesion. Healthy Parks interview participants expressed concern for the state of community cohesion in the region, particularly in minority communities. Gentrification, the fear of deportation, and school closures all threaten these communities. When responding to the statement, "I feel like I belong to my neighborhood," only 9% of white online survey respondents disagreed with the statement, compared to 29% of Hispanic respondents. Interview participants also noted that for many people in minority communities, parks and trails feel like they were not developed for them. Interview participants also felt that parks could do more to incorporate art, and referenced the murals of East Austin as positive examples.

Considering this feedback, as well as the high importance placed on "Beautification" to improve parks as social spaces, stakeholders should try to employ art and design that celebrate local communities, their history, and their cultural diversity. This has the potential to support neighborhood identity, create a greater sense of ownership over local parks and trails in minority communities, and beautify local parks.

How can stakeholders increase park access in areas with low capacity to build new parks?

Schoolyard Parks

"The place we go for exercise is my daughter's high school. We live in suburbia and that place is very safe, belongs to the community, is fenced and there is only one entrance. You feel in control."

-Intercept Survey Participant, Austin Texas, Mexican Consulate

"Community activities revolve around the schools. This is an opportunity."

-Interview Participant

Schoolyard parks serve as a quick, low-cost way to increase park access. Image credit: Asakura Robinson.

"The community is divided into pockets. It is like a wheel. The spokes don't have interaction with each other... older people... Hispanic families... young people moving in, leaving Austin and Elgin and Bastrop... the farmers and ranchers... The school is the axle, because there is no other governing body."

-Interview Participant

Many interview participants expressed concern for the lack of park access in rural communities as well as the lack of opportunities to improve access. In Bastrop and Caldwell Counties, large percentages of residents live in unincorporated communities that lack parks and recreation departments. Geographic isolation, long work days, and a lack of access to public or private transportation can leave these community members isolated and without opportunities for physical activity. However, schoolyard parks provide a potential solution to this challenge. By making school grounds available to the public during non-school hours, communities can drastically increase park access. This solution feels particularly well-suited to rural areas, as community members emphasized that in these small towns, community life revolves around the schools. Furthermore, according to phone poll results, parents in Bastrop and Caldwell Counties simply do not have time to take their children to parks (see "What are the greatest barriers to park use?"). Schoolyard parks would diminish this barrier by locating park opportunities where children already are; in the schools, while adding more convenient exercise opportunities for their adult relatives who come to pick them up.

Residents in some areas did express confusion as to whether or not their local school grounds were open to the public during non-school hours. For this reason, signage announcing the site as a schoolyard park with the site's public hours is essential.

Geographic Priorities

Spatial Data Analysis Results

Mapping key resources, hazards, and demographic factors was a fundamental part of the Healthy Parks Plan process. To determine the highest priority areas for park investments in such a large and diverse region, Geographic Information Systems (GIS) were employed to map the most critical datasets for determining park need (for more on this see the Healthy Parks Plan Approach Section on page 1).

The project's GIS analysis was organized into the following mapping topics:

- Park Access
- Community Health
- Socioeconomic Vulnerability
- Heat Islands and Air Quality
- Flooding and Water Quality

In this section, each of these mapping topics is explained along with the resulting topic-specific map. Although these specific mapping topic results were combined to create one Overall Priorities Map (presented at the end of this section), the results of each topic are also useful independently, and some are associated with particular interventions. The Heat Islands and Air Quality Map indicates where to focus urban tree planting. The Flooding and Water Quality Map shows where flood zones will provide the most promising opportunities for park land. The Park Access Map demonstrates where new parks could have the greatest impact on park access. The Community Health Map shows where additional parks could help address community health issues. The Socioeconomic Vulnerability Map shows where there are underserved populations who may have greater need for the health services provided by parks.

This process was guided by a group of local experts serving on a Technical Advisory Team (TAT). Through webinars and in-person meetings, the TAT guided the analysis by helping to (1) compile a list of relevant criteria to map, (2) collect the best available data, and (3) review results to ensure they accurately reflect on-the-ground realities. This mapping process was iterative, with regular review from the advisory team, followed by revisions based on their input. A list of criteria was generated at the TAT kickoff meeting, with additional criteria being added and removed based on data availability and the continued input of the TAT.

As the analysis progressed, the TAT changed from meeting as an entire group to smaller topic-specific subcommittees composed of experts in that field.

Thirty-five local experts participated in the TAT, representing public health organizations (e.g. Austin Public Health, People's Community Clinic, Children Optimal Health, Texas Department of State Health Services), community organizers (e.g. Community Advancement Network (CAN), Latino HealthCare Forum, Go Austin/Vamos Austin,) universities (e.g. Dell Medical School, Department of Population Health), environmental organizations (e.g. Tree Folks, Nature Conservancy, Texas Parks and Wildlife Department, and Austin Parks Foundation), and parks and recreation departments throughout the project area.

Detailed GIS metadata with descriptions of how criteria were categorized as "Moderate", "High", or "Very High" are available through the Healthy Parks Plan mapping portal. The portal also hosts the project's Decision-Support Tool, which allows users to view the project's GIS analysis results in an interactive setting, sketch potential projects, and measure their impacts.

https://web.tplgis.org/healthyparksplan/

Figure 5: The Healthy Parks Plan mapping framework offers a holistic view of park need by incorporating data from varied topics into a single analysis, accounting for the broad spectrum of health benefits that parks provide.

Overview of Mapping Results

Park Access

One of the most important steps in the Healthy Parks Plan Process was determining who currently has access to a park and who does not. The GIS analysis for this mapping topic followed The Trust for Public Land's ParkServe methodology. The process first identifies areas that are not within a 10-minute walk to a park, excluding very low population density areas. For each of these areas, the following criteria were analyzed and weighted:

- Population Density (50%)
- Percent of Population Age 19 and Younger (25%)
- Percent of Households with Low Income (25%)

Areas outside of walking distance to a park with high combined values for these datasets are considered to have the greatest park need. These are the areas where new parks would create the greatest impact.

The majority of "Very High" need areas are scattered throughout Austin. Other very high need areas include pockets of Smithville, Bastrop, and Camp Swift, as well as the peripheries of Elgin, Luling, and Lockhart, where parks are largely concentrated in the more central portions of town. Bastrop and Caldwell Counties have many other areas outside of a 10-minute walk to a park. However, lower population densities largely exclude these populations from the analysis, or limit these areas to a "Moderate" need ranking.

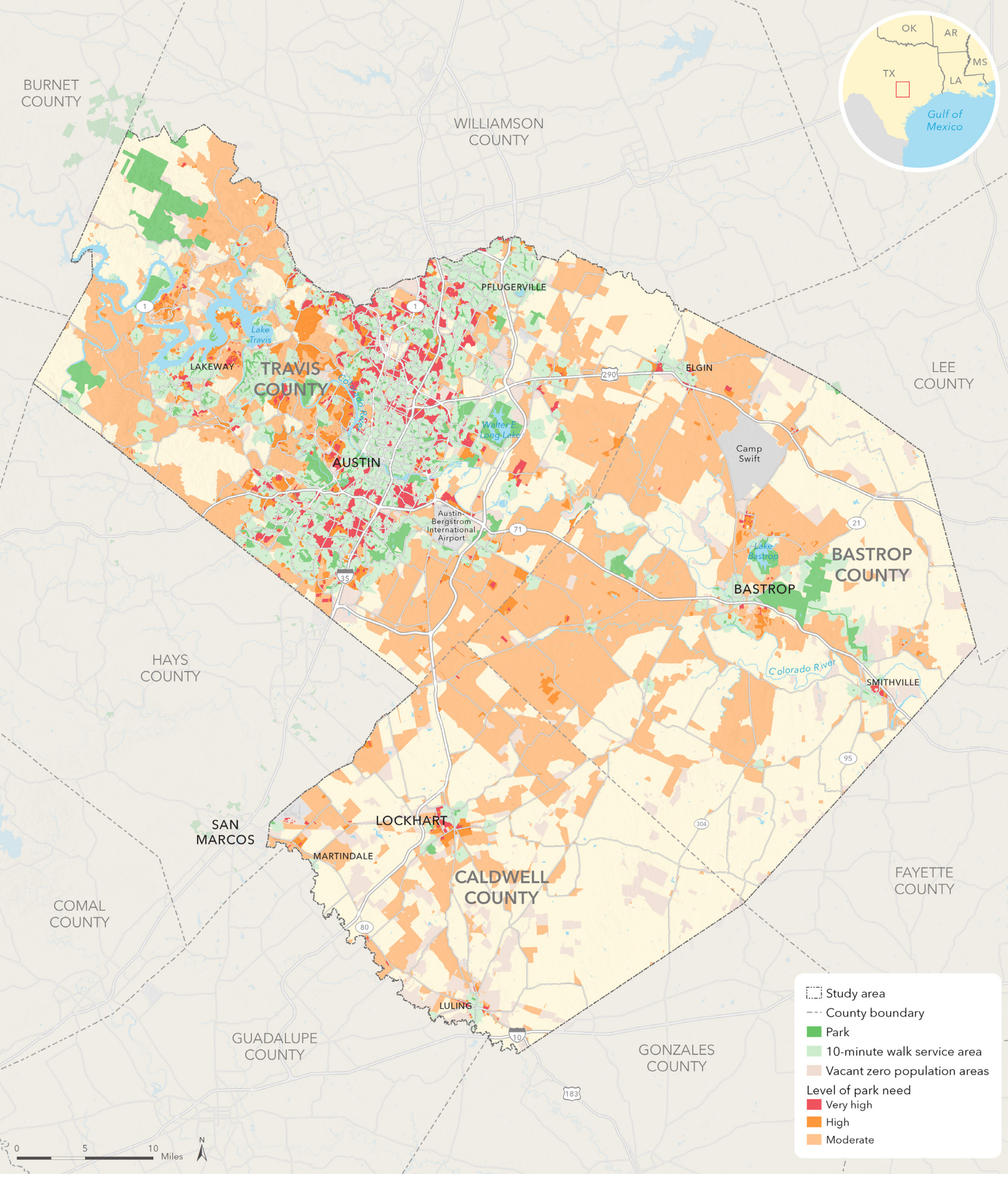


Figure 6: Park Access Map

Socioeconomic Vulnerability

Vulnerability is comprised of all the characteristics that decrease the ability of communities to anticipate, cope with, resist, and recover from hazards. Poverty, isolation, or lack of political voice can all contribute to a population's vulnerability. Communities facing high social and economic vulnerability may have the greatest need for the services provided by parks, and the most limited ability to travel long distances to access these services or to pay to use private recreational facilities.

To determine the areas with the highest Socioeconomic Vulnerability, this analysis examined the criteria below. All of the listed criteria were weighted based on the results of a survey given to the TAT and Steering Committee and combined to create this Socioeconomic Vulnerability Priority Result. The priority areas in this layer represent areas that are the most affected by the many vulnerability criteria examined.

- Low income households (21.0%)
- Economically disadvantaged students (13.9%)
- People of color (11.2%)
- Households without cars (10.2%)
- Population with less than a high school education (8.8%)
- Disabled population (7.1%)
- People over 64 years old (6.1%)
- Children under 5 years old (6.1%)
- Linguistic isolation (6.1%)
- Children 19 and under (6.1%)
- Refugee population (3.4%)

The areas with the highest socioeconomic vulnerability included Eastern Travis County (Austin's Eastern Crescent, Del Valle, and Mustang Ridge), Lockhart, Luling, Smithville, Bastrop, Elgin, and the unincorporated communities around Cedar Creek and Paige. Many of the examined indicators were "High" or "Very High" for the majority of these communities (e.g. low-income households, population with less than a high school education, and children 18 and under).

Linguistic isolation is highest in Eastern Travis County and decreases with greater distance from Austin. The prevalence of People of Color follows a similar pattern, with the exception of larger populations in Lockhart, Elgin, and northern Luling. While some small areas with a higher prevalence of households without cars areas do exist in Austin, they are more common in the incorporated towns of Bastrop and Caldwell. Refugee populations are primarily concentrated in Austin, immediately south of downtown and further north, in the Rundberg area. Economically disadvantaged students were mainly concentrated in Austin's Eastern Crescent.

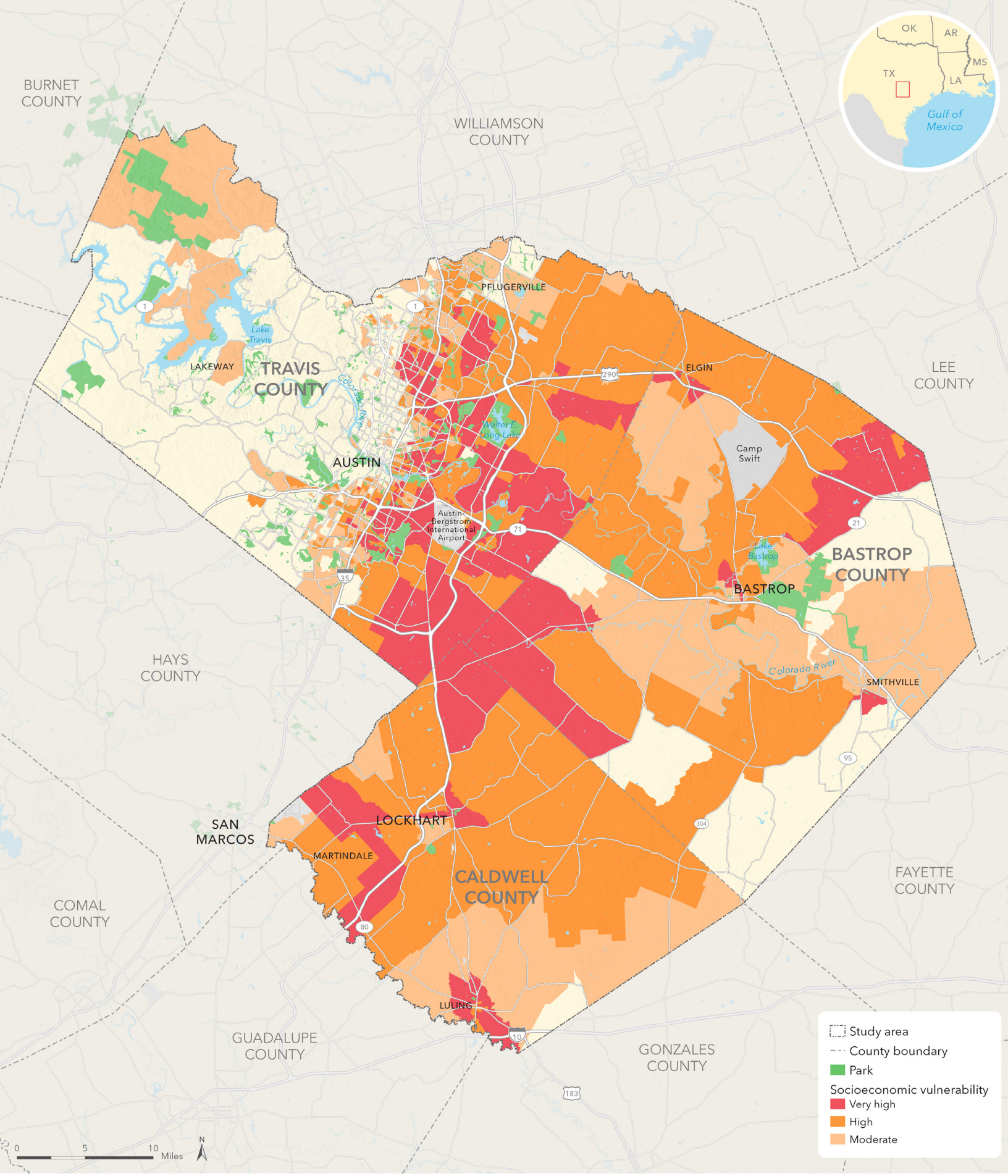


Figure 7: Socioeconomic Vulnerability Map

Flooding and Water Quality

Water-smart parks and playgrounds can help absorb rainfall before it makes its way downstream, deteriorating water quality and contributing to flooding. The Flooding and Water Quality map shows where parks and open space can mitigate a number of water quality issues. The five criteria listed below were weighted based on the input of the Technical Advisory Team.

Opportunities for parks to be a part of a mitigation strategy were mapped by combining these indicators:

- FEMA Flood Zones (30%): These official flood zones provide park and open space opportunities.
- Priority watersheds (30%): Priority is given to watersheds with poor water quality.
- Stream and wetland buffers (20%): These locations are important to preserve for water quality.
- Road and highway runoff (10%): Buffers around roads can improve water quality by absorbing polluted stormwater runoff.
- Erosion potential (10%): An increase in sediment input can cause water quality problems in streams and rivers. A park or natural area can help retain sediment in areas with high erosion potential.

The majority of the highest priority areas follow the region's major floodplains. These include the San Marcos River and Plum Creek in Caldwell County; Cedar Creek, Walnut Creek, and the Colorado River in Bastrop County; and the Colorado River, Gilleland Creek and Onion Creek in Travis County. Very high priority watersheds were primarily located in the developed parts of Bastrop and Caldwell (Luling, Lockhart, Smithville, Bastrop, Elgin, Camp Swift, and Cedar Creek) as well as Del Valle and western Travis County near Baldwin Bend.

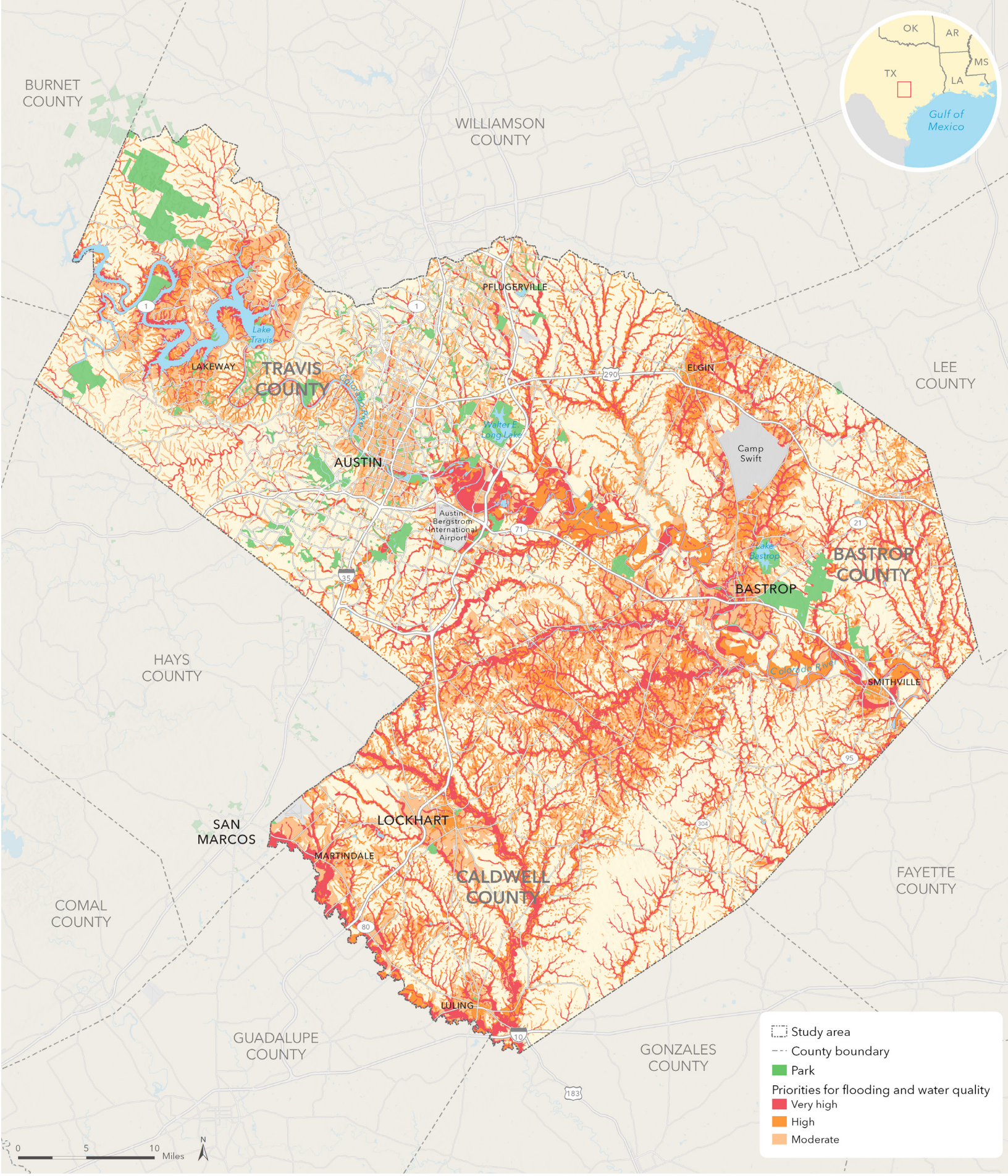


Figure 8: Flooding and Water Quality Map

Community Health

Parks can play a critical role in supporting community health, providing residents with a free, close-to-home opportunity for physical activity. Parks also help relieve stress and combat social isolation. This map identifies areas where increased access to outdoor recreation could have the greatest possible positive impact on health.

The health analysis for The Healthy Parks Plan examined health inequities by mapping and combining thirteen health indicators:

- Among children: asthma, obesity, and poor mental health.
- Among adults: asthma, cancer, chronic obstructive pulmonary disease (COPD), diabetes, heart disease, high cholesterol, kidney disease, poor mental health, obesity, and stroke.

All of the above community health criteria were weighted equally and combined. The priority areas in this map represent the ZIP codes that experience the most negative health conditions. These include Luling and the surrounding area (due largely to a high prevalence of strokes, cholesterol, heart disease, diabetes, COPD, and asthma), Smithville and north-central Bastrop County around McDade and Paige (due largely to high rates of obesity, kidney disease, heart disease, COPD, cancer, and asthma), Cedar Creek (due to a high prevalence of adult obesity, high cholesterol, and diabetes), Sunset Valley in South Austin (due largely to its prevalence of strokes, poor mental health in adults, and high cholesterol), and in parts of East Austin including Hornsby Bend, Central East Austin, and Mueller (due largely to the high prevalence of strokes, poor mental health, adult obesity, kidney disease, heart disease, diabetes, asthma, and obesity).

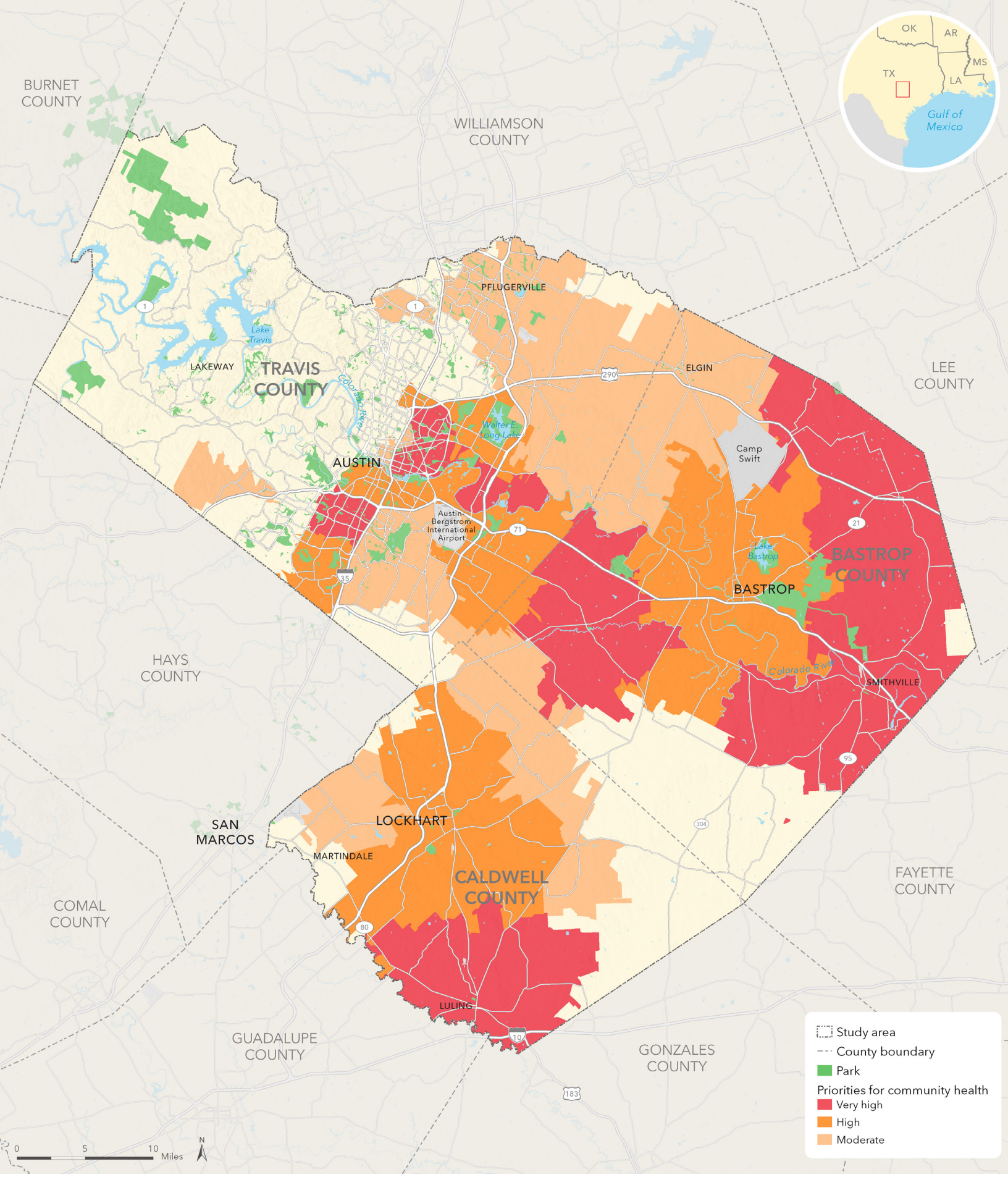


Figure 9: Community Health Map

Heat Islands and Poor Air Quality

Extreme heat is a major risk to human health. Parks can cool surrounding neighborhoods by providing shade and by creating a break in hot surfaces like pavement. Trees and urban canopy also filter some of the air pollutants which cause respiratory diseases and asthma. This map indicates where parks, trees, and green infrastructure can help mitigate heat and poor air quality.

The three criteria below were weighted as per the guidance of the Technical Advisory Team.

- Heat islands (40%)
- Poor air quality (35%)
- Lack of tree canopy (25%)

The results generally adhere to the region's development patterns, with the more developed areas showing a higher level of need. Central Travis County (Austin and Pflugerville) ranked 'High' to 'Very High' on all three indicators. Pockets of "Very High" need exist in western Travis County, primarily due to poor air quality. The more urban areas of Bastrop and Caldwell Counties (Luling, Lockhart, Martindale, Bastrop, Smithville, and pockets of Elgin) all lack tree canopy.

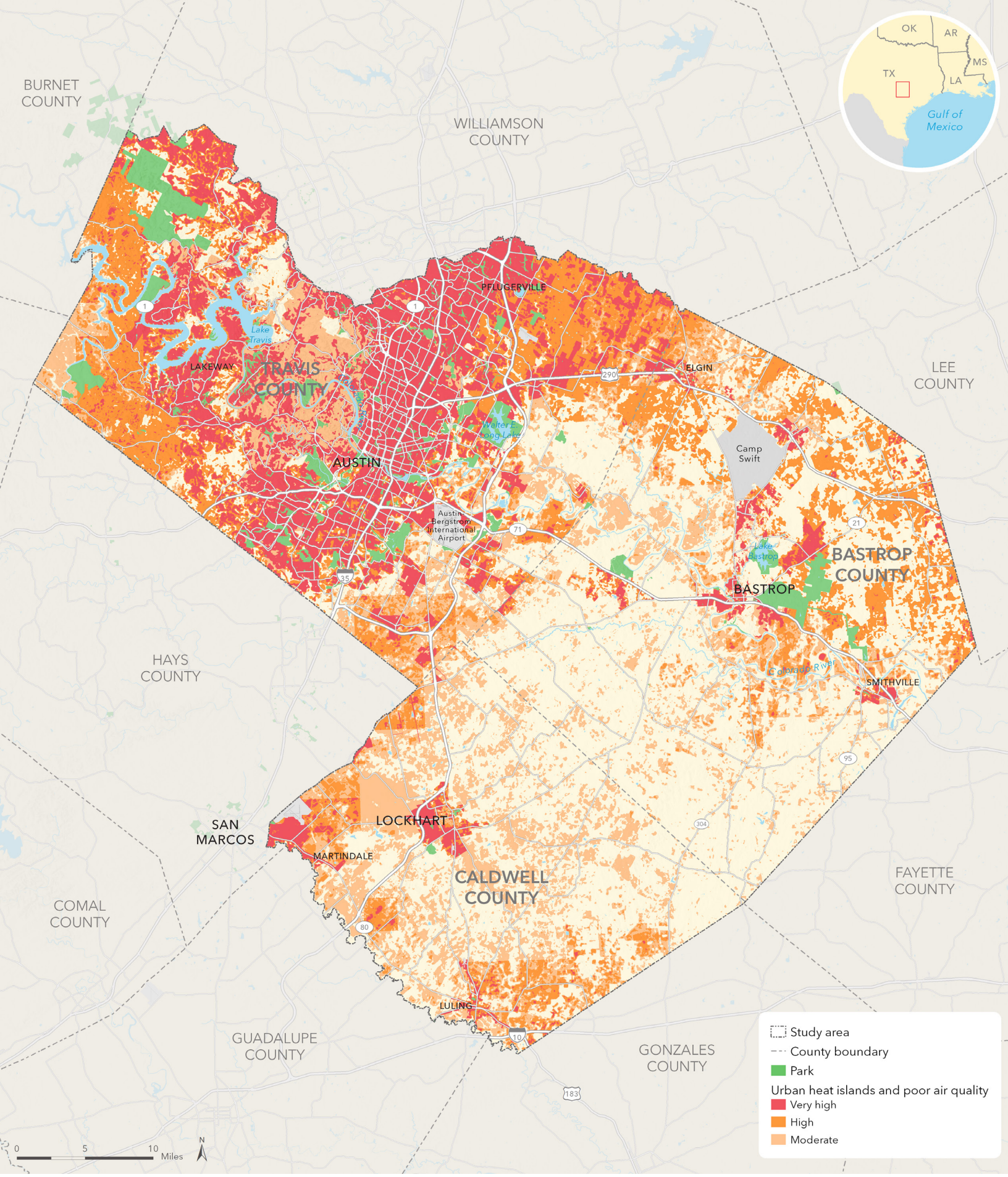


Figure 10: Heat Islands and Poor Air Quality Map

Overall Priorities Map

The Overall Priorities Map combines the mapping results from the five map topics described above. The Overall Priorities Map incorporates results related to parks, community health, flooding and water quality, heat islands and air quality, and socioeconomic vulnerability, and indicates where greater access to outdoor recreation could have multiple benefits within the study area. By incorporating data from such varied topics into a single analysis, the map accounts for the broad spectrum of health benefits parks provide, offering the most holistic view of park need in the study area. The Technical Advisory Team chose to weight all of the five mapping topics equally, as each topic area has major implications for health in the study area. Please note that the Decision-Support Tool includes an interactive slider bar that allows users to experiment with different weights.

- Socioeconomic vulnerability (20%)
- Level of park need (20%)
- Flooding and water quality (20%)
- Community health (20%)
- Heat islands and poor air quality (20%)

The highest overall priority areas are well distributed throughout the region, but generally align to eastern Travis County, as well as the more developed areas of Caldwell and Bastrop Counties (Luling, Lockhart, Smithville, Bastrop, and Elgin) and the smaller, unincorporated areas around Prairie Lea and Fentress in Caldwell County; Cedar Creek, Camp Swift, and McDade in Bastrop County; and Del Valle and the unincorporated area around Blue Bonnet Acres in Travis County.

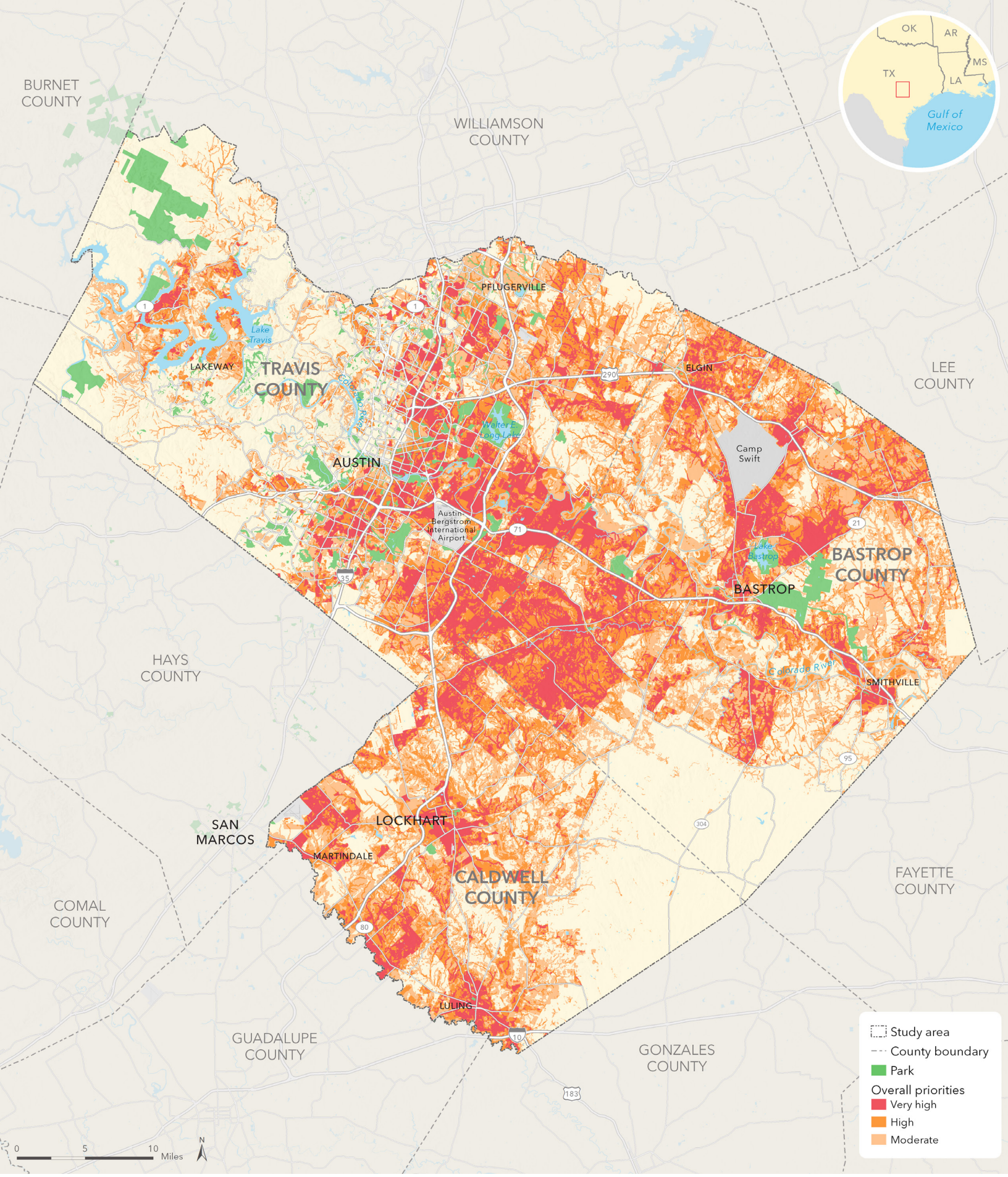


Figure 11: Overall Priorities

Healthy Parks Design Guidelines

What is a Healthy Park?

Parks for Public Health

Public parks have a long history of being valued for their public health benefits. In the late 1800's, doctors were public parks' biggest advocates. Central Park in New York City was planned to be the "lungs of the city" to cleanse the air pollution that plagued Manhattan. These days, public parks continue to play a critical role in public health because they are accessible ways for the public to address multiple facets of personal health and well-being.

Research has shown that adults who visit parks monthly are four times more likely to meet recommended levels of physical activity; however, active recreation is not the only reason people visit parks (Cohen et al., 2007). Other health benefits include parks' ability to support the mental and environmental health benefits these open spaces provide.

Defining a Healthy Park

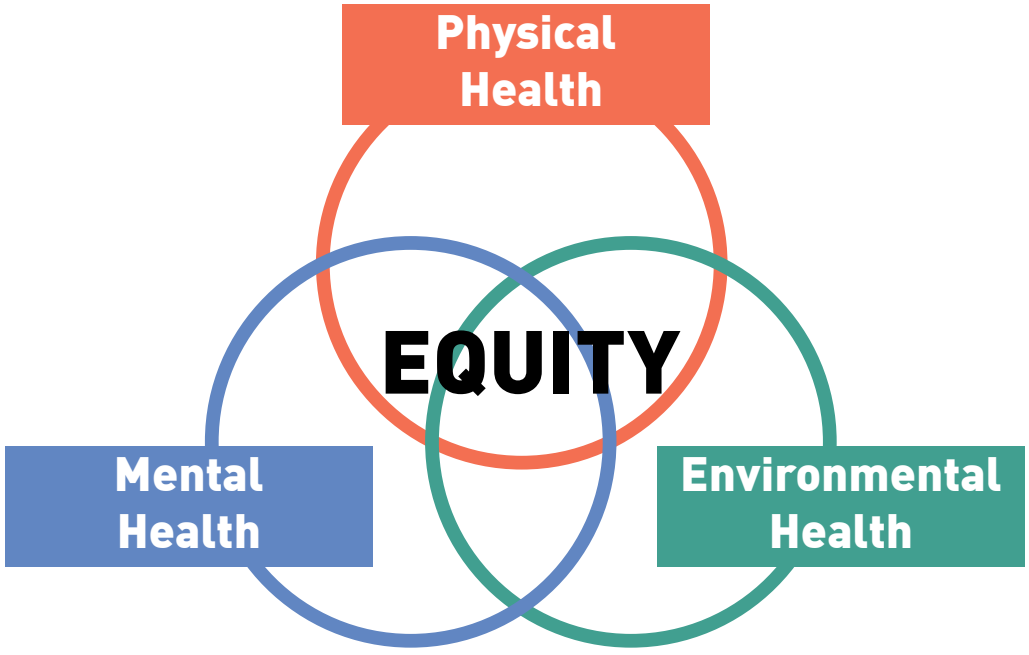
A healthy park provides a range of amenities that enhance each facet of community health - physical, mental, and environmental. Parks support physical health by providing open spaces for active play and sports, playgrounds for children, courts and fields, walking paths, and other park features that provide opportunities for active, outdoor recreation. The mental health benefits of parks are twofold: 1) parks provide opportunities to connect with nature, which has been linked with stress reduction and emotional resiliency and 2) parks are gathering spaces where communities, neighbors, friends, and families gather to strengthen social connections and support networks. Trees and other features of parks enhance environmental health by filtering asthma-triggering air pollution and reducing urban heat island effect.

Healthy Park Amenities

For parks to improve community health, they must be attractive destinations that offer a suite of appealing amenities and activities for visitors. Activities like yoga, dance classes, and sports clubs and social programs are especially important in rural communities where parks may not be the only available option for outdoor recreation. Community engagement during the design process is critical to identifying healthy amenities people will value and use.

Healthy Parks Toolkit

The goal of this guide is to provide a suite of amenities in a "toolkit" to assist in park design decision-making for physical, mental, and environmental health. The positive health effects of each tool is supported by research and provides a way for policy-makers, planners, and designers to make decisions about how open space is best utilized to improve public health.



Guiding Principles

1. **Use community engagement strategies and identify constituencies throughout the design process to determine local park needs and preferences.**

2. **Parks should have a mix of physical health, mental health, and environmental health opportunities for all age groups.**

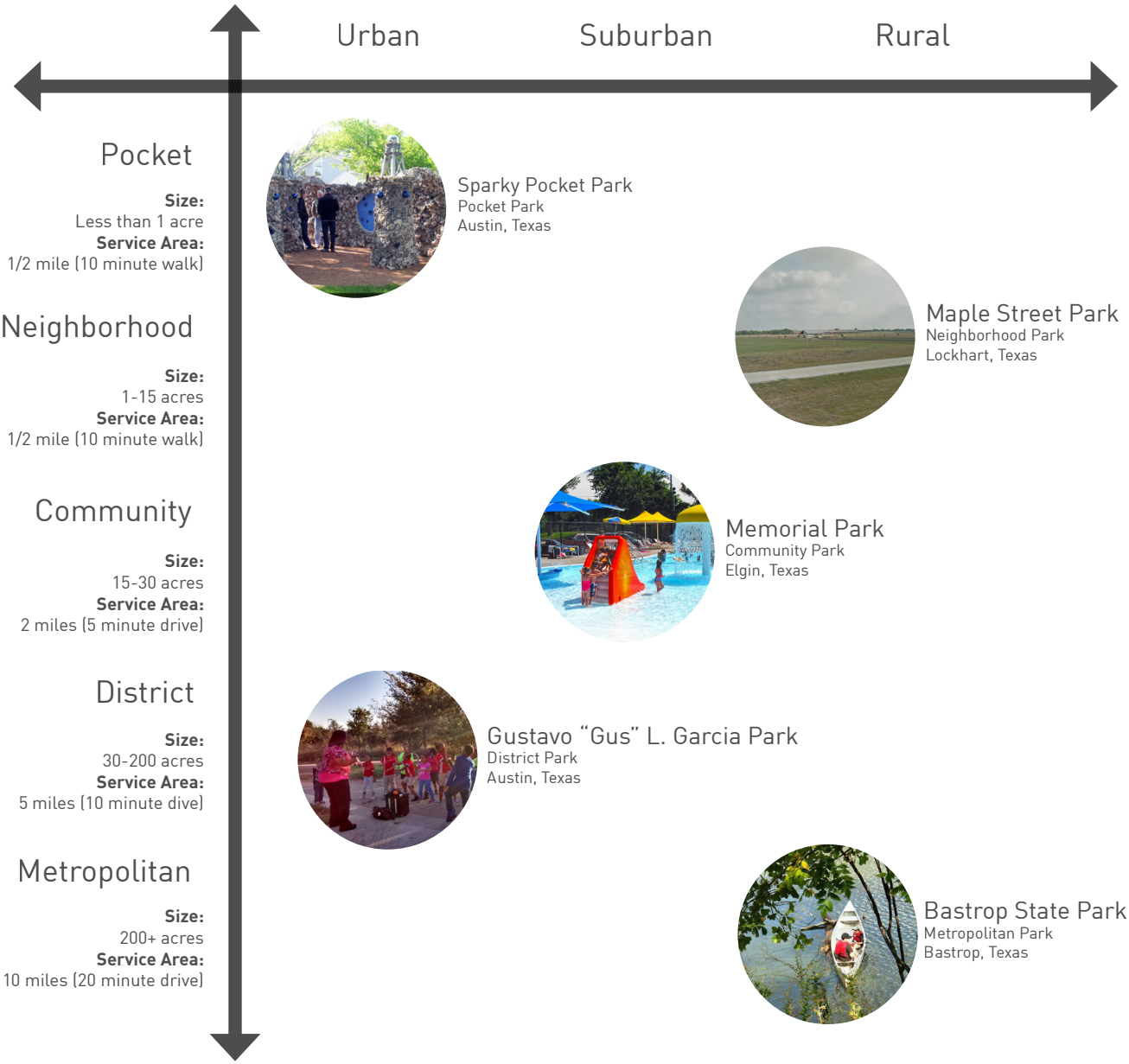
3. **Parks should tie into the existing trail networks and be accessible to public transit users, bicyclists, and pedestrians.**

4. **Safety features like lighting and visibility should be prioritized. Parks should have a planned maintenance schedule to keep all amenities functional for visitors.**

5. **All park amenities and areas should be designed using Universal Design principles and be accessible to all regardless of age, gender, and ability.**

Park Type

Park type and size influences the types of amenities included in the design of the park. The distribution of park amenities that are high-cost and service a large population, such as pools, should be prioritized in larger district and metropolitan parks. Location and distribution of these types of amenities should be distributed based on distance from other parks with the same amenity and the size of the population served as determined by Service Area. Smaller, less expensive amenities that can only be used by a limited number of people at a time, such as fitness equipment and basketball courts, should be distributed among all types of parks in greater density. Overall, every park should have a mix of physical, mental, and environmental health amenities.



Toolkits

The Healthy Parks Toolkits provide"tools" to be included in the planning and design of a healthy park. Because healthy parks offer a range of opportunities to support physical, mental, and environmental health, at least 2-3 tools from each toolkit should be included in park planning and design. Each tool is presented with research on how it enhances health, the relative cost of the tool, and the park type that is best suited for the tool.

Benefits

Tool benefits detail the ways in which the tool improves health.

Citation

The research that supports this tool.

Indicates whether this tool is appropriate for a Pocket Park, Neighborhood Park, Community Park, District Park, or Metropolitan Park.

Park Type

Research or supporting evidence for why this tool is considered a healthy park amenity.

Research

Relative cost of the amenity. Ranges from $ - $$$.

Relative Cost

In the Physical Health Toolkit, Intensity indicates the level of cardiovascular activity or strength the amenity requires.

Intensity

Physical Health Toolkit

While it is widely accepted that exercise is a prevention tool to fight obesity, heart disease, diabetes, and other health problems, more than 60% of American adults are not regularly active, and 25% of the population does not report being active at all (Centers for Disease Control and Prevention).

Parks are one resource public health professionals, planners, and city policy-makers can use to encourage active behavior. When people visit parks they tend to be active; studies have shown a positive correlation between access to open space and increased physical activities. In addition to the walking trails, athletic fields, and other healthy amenities provided by parks, the proximity and accessibility via bicycle or on foot compounds the positive health impact of parks. This toolkit provides a suite of tools parks designers, planners, and policy makers can include in design decision-making to optimize the activity levels of those visiting parks. Decision makers should select toolkit items based on park size, the availability of similar amenities in nearby parks, and park type.

Benefits

Varies with activity, but generally:

- Helps Prevent Obesity
- Lowers Blood Pressure
- Strengthens Muscles

Adolescents who play sports have a lower body mass index and are less likely to have smoked cigarettes or used drugs.

Intensity:

Cost: $$

U.S. Office of Disease Prevention and Health Promotion

Benefits

Varies with activity, but generally:

- Helps Prevent Obesity
- Lowers Blood Pressure
- Strengthens Muscles, Improves Flexibility

A recent study showed that those who engage in physical activity in outdoor environments, rather than indoors, were more likely to repeat the activity and continue to exercise over time.

Intensity: -

Cost: $

Thompson Coon et. al., 2011

Benefits

- Increases Lung Capacity
- Lowers Blood Pressure
- Supports Full Body Strength

In addition to the benefits of cardiovascular exercise, swimming can improve various measures of blood sugar control, such as insulin sensitivity, and improves lung capacity.

Intensity:

Cost: $$$

Chen et al., 2010

Benefits

Varies with activity, but generally:

- Helps Prevent Obesity
- Lowers Blood Pressure
- Increases Muscle Strength
- Slows Bone Density Loss

Walking for thirty minutes a day has been shown to improve circulation, slow bone density loss, lower blood pressure, and strengthen the heart.

Intensity:

Cost: $$

Haskell et al., 2007

Benefits

Varies with activity, but generally:

- Helps Prevent Obesity
- Lowers Blood Pressure
- Increases Abdominal and Upper Body Strength

Water sports such as kayaking, canoing, and paddle boarding require the use of multiple upper body muscles, including backs, abdominal muscles, and upper arm muscles.

Intensity:

Cost: $

Benefits

- Develops Fine Motor Skills
- Develops Gross Motor Skills

Playgrounds provide opportunities for children to develop gross motor skills and fine motor skills. Playground play can contribute significantly to children's daily physical activity needs.

Intensity:

Cost: $$

Adams et. al, 2018

Benefits

Varies with activity, but generally:

- Helps Prevent Obesity
- Lowers Blood Pressure
- Increases Muscle Strength
- Slows Bone Density Loss

Unprogrammed, flexible open spaces allow park visitors to engage in a range of casual active pursuits, such as frisbee or yoga.

Intensity:

Cost: $

Benefits

Varies with activity, but generally:

- Helps Prevent Obesity
- Lowers Blood Pressure
- Increases Muscle Strength
- Slows Bone Density Loss

Running just five minutes per day can extend lifespan by several years by improving heart and cardiovascular health.

Intensity:

Cost: $$

Lee et al., 2014

Benefits

Varies with activity, but generally:

- Helps Prevent Obesity
- Lowers Blood Pressure
- Increases Muscle Strength

Exchanging benches and seating with seated outdoor athletic equipment may provide a substitute for seating while promoting exercise.

Intensity:

Cost: $

Floyd et al., 2011

Mental Health Toolkit

Low-grade stress is a chronic condition that affects a large percentage of American adults, and can lead to reduced immune function and a suite of other long-term health problems.

Research has shown that parks relieve stress and enhance mental health by providing opportunities for contact and connection with nature. While much research connects the benefits of camping or long-term exposure to completely natural environments, even "nearby nature" available in local parks in urban and rural settings improves health, wellness, and productivity. Gathering in green spaces provides the compounded benefit of social connectedness and stress relief, especially in socially isolated populations like the elderly. The tools presented here provide options for amplifying the mental health benefits parks and green space provide.

Benefits

- Helps Prevent Depression
- Supports Heart Health

Strong social connections have been shown to ease depression and reduce risk of heart disease and stroke. These connections form "social cohesion," which is the experience of mutual trust that may arise through neighborhood social events.

Cost: $

Peters et. al, 2010

Benefits

- Helps Prevent Depression

Benches, tables, picnic areas, unprogrammed open spaces, and shelters provide formal and casual places for people to gather and maintain close social ties that prevent depression and isolation, especially in elderly adults.

Cost: $$

Kawachi & Berkman, 2001

Benefits

- Helps Prevent Depression
- Improves Cognitive Performance

Trees have been shown to reduce depressive symptoms. In one study, adults with major depressive disorder reported improvements in both mood and cognitive performance after taking weekly walks on streets with trees.

Cost: $

Berman et. al, 2012

Benefits

Improves Safety and Perceptions of Safety

Adequate lighting encourages active park usage into the evening and improves safety and perceptions of safety within parks. Similarly, maintaining landscaping and lines of sight is an important aspect of feeling safe in a park.

Cost: $

Boyce et al., 2000

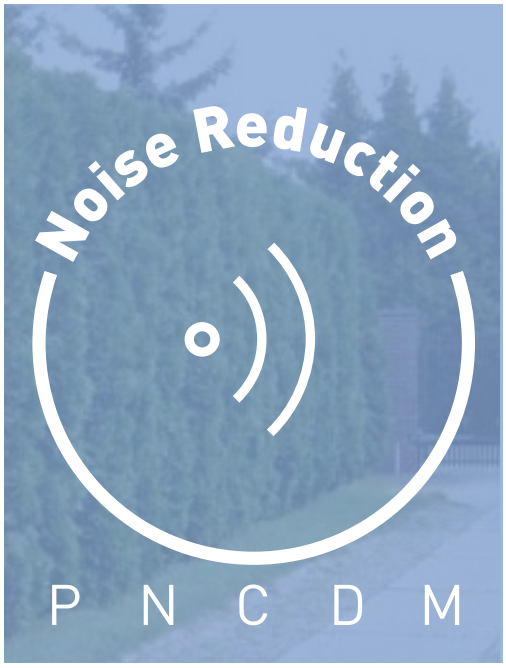
Benefits

Decreases Stress Levels

Time spent in nature, especially in “blue spaces” like ponds, lakes, streams, and fountains, have been shown to decrease stress levels.

Cost: $$

Kaplan & Kaplan, 1989



Benefits

Decreases Stress Levels

Noise pollution in the built environment has been shown to amplify stress levels. Noise management within parks can include the creation of berms or landscaped barriers and low-noise maintenance equipment.

Cost: $

Stansfeld et al., 2003

Environmental Health Toolkit

Ecosystem services are the many benefits provided by our cities' natural systems, such as clean air and water, flood management, and crop pollination.

Public health and well-being also benefit from the services these natural systems provide. For example, poor environmental conditions, such as air pollution and high temperatures from urban heat islands, can negatively affect human health by triggering asthma and heat stroke. Parks and open space can be designed to include elements, such as trees and native plants, to help create environmental conditions that are hospitable to human health. These systems can be made even more effective when they are integrated into parks and open space in a regional network of "green infrastructure."

Benefits

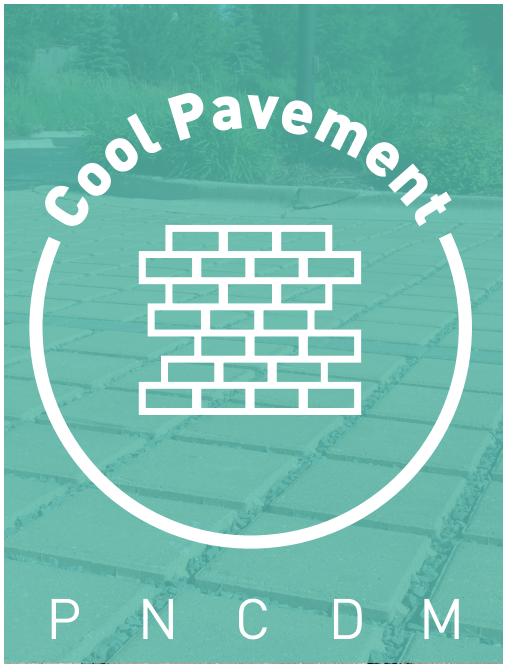
Eases Asthma

Cools Body

Asthma is the most common chronic disease in the United States, and it is often exacerbated by air pollution, which worsens as air temperatures increase. Trees both improve local air quality and provide cooling effects through shading and evapotranspiration.

Cost: $

Frumkin, 2016



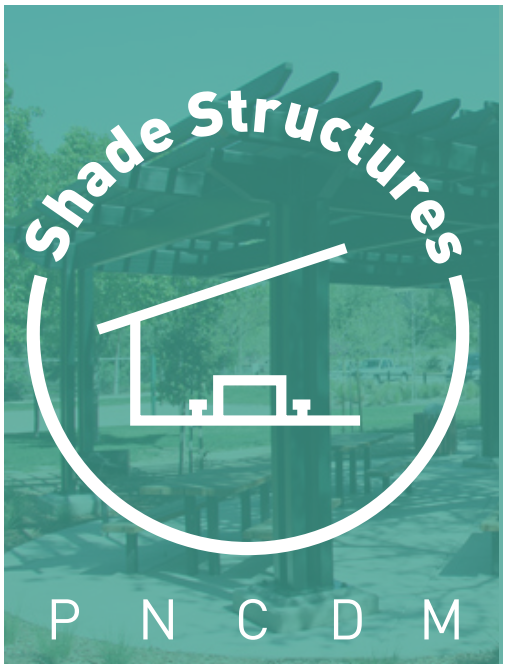
Benefits

Helps Prevent Heat-Related Illnesses

Traditional paving materials can reach summertime temperatures of 120 F - 150 F. This excess heat radiates into the air, creating hot environments that put people at risk for heat-related illnesses. Cool pavement materials reflect solar energy to create a safe ambient temperature.

Cost: $$

Akbari et al., 2001



Benefits

Helps Prevent Heat-Related Illnesses

Hot summer temperatures put people, especially the elderly, at risk for heat-related illnesses. Adequate shading and sheltered activity areas allow for safe park usage even in hot summertime conditions.

Cost: $$

Benefits

- Helps Prevent Obesity
- Improves Nutrition

Many urban and rural communities have limited access to affordable, fresh, and nutritious food. Studies have shown that participating in community gardens increases fruit and vegetable consumption, promotes physical activity, and strengthens social ties.

Cost: $

Egli et al.,2016

Benefits

- Decreases Stress Levels
- Reduces Risk-Related Anxiety

Networked systems of green stormwater infrastructure in cities can reduce flooding, which increases stress and may worsen mental health problems.

Cost: $

Milojevic et al., 2017

Benefits

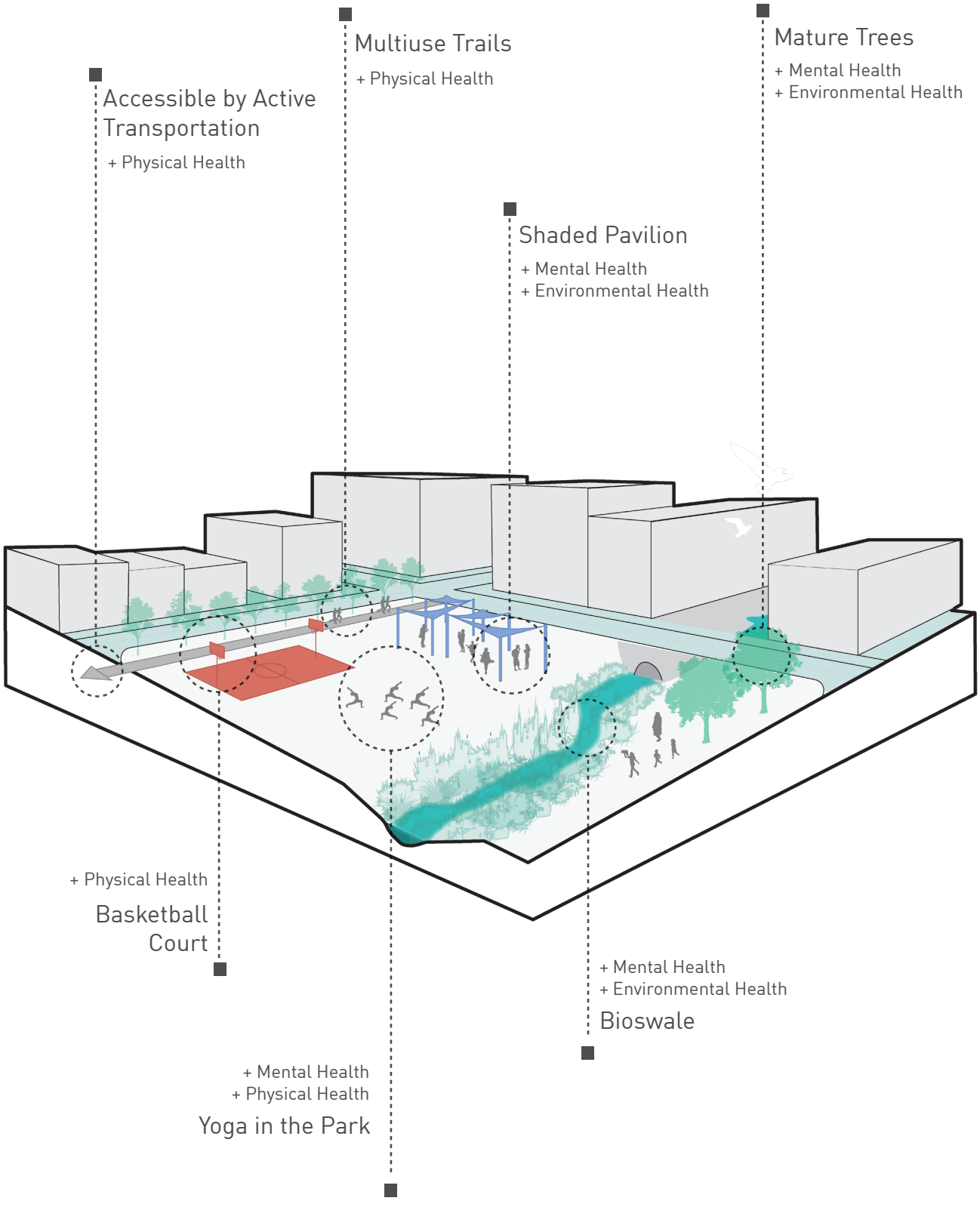
- Immune System Development

Exposure to diverse natural habitats, which can be achieved by planting a diverse mix of plants and trees in parks, helps children develop normal immune responses to allergens and other disease-causing factors.

Cost: $

Sandifer, Sutton-Grier, and Ward, 2015

What does a Healthy Park look like?



Getting Started

How to Get Started

This report provides information that can help communities in Travis, Bastrop, and Caldwell Counties make their parks healthier. However, turning this knowledge into action will require advocacy, collaboration, and ingenuity from local stakeholders.

This section of the report provides guidance on how to utilize the Healthy Parks Plan. It begins with a list of high priority parks located in areas with the greatest need and a list of the schoolyards in high need areas that would do the most to increase park access. Next, it lays out a framework for using these results and the accompanying Decision-Support Tool to support healthy parks in your own community. It concludes with conceptual designs for three parks in the study area. These designs serve as examples of how the project's mapping results can be used to locate existing parks and potential park sites in high need areas, and how stakeholders and designers can utilize both the project's engagement results and design guidelines when deciding how to design or improve their parks.

Initial High Priority Projects

The Overall Priority Map presented in the Geographic Priorities section helps stakeholders to determine which communities and neighborhoods are faced with the greatest need for the services provided by parks. However, as there are over 200 parks located in 'Very High Need' areas, a shorter list of high priority projects was identified in addition to these maps. Based on the mapping results, community engagement data, and input from local stakeholders, the following sites and improvements were identified as projects that have the potential to meet the goals of the healthy parks planning process while being competitive for private and public funding sources.

Bastrop County

Cedar Creek Park, Cedar Creek

Cedar Creek Park, a 37-acre district park, serves the rapidly growing Cedar Creek Community in Western Bastrop County. As one of the only parks in an unincorporated region of the county, the site serves an area with few other park opportunities. The park was selected for a conceptual design incorporating exercise nodes, a splash pad, and spaces for special events into the design (see Concept Designs below).

Delgado Park, Bastrop

Delgado Park is a 3-acre neighborhood park in north Bastrop. The site is a new park and is not yet fully developed. Park needs include a walking trail, community gardens, and basketball courts.

Camp Swift Park, Camp Swift

Camp Swift is a large, unincorporated area located in northern Bastrop County. The area has no access to existing parks. This forthcoming park would fulfill a major need for recreational access in the area. The site was selected for a conceptual design as part of this process (see Concept Designs below). The updated design includes a nature play area along the site's dry creek bed, exercise equipment, shaded trails, and an open field for free play and larger gatherings.

MLK Park, Smithville

MLK Park is a 6-acre neighborhood park in Smithville. The park is primarily used for its little league fields. Potential upgrades to the park include a splash pad, a pavilion, upgraded restrooms and drinking fountains, shade trees, and additional playground equipment with nearby exercise opportunities for adults, such as fitness equipment and a loop trail.

Thomas Memorial Park, Elgin

Thomas Memorial is an 11-acre neighborhood park in Elgin. Potential improvements include additional fitness elements near the park's playground, access and trail improvements, and upgrades to the aging basketball courts.

Stony Point Park, Stony Point*

Stony Point Park is a 5-acre park in the community of Stony Point, a small subdivision in western Bastrop County. The site is located in a relatively remote location and is isolated from other recreational opportunities. Stony Point Park is in need of play equipment.

McDade High School, McDade

Located in northern Bastrop County, McDade is a small, rural community with few opportunities for outdoor recreation or public social space. The McDade Independent School District is interested in making the community's high school a schoolyard park, with access to the grounds for all community members during non-school hours. Requested upgrades include lighting, a soccer field, a walking path, shade trees, and picnic areas to provide a space to socialize.

**Indicates projects have already received some support from St. David's Foundation.*

Blanche Square in Luling, one of the initial high priority sites identified through this process. Image credit: TPL.

McDade Elementary School, McDade*

The McDade Elementary School grounds are in need of playground upgrades.

Caldwell County

Blanche Square, Luling

Blanche Square is a 3-acre neighborhood park in Luling. Stakeholders identified the need for improvements to the existing basketball court and baseball field as well as infrastructure upgrades.

City Park, Lockhart

As a 94-acre Metropolitan park, Lockhart's City Park has enormous potential for serving residents. Existing needs identified by stakeholders include fitness equipment, multi-use trails with maps and signs indicating distances, and upgrades to the park's aquatics facility.

Edgar B. Davis Northside Park, Luling

The 31-acre park north of downtown Luling is loved by local community members for its walking trails. The site was selected for an updated conceptual design as part of this process (see Concept Designs below). The updated design includes a splash pad, new trails, a soccer field, and fitness equipment.

Longer Park, Luling*

Longer Park is a 3-acre neighborhood park in Luling. The site is in need of improvements to its tennis and basketball courts as well as infrastructure upgrades.

Patton Park, Luling*

Patton Park is a 3-acre neighborhood park in Luling. The site is in need of infrastructure upgrades.

Prairie Lea School, Prairie Lea

Prairie Lea is a small community in southern Caldwell County. The community is entirely without park access, as the nearest parks are located over 5 miles away in Luling. Converting the school grounds to a schoolyard park during non-school hours would do a great deal to increase park access in the area.

**Indicates projects have already received some support from St. David's Foundation.*

Town Branch Trail System, Lockhart*

Lockhart's Town Branch Trail System will create a series of trails that will follow the Town Branch Creek. The trail will connect neighbors to both the creek and Lockhart Municipal Park.

Travis County

Austin's Colony Neighborhood Park, Austin's Colony

Located on the northern banks of the Colorado River in eastern Travis County, this 10-acre site is currently underdeveloped, hosting few amenities. Due to its location within the flood plain, low maintenance amenities such as trails, nature play opportunities, and river access points are most appropriate.

Brownie Neighborhood Park, Austin

Brownie Neighborhood Park is an 8-acre site in Austin's Rundberg neighborhood. The park's master plan was recently completed and a new soccer field is already being planned. Additional needs include fitness equipment, a loop trail, a new playscape, and nature play elements.

Boggy Creek Greenbelt, Austin

This 48-acre greenbelt is located in the Patton Neighborhood of East Austin. Stakeholders have expressed a desire to enhance the Boggy Creek Greenbelt by expanding the existing trail system.

Buttermilk Neighborhood Park, Austin

This 17-acre park in the St. John/Coronado Hills neighborhood of Austin abuts a greenbelt, elementary school, recreation center, and library. The site is in need of refurbishing for the existing basketball courts, as well as additional amenities, to be determined by site-specific outreach.

Civitan Neighborhood Park, Austin

This 7-acre neighborhood park in the Montopolis neighborhood is popular for its tennis courts, pool, playground, and baseball/softball fields. Needs include refurbishing of the tennis courts (possibly with some conversion to a different use) and an expansion of the park's loop trail, with added seating, shade trees, and fitness equipment.

Earl J. Pomerleau Pocket Park, Austin

This 2-acre pocket park is located in the Windsor Park neighborhood. The site has a recently completed master plan, which includes a play area, loop trails, shade trees, and native plant restoration.

Givens District Park, Austin

Givens is a 42-acre district park located in East Austin. The site currently has a scheduled playscape replacement. Community members have also expressed their desire for trails and nature play opportunities. A Master Plan for the park was approved by the City of Austin Parks and Recreation Department Board in 2019.

Houston School Park, Austin*

Located on a 9-acre school grounds in South Austin, stakeholders and neighborhood groups have identified the need for an upgraded walking track.

Montopolis Recreation Center, Austin*

This 8-acre park and recreation center provides important recreational opportunities to the Montopolis neighborhood of Austin. In addition to scheduled renovations already underway at the site, stakeholders identified upgrades to the park's pool as a major need.

Quail Creek Neighborhood Park, Austin*

Quail Creek is a 16-acre park in Austin's Rundberg neighborhood. Stakeholders identified the need for fitness equipment and updated play equipment.

St. Elmo School Park, Austin

St. Elmo School Park is located in the South Machaca neighborhood of Austin and measures 6 acres. The site would benefit from nature play amenities, and refurbished basketball courts.

South Austin Neighborhood Park, Austin

This is a 12-acre park located in South Austin. Local community members have requested a trail along the park's perimeter. Although they have been successful in creating a conceptual design for the trail, the neighborhood has been unable to locate funding for the project.

**Indicates projects have already received some support from St. David's Foundation.*

T.A. Brown Neighborhood Park, Austin

This 2-acre park in Crestview sits adjacent the T.A. Brown Elementary School, a local elementary school currently undergoing renovations. The park would benefit from nature play amenities and fitness equipment.

Sanchez School Park, Austin

Sanchez School Park is being developed as a Green School Park, accompanying an overall remodel of the school. Stakeholders identified the need for nature play elements as an integral component of the Green School Park.

Williams School Park, Austin

Located on the grounds of Williams Elementary School in South Austin, this schoolyard park is currently open to community members during non-school hours. Local stakeholders are seeking to create a button park on the site, a small park that is open to the public even during school hours. Button parks are fenced from the school property and contain amenities that are focused on serving pre-kindergarten age children and older adults.

Wooldridge School Park, Austin

This schoolyard park in the Rundberg neighborhood is currently undergoing a Green School Project, with additional nature play elements being added. In addition to these elements, community members have requested upgrades to the basketball and tennis courts, and new sports facilities.

Wooten Neighborhood Park, Austin

Wooten Neighborhood Park is a 7-acre park in the Wooten neighborhood of north Austin. Stakeholders suggested that the site would benefit from fitness equipment and a new playscape.

Schoolyard Parks

Schoolyard parks provide an opportunity for communities to increase park access relatively quickly and at a low cost. By providing public access to school grounds after the school day has completed, stakeholders can drastically reduce park need without acquiring new land or undergoing major construction costs. Furthermore, throughout the community engagement process residents stated the centrality of schools as community pillars, particularly in rural communities. The table below lists the schoolyards located in high need areas that, if converted to schoolyard parks, would lead to the greatest reduction in park need. The top 10 schools are presented here for both Bastrop and Caldwell Counties. The Travis County list contains its top 15 sites due to the greater number of schools in Travis County with the potential to substantially reduce park need. This is due to both the higher number of schools in Travis County and the county's higher population density.

Table 7:
Potential Schoolyard Parks Ranked by Number of New People with Park Access (Travis County)

School	School District	County	Grade Range	New Population Served
Pleasant Hill Elementary School	Austin ISD	Travis	Pre K-5	5,522
Padrón Elementary School	Austin ISD	Travis	Pre K-5	5,379
Ridgetop Elementary School	Austin ISD	Travis	Pre K-5	4,640
Galindo Elementary School	Austin ISD	Travis	Pre K-5	4,591
Reagan Early College High School	Austin ISD	Travis	9-12	4,409
Baty Elementary School	Del Valle ISD	Travis	Pre K-5	4,170
Settlement Home	University of Texas University Charter School	Travis	6-12	3,893
Harris Elementary School	Austin ISD	Travis	Pre K-6	3,796
Burnet Middle School	Austin ISD	Travis	6-8	3,542
Bedichek Middle School	Austin ISD	Travis	6-8	3,232
Dawson Elementary School	Austin ISD	Travis	Pre K-5	2,593
Pickle Elementary School	Austin ISD	Travis	Pre K-5	2,564
Walnut Creek Elementary School	Austin ISD	Travis	Pre K-6	2,468
T.A. Brown Elementary School	Austin ISD	Travis	Pre K-6	2,362
Dobie Middle School	Austin ISD	Travis	6-8	2,278

Table 8:
Potential Schoolyard Parks Ranked by Number of New People with Park Access (Bastrop County)

School	School District	County	Grade Range	New Population Served
Smithville Junior High	Smithville ISD	Bastrop	6-8	1,202
Smithville Elementary School	Smithville ISD	Bastrop	3-5	1,088
Cedar Creek Intermediate School	Bastrop ISD	Bastrop	5-6	263
Bastrop Middle School	Bastrop ISD	Bastrop	7-8	252
Elgin Middle School	Elgin ISD	Bastrop	6-8	230
Smithville High School	Smithville ISD	Bastrop	9-12	224
Cedar Creek Middle School	Bastrop ISD	Bastrop	7-8	204
Booker T. Washington Elementary School	Elgin ISD	Bastrop	K-5	187
Brown Primary School	Smithville ISD	Bastrop	Pre K - 2	141
Emile Elementary School	Bastrop ISD	Bastrop	Pre K - 4	136

Table 9:
Potential Schoolyard Parks Ranked by Number of New People with Park Access (Caldwell County)

School	School District	County	Grade Range	New Population Served
Navarro Elementary School	Lockhart ISD	Caldwell	1-5	1,124
Clear Fork Elementary School	Lockhart ISD	Caldwell	1-5	985
Lockhart High School	Lockhart ISD	Caldwell	9-12	884
Bluebonnet Elementary School	Lockhart ISD	Caldwell	Pre K - 5	869
Lockhart Junior High School	Lockhart ISD	Caldwell	6-8	577
Luling Primary School	Luling ISD	Caldwell	Pre K - 1	306
Leonard Shanklin Elementary School	Luling ISD	Caldwell	2-5	283
Gilbert Gerdes Junior High School	Luling ISD	Caldwell	6-8	271
Luling High School	Luling ISD	Caldwell	9-12	265
Pride High School	Lockhart ISD	Caldwell	9-12	204

Healthy Parks the DIY Way

While the lists of high priority parks and schoolyards above provide opportunities to support healthy parks throughout the study area, these lists are not exhaustive. The results of this project are intended to benefit communities throughout the study area by helping them to determine their own opportunities to make parks healthier. The framework below provides instructions for getting started using the Healthy Parks Plan in your own community.

Determining Healthy Parks Priorities in Your Community

Should your community focus on improving existing parks, or building new parks? Many communities struggle with this question. Of course, the ideal is usually to do both, but in the short term it may be necessary to determine one over the other. This decision will be determined in part by on-the ground realities, such as funding availability and sources, staff capacity, and the availability of land. However, for communities that do have a decision to make, the Healthy Parks Plan can help.

A good place to start is the project's Park Access map, viewable in this report or in the project's Decision-Support Tool (https://web.tplgis.org/healthyparksplan/). If large parts of your community are located in high or very-high need areas, that means that many local residents live outside of a 10-minute walk to a park, signaling a need for increased recreational access in the form of new parks or schoolyard parks. However, if the vast majority of your community lives within a 10-minute walk to a park, park access may not be a major barrier to park use, and you can focus your resources on improving existing parks.

Using the Mapping Results and Decision-Support Tool to Select Locations

Regardless of whether your community chooses to focus on building new parks or improving existing parks, the project's mapping results can help you to select locations. Start off by using the Overall Results map in this report, or viewing the data in the Decision-Support Tool to find the highest need areas in your community. If you or your organization value one mapping topic above the others (for example, you are very focused on reducing heat islands) you can use the Scenario Tool to adjust these results based on your own priorities. If you are locating parks to improve, make note of the parks that are in the highest need areas.

The Decision-Support Tool's query function can also help you to find potential locations for new parks. Simply enter the criteria you are searching for (for example, a publicly owned, vacant parcel in a high need area) and you will be given a list of parcels. Once potential sites have been located, the Project Impact Tool allows users to sketch potential parks in high need areas and collect data about the population that the park would serve.

If you find that a great deal of park need exists in your area (that is, many areas are outside of a 10-minute walk of a park) but your community has very limited ability to build new parks, you may consider investing in schoolyard parks. Load the schoolyard park analysis in the Decision-Support Tool together with the Park Access and Overall Results maps to check if there are schools in the high need areas that could be converted to schoolyard parks. Then, click on a school to learn about the population that it would serve as a schoolyard park.

This section provides a brief overview of the ways in which the Decision-Support Tool can help you to support healthy parks in your community. For the complete manual, please visit https://web.tplgis.org/healthyparksplan/

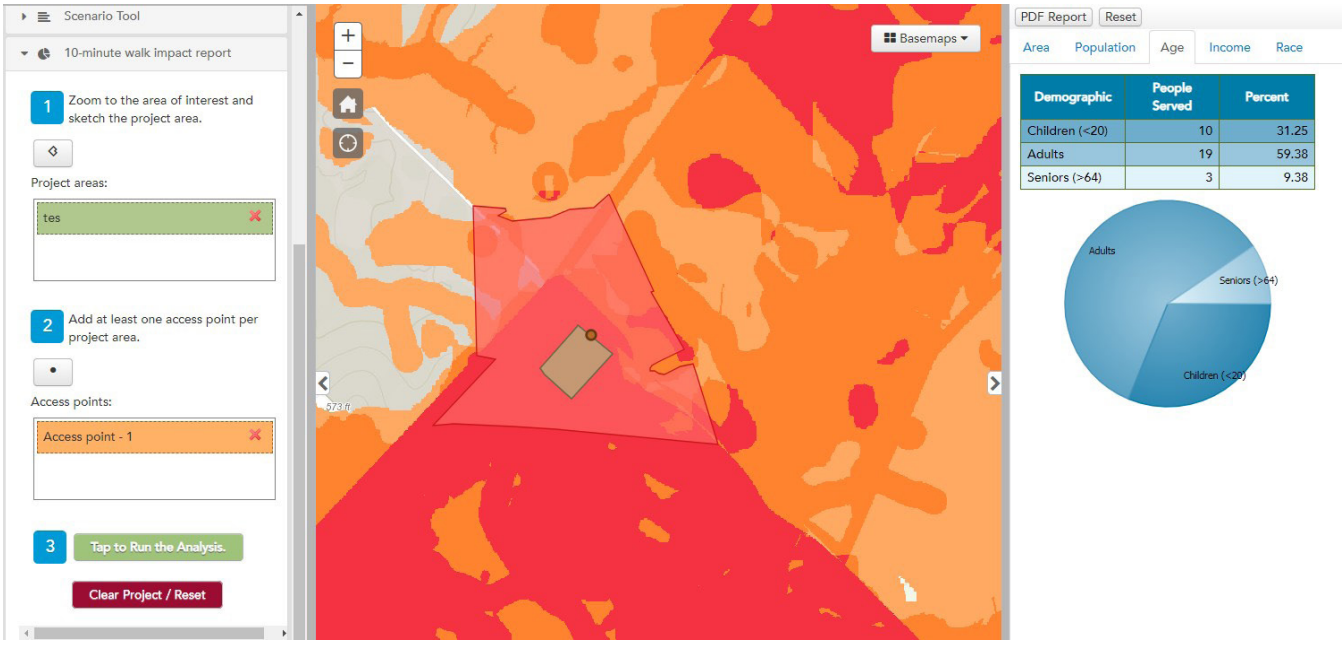
Making Decisions about Amenities and Design

Once you have located the park you want to improve, or a location for a new park, it is time to make decisions about how the park will be developed or improved.

- **Use the data in the Decision-Support Tool to learn more about the site and its surrounding area.** Although these mapping results are primarily used to help determine a site, they can also help to decide how best to improve the site. If the site is in an urban heat island, for example, tree planting will be particularly important. If the park is in a priority watershed, green infrastructure features like bioswales will help to maintain local water quality.

- **Review the community engagement results in the Community Priorities section.** This section summarizes residents' top priorities for making parks better places for relaxing, socializing, and being physically active. When possible, it is beneficial to do site-specific community engagement, discussing the site with the local neighborhood residents, reviewing the design guidelines and engagement results, and inviting them to help design the site. Identifiying constituencies for park projects at the beginning of the planning stage ensures the best probability of prioritizing improvements that benefit the specific park users and visitors.

- **Review the Healthy Parks Design Guidelines.** These guidelines will help you to understand what park features can do the most to benefit physical, mental, and environmental health. Look for areas of overlap between the items in each toolkit and the community's priorities, and try to incorporate at least 2-3 tools from each of these toolkits into your park.



The Decision-Support Tool allows users to sketch potential park sites and measure their impact on local communities.

Putting it All Together: Healthy Parks Prototypes

Concept Designs

To illustrate how this process can be used to develop new parks and enhance existing parks, conceptual park designs were developed for 3 sites in the study area, including 2 existing parks and 1 park that is still in the planning phase.

These park designs and the process involved in their development provide examples of how the Healthy Parks Plan can be utilized moving forward. The Decision-Support Tool was used to determine these 3 sites, which are all located in very high need areas. Once the sites were located, landscape architects at TBG Partners developed conceptual designs for the sites utilizing both the project's community engagement results and design guidelines. By combining these elements, they were able to determine how to make each site healthier while also meeting the community's needs.

Guiding Principles

- Use community engagement strategies and indentify constituencies throughout the design process to determine local park needs and preferences.
- Parks should have a mix of physical health, mental health, and environmental health opportunities for all age groups.
- Parks should tie-in to existing trail networks and be accessible by bicycle, public transit, and pedestrian access.
- Safety features like lighting and visibility should be prioritized. Parks should have a planned maintenance schedule to keep all amenities functional for visitors.
- All park amenities and areas should be designed using Universal Design principles and accessible to all regardless of age, gender, and ability.

Design Key

The following categories are denoted in the legend of each park concept design on the following pages. In each design, park features and amenities are marked with the letters p, n, and m. These letters refer to the health benefits that are provided by that feature. As explained in the Healthy Parks Design Guidelines (page 47), parks can provide three types of health benefits to their surrounding community.

Physical health benefits (features which provide opportunities for physical activity) are symbolized with a "p". Mental health benefits (features which help combat stress or facilitate social interaction) are symbolized with an "m". Environmental health benefits (such as features that cool urban temperatures) are symbolized with an "e".

Physical Health

Toolkit:

- Athletic Fields
- Fitness Programs
- Swimming Facilities
- Multi-use Trails
- Water Sports
- Playgrounds
- Open Fields
- Tracks
- Fitness Equipment

Mental Health

Toolkit:

- Social Events
- Gathering Spaces
- Mature Trees
- Visibility and Safety
- Water Features
- Noise Reduction

Environmental Health

Toolkit:

- Tree Canopy
- Cool Pavement
- Shade Structures
- Community Gardens
- Green Infrastructure
- Native Plantings

Camp Swift Park, Camp Swift

Camp Swift is a large, unincorporated area of Bastrop County. Like many communities outside of the area's incorporated cities, the community has no existing parks. The effort to make Camp Swift Park a reality is being led by a group of ambitious stakeholders. If the site is built, it will be the first new park developed by the government of Bastrop County, and would fulfill a major need for recreational access in the area.

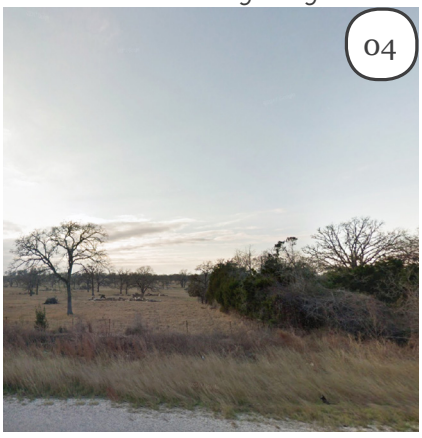
The site is located on a corner parcel currently owned by the City of Bastrop, although stakeholders are also hoping to acquire additional land to the west and south of this parcel in the future. The site is relatively flat, heavily treed with a mix of cedars and oaks, and hosts an ephemeral creek bed.

The site's conceptual design takes advantage of these natural features by maintaining existing trees for shade, adding nature play elements surrounding the creek bed, and maintaining the pastoral areas on the southern side of the site as open spaces for special events and free play. The open views created by these undeveloped areas will also help to address residents' safety concerns. The design also adds highly requested park features, such as trails, picnic areas, restrooms, and playgrounds placed in close proximity to fitness equipment to allow parents to exercise while watching their children.

Standing water at existing foundation

Dense shrubs and trees

Gate access at firing range



Pastoral view of the southern parcel

Existing Conditions

Conceptual Design

Park Design Elements

01_ crosswalks to neighborhoods
02_ make entry statement
03_ parking on street with walk
04_ paved entry road
05_ privacy gateway into gun range
06_ 5'-8' gravel trail (p)(e)
07_ 3-5' berms for buffer/seating area (m)
08_ fitness plaza with exercise equipment (p)
09_ soccer fields (p)
10_ community bldg/restrooms/ concession/stage opportunity (e)
11_ parking lot with walks
12_ picnic pavilion at old building with architectural character and seating (m)
13_ dry creek along play area (e)
14_ playground area with swings/seating (p)
15_ nature trails/shaded seating (m)(e)
16_ upgraded landscape along roadway
17_ open field for performances/ movies/free play (m)

(p) physical tool
(m) mental tool
(e) environmental tool

Cedar Creek Park, Cedar Creek

Cedar Creek Park, a 37-acre district park, serves the rapidly growing Cedar Creek community in western Bastrop County. As one of the only parks in an unincorporated section of the county, the site serves an area with few other recreational opportunities. The park sits directly south of Cedar Creek Elementary School.

The site currently hosts a trail, butterfly garden, picnic pavilion, playgrounds, baseball fields, and volleyball and basketball courts. The updated design expands the existing trail system and activates it by adding fitness equipment. The design also incorporates additional sports fields, splash pads, a potential pool area, an event pavilion, adds shade trees throughout the park, and maintains some of the existing open fields for large events.

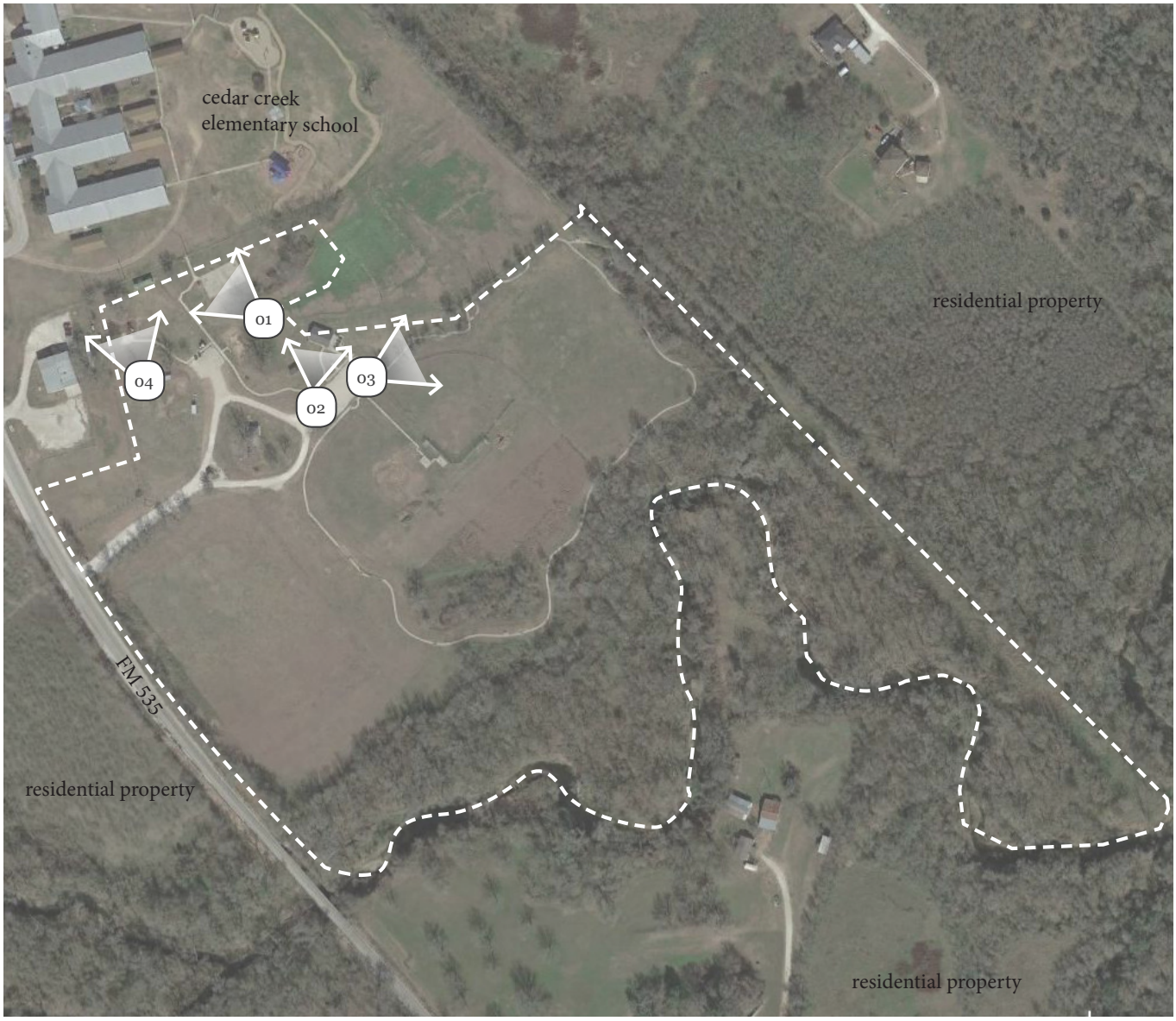
View of playground from pavilion

Picnic pavilion

Start of walking trail

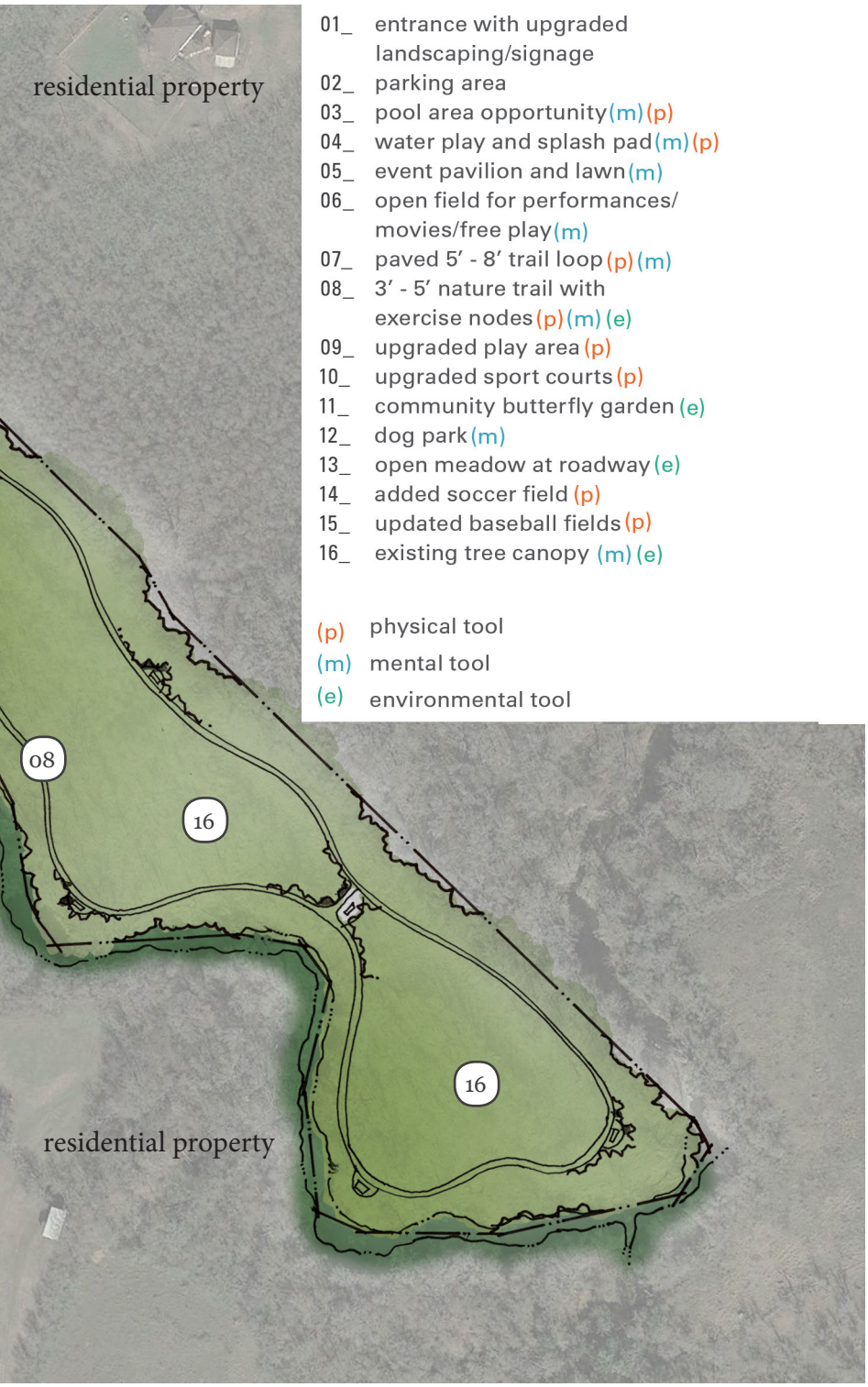
Swings near school

Existing Conditions



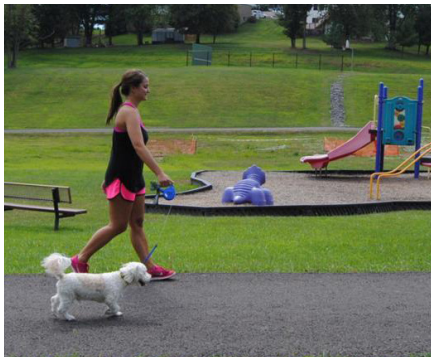
Conceptual Design

Park Design Elements



01_ entrance with upgraded landscaping/signage
02_ parking area
03_ pool area opportunity (m) (p)
04_ water play and splash pad (m) (p)
05_ event pavilion and lawn (m)
06_ open field for performances/ movies/free play (m)
07_ paved 5′ - 8′ trail loop (p) (m)
08_ 3′ - 5′ nature trail with exercise nodes (p) (m) (e)
09_ upgraded play area (p)
10_ upgraded sport courts (p)
11_ community butterfly garden (e)
12_ dog park (m)
13_ open meadow at roadway (e)
14_ added soccer field (p)
15_ updated baseball fields (p)
16_ existing tree canopy (m) (e)

(p) physical tool
(m) mental tool
(e) environmental tool



Edgar B. Davis Northside Park, Luling

E.B. Davis is a 31-acre park located north of downtown Luling. The park is loved by local community members for its walking trails. It also includes baseball fields with a concession building, batting cages, a playground, a pavilion, a basketball court, and a community building.

The updated design expands the trail system, adds soccer fields, additional parking, a splash pad, and upgraded landscaping. Fitness equipment is located both along trails as well as close to the updated play area, basketball court, and baseball fields, allowing parents to exercise while at the park for children's activities. The redesign also incorporates a new dog park, which was highly requested by Luling residents.

Start of walking trail

Existing play structure

Gateway to batting cages

Existing basketball court

Existing Conditions

Conceptual Design

Park Design Elements

01_ entrances with upgraded landscaping (e)
02_ possible splash pad zone (visible from road) (p) (m)
03_ added parking areas
04_ updated protected play area (p)
05_ upgraded baseball fields (p)
06_ upgraded batting cages with added screening (p)
07_ sloped event lawn for movies/ performances (m)
08_ dog park zone (m)
09_ updated community event space with access to restrooms/event lawn/ picnic areas/food truck zone (m)
10_ upgraded basketball court (improve restrooms, remodel walls, repave court, new goals) (p)
11_ upgraded pavilion (possible 2nd) with new seating (m)
12_ paved minor loop trail (p)
13_ major loop trail with exercise nodes (p)
14_ secondary recreation area/ bmx trail system (p)
15_ slightly re-oriented park drive with some on-street parking
16_ added soccer field (p)
17_ exercise/fitness node (p)

(p) physical tool
(m) mental tool
(e) environmental tool

Final Thoughts

Parks are a crucial component of any community's public health strategy. They provide a free venue for physical activity, bring communities together, support mental health, and create healthier environments. The Healthy Parks Plan provides stakeholders with the tools to build healthier communities through parks. The project's community engagement process collected input from over 2,000 community members, learning what a healthier park looks like to local residents and how government and nonprofit institutions can help to make that vision a reality. The project's maps can help stakeholders to locate areas that lack park access and identify communities with the greatest need for the health benefits provided by parks. The Decision-Support Tool allows users to view this data in an interactive manner, adjust weights based on their organization's priorities, and measure the impacts of potential park projects. The Healthy Parks Design Guidelines provide a science-based toolkit for making existing parks healthier for the mind, body, and environment, and for designing new parks to maximize health benefits. Implementing this vision will be a collaborative effort, led by the many passionate park and health advocates that are already leading the fight for a greener, heathier, and more equitable Central Texas.