

PASADENA
Healthy Parks Plan

October 2020

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HOUSTON
PARKS BOARD

LAND + WATER
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3: Appendix C: Engagement Summaries
- Community Survey Report
- Telephone Poll Report
- Community Workshop #1 Results
- Additional Engagement Results: Phase 1 Infographic + Phase 2 Report

4: Appendix D: Data Analysis Background (full details on all data sources)
5: Appendix E: Finance Feasibility Report
6: Appendix F: Cost Estimate Table for Priority Projects











Preface

How to Use the Healthy Parks Plan

The Healthy Parks Plan is community-driven and data-driven—with a strong focus on equity. It is designed to be not only a report, but a set of tools for the Pasadena Parks and Recreation Department and its partners to use for ongoing adaptive planning and management. Conditions in Pasadena will change over time, as will opportunities for funding, partnerships, and parkland acquisition. The Healthy Parks Plan is designed to be responsive to these changes. The Plan outlines priorities for the next five years, but the tools and recommendations can also be used much farther into the future.

The Healthy Parks Plan is designed to help make decisions at a wide range of scales from a single park or parcel to a neighborhood to the entire citywide park system. There are three primary types of information in the Healthy Parks Plan: Assessments, Tools, and Recommendations. Some elements fit into more than one of these categories as shown in Table P-1. The Pasadena Healthy Parks Plan follows the guidelines for local park master plans established by the Texas Parks and Wildlife Department (TPWD).The locations of information required by TPWD are shown in Table P-2.

Table P-1. Elements in the Healthy Parks Plan: Assessments, Tools, and Recommendations

Assessments	Tools	Recommendations
Pasadena Profile Planning Context Park System Inventory Programming Inventory Assessments of Priority Parks Park System Benchmarking Community Priorities Mapped Priorities Funding Feasibility Report	Park Assessment Tool Community Priorities (engagement results) Mapped Priorities (Indexes) Compiled GIS from Mapping Analysis (joined with parcel data) Healthy Parks Design Guidelines Project Selection Criteria and Methodology Funding Feasibility Report Park Life Cycle Assessment	Goals, Objectives, Implementation Steps Table Park System Standards Priority Project Recommendations: Park Projects, Connectivity, Programming Concept Design for Memorial Park

Plan Organization

Chapter 1: Healthy Parks Plan: Why and How
Benefits, Goals, Approach

Chapter 2: Pasadena Profile and Context
History, People Profile, and Environment Profile

Chapter 3: Park System Inventory, Assessments, & Benchmarking
Park System Overview, Programming Overview, Summary of In-Depth Park Assessments for Priority Parks, Park System Benchmarking

Chapter 4: Community Priorities
Community Engagement Results

Chapter 5: Mapping Priorities
Mapping Analysis Results and Mapping Indexes

Table P-2. Texas Parks and Wildlife Department (TPWD) Requirements

TPWD Requirement	Healthy Parks Plan Report Chapter
Introduction	1
Goals and Objectives	1 and 6
Plan Development and Public Input Process	1 and 4
Area and Facility Concepts and Standards	3, 6, and 8
Inventory of Areas and Facilities	3
Needs Assessment and Identification	2, 3, 4, 5, 6, 7, 8, 9
Plan Implementation and Prioritization of Needs	6, 7, 8, 9
Proof of Adoption	Appendix

Chapter 6: Goals and Standards
Goals/Objectives/Implementation Steps Tables, Park System Standards,

Chapter 7: Priority Projects and Capital Improvements
Project Identification, General Cost Estimates

Chapter 8: Tools & Guidelines
Park Design and Park Improvement Tool, Project Selection/ Prioritization Criteria, Funding Feasibility Summary, Programming Life Cycle Assessment, Park Assessment Tool

Chapter 9: Applying Healthy Parks Plan Tools and Standards: Healthy Parks Design for Memorial Park
Project Selection Methodology, Assessment of Memorial Park, Concept Design for Memorial Park

Proof of Adoption

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    - Additional Engagement Results: Phase 1 Infographic + Phase 2 Report
4. Appendix D: Data Analysis Background (full details on all data sources)
5. Appendix E: Finance Feasibility Report
6. Appendix F: Cost Estimate Table for Priority Projects

Acknowledgements

The Pasadena Healthy Parks planning process began in 2019 and was completed in 2020. Forty-three Advisory Committee members participated in shaping the Plan, along with thousands of local residents who participated in the project's equity-driven community engagement plan. The creation of the Healthy Parks Plan was made possible by generous funding from the Houston Endowment and Pasadena Vibrant Community (a program of The University of Texas MD Anderson Cancer Center funded by Shell Oil).

Core Team & Partners

The mission of the **Pasadena Parks and Recreation Department** is to enhance the quality of life for our citizens through the city's exceptional parks, programs and activities.

The **Houston Parks Board** creates, improves, protects, and advocates for parks for everyone. The vision of the Houston Parks Board is thriving parks and communities for everyone forever.

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 and our employees are leaders in social and environmental design.

Land and Water Connections Consulting leads community-based planning and research projects to help expand equitable access to the benefits of parks and conservation.

City of Pasadena

Mayor Jeff A. Wagner

City Council

Ornaldo Ybarra, District A
Bruce Leamon, District B
Don Harrison, District C
Sammy Casados, District D
Cody Ray Wheeler, District E
Phil Cayten, District F
Cary Bass, District G
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Beth White, President and CEO

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Amber MacNeish, Pasadena Independent School District*
Ashea Jones, Lone Star Legal Aid*
Bakeyah Nelson, Air Alliance Houston
Cheryl Mergo, Houston-Galveston Area Council
Chip Place, Houston Parks Board (former)
Chris Saddler, Harris County Precinct 2
Curtis Lampley, Harris County Flood Control District
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Donny Taylor, City of Pasadena Parks and Recreation Department*
Elizabeth Love, Houston Endowment
Emily Kelley, Brighter Bites
Emily Paul, YMCA of Greater Houston, American Heart Association
Ernest Cook, Land/Water Associates
Glenn Laird, Harris County Flood Control District
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Ivan Santillanes, City of Pasadena Police Department
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Janna Roberson, Urban Harvest
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Katie Chennisi, Harris County Public Health
Katy Oestman, The University of Texas MD Anderson Cancer Center/Pasadena Vibrant Community*
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Kimberly Sorensen, Texas Parks and Wildlife Department
Margie Peña, BakerRipley*
Mark Kramer, Armand Bayou Nature Center*
Matt Singer, Galveston Bay Foundation
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Raul Camarillo Jr., Harris County Precinct 2*
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Tim Miller, City of Pasadena Parks and Recreation Department*
Tim Pylate, Armand Bayou Nature Center*
Trina Rodriguez, City of Pasadena Parks and Recreation Department*

Note: An * indicates a member of the Advisory Committee who also participated in an interview for the Healthy Parks Plan. In addition to these 17 Advisory Committee members, the following four people were interviewed:

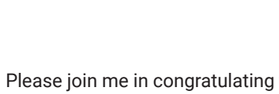
Cristina Womack, CEO, Pasadena Chamber of Commerce
Melissa Quijano, Community Development, City of Pasadena
Michelle Blunt, Manager of the Verne Cox Adaptive Recreation Center
Veronica Nino, Community Health Worker, Memorial Hermann

Message from Mayor Wagner

Please join me in congratulating the City of Pasadena Parks and Recreation Department on the success of their recent Healthy Parks Plan initiative. Our parks and recreation programs are a critical part of this community and we are so blessed to have the opportunity to enhance them even more. This endeavor could not have been possible without the support of several amazingly generous entities: Houston Parks Board, Asakura Robinson, Houston Endowment, Pasadena Vibrant Community, The University of Texas MD Anderson Cancer Center and Shell Oil Company.

The Pasadena Healthy Parks Plan encompasses months of hard work by our team, as well as input from residents all over the city. Suggestions and feedback were solicited through in-person meetings, online surveys and virtual workshops. Despite meeting restrictions caused by the COVID-19 pandemic, our team persevered and successfully attained more than 4000 responses and valuable feedback that will help the City of Pasadena upgrade parks and services for generations to come.

Thank you to everyone involved. God Bless you, your family and God Bless Pasadena.



Jeff Wagner

Mayor, City of Pasadena

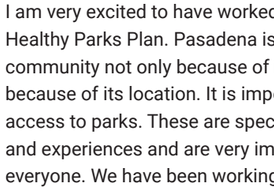


City of Pasadena Mayor Jeff Wagner

Message from Parks and Recreation Director Jed Aplaca

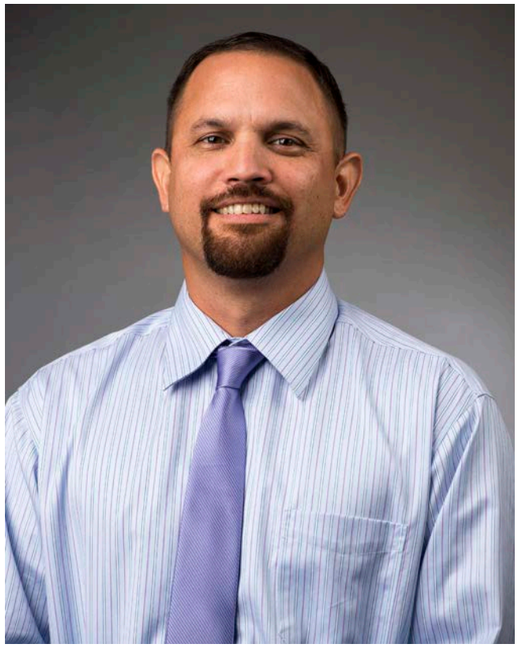
I am very excited to have worked with our team on this Healthy Parks Plan. Pasadena is a wonderfully diverse community not only because of its demographics, but also because of its location. It is important that all people have access to parks. These are special places create memories and experiences and are very important to quality of life of everyone. We have been working hard to gather community input, hard data and best management practices to put together this plan. This has been a very important process and we appreciate all the input from the community and local stakeholders.

We also must understand that things are constantly changing, and the Parks and Recreation Department and its partners will always be finding better ways to do things. Accessibility to well-maintained parks, programs and facilities is very important to everyone and this will be at the forefront of the Department's mission. Implementation may take time, but with support, collaboration and partnerships like the ones put together to undertake this plan will help to accomplish many of the goals in this plan. The Pasadena Healthy Parks plan would not have been possible without generous support from the Houston Endowment and The University of Texas MD Anderson Cancer Center. As we move forward through storms, pandemics and other issues that befall our society, Pasadena's parks, our programs and facilities will be there for everyone to create memories and experiences that will last a lifetime.



Jed Aplaca

Director, City of Pasadena Parks and Recreation Department



City of Pasadena Parks and Recreation Department Director Jed Aplaca

Executive Summary

What is the Healthy Parks Plan?

The Pasadena Healthy Parks Plan is based on the premise that parks are absolutely essential to health and quality of life. While the Healthy Parks Plan meets all the requirements of a traditional park system master plan, it also goes deeper by making health and equity the central lenses for looking at park needs. Health as addressed by this plan includes the physical, mental, social, and economic health of Pasadena residents and the environmental and financial health of the City of Pasadena and its park system.

The goal of the Healthy Parks Plan is to identify the highest priority investments to ensure that Pasadena continues to thrive through making its parks healthy, welcoming, and accessible to all. **The long-term vision for the Healthy Parks Plan is a healthy, thriving, and connected Pasadena where safe, beautiful, welcoming parks ensure that everyone has a place to belong, be active, and enjoy nature.**

The Healthy Parks Plan is community- and data-driven. The plan identifies current recommendations and priority projects, but also provides a set of tools for the Pasadena Parks and Recreation Department and its partners to use for ongoing adaptive planning and management as conditions change.

Developing the Healthy Parks Plan involved: (1) Equity-driven community engagement; (2) Incorporation of local, scientific, and design expertise; (3) Assessment of existing park and programming resources; and (4) Mapping of key indexes that help identify priority locations for park improvements and new parks. Assessment of park resources included in-depth assessments of ten priority parks (Memorial Park, Strawberry Park, Ghana Playlot, El Jardin Beach, Bliss Meadows Park, Oaks Drive Playlot, Tatar Park, Sherwood Park, Light Company Park, and Parklane Play Lot). The indexes developed through the mapping analysis address Socioeconomic Vulnerability, Community Health, Environmental Vulnerability, and Park Need (see Chapter 5).

In addition to system-wide and site-specific recommendations, Healthy Parks Design Guidelines (see Chapter 8) were developed for promoting physical activity (Move), expanding access to the mental health benefits of parks (Relax), bringing people together to foster social connections (Gather), reducing extreme heat (Cool Off), improving air quality (Breathe), and supporting ecological health to benefit people and nature (Support Nature). The final component of the Plan is a conceptual design for phased improvements to Memorial Park; this design brings together all of the Healthy Parks Plan's tools and recommendations.

Vision and Guiding Principles

OVERALL GOAL

Identify the highest priority investments to ensure that Pasadena thrives through making its parks healthy, welcoming, and accessible to all.

VISION

Our vision is a healthy, thriving, and connected Pasadena where safe, beautiful, welcoming parks ensure that everyone has a place to belong, be active, and enjoy nature.

The overall goal for this project was identified early in the project by the core team. The vision and the guiding principles were developed collaboratively by the Advisory Committee with the guidance of the core team. Advisory Committee members voted unanimously to affirm adoption of the vision and guiding principles.

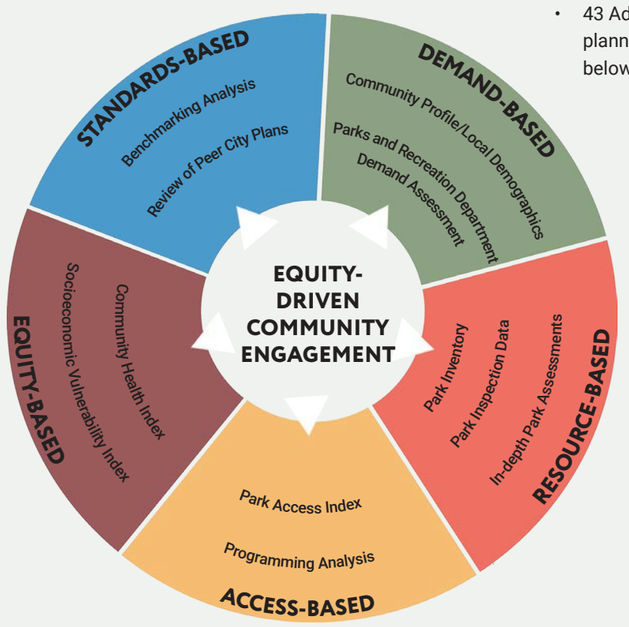
Guiding Principles

1. **A healthy park system is fundamental to Pasadena's quality of life.** New parks and park improvements should maximize social, health, environmental, and economic benefits.
2. **Parks are critical for healthy communities and people.** Parks bring people together, improve physical and mental health, build civic pride, and strengthen local economies.
3. **Parks contribute to a healthy environment.** Parks provide green infrastructure that improves local air and water quality and helps protect residents from flooding and extreme heat. When parks incorporate natural elements, they reduce environmental risks, provide habitat for wildlife, and create opportunities to connect with nature.
4. **Parks improve economic health.** High quality parks and trails increase property values, attract businesses and visitors, and encourage beneficial development.
5. **Pasadena's parks should be truly accessible to all.** This means ensuring that people of all ages and abilities feel safe and welcome. A healthy park network should include safe walking and biking connections to homes, businesses, and schools.
6. **Pasadena's park system should reflect the diversity and the needs of its residents.** Parks should provide resources for people of all ethnicities, age groups, economic backgrounds, and abilities. Parks should help people feel connected to Pasadena's history and cultures. Special consideration should be given to ensuring access for residents who need it most.
7. **The development of the Healthy Parks Plan must be inclusive, equitable, and transparent.** Planning should be community-driven. We want to hear from all residents, and we will work to reduce barriers to participation, especially for underserved and underrepresented community members.
8. **The success of the Healthy Parks Plan depends on extensive engagement, strong analysis, and determined champions.** The recommendations in the Healthy Parks Plan need to combine community perspectives with scientific data and expertise. The success of the Healthy Parks Plan will depend on strong local champions, including elected officials, business leaders, faith-based groups, schools, and health professionals.
9. **Ensuring a healthy park system for future generations depends on long-term stewardship.** Communities and parks thrive together when parks reflect community needs and communities feel empowered to be active stewards. We need to work with residents, local businesses, and industry to support ongoing stewardship of Pasadena's parks.

Who participated in creating the Healthy Parks Plan?

The core team for the development of the Healthy Parks Plan was the Pasadena Parks and Recreation Department, Houston Parks Board, Asakura Robinson, and Land and Water Connections Consulting. Forty-three Advisory Committee members representing over 30 local, regional, and state organizations helped shape the Plan, along with thousands of local residents who participated in the project's equity-driven community engagement. The creation of the Healthy Parks Plan was made possible by generous funding from the Houston Endowment and Pasadena Vibrant Community (a program of The University of Texas MD Anderson Cancer Center funded by Shell Oil).

Figure P-1. Healthy Parks Plan Needs Assessment



Summary of Community Engagement Participation

- 1,043 responses to the Community Survey
- 400 reached through a demographically representative Telephone Poll
- 45 community members of all ages attended an in-person Community Workshop
- 79 separate accounts logged in to participate in an online Community Workshop via Facebook Live (many of those accounts represented several family members logged in together, and there have since been thousands of views of two videos posted from the workshop)
- 790 reached through Speak-Outs and Intercept Surveys at community events
- 222 responses to key questions from Phase 2 engagement via texting and participation in the Facebook Live Community Workshop
- 42 comments on the project's Interactive Map
- 21 local leaders and experts participated in Interviews
- 43 Advisory Committee members participated in planning meetings and provided other input (listed below)

What are the key findings in the Healthy Parks Plan?

Key Assessment Results

- Currently, only 54% of Pasadena's population lives within a 10-minute walk of a park. Even in areas where residents live close to parks, there may not be safe routes to walk or bike to the park.
- Pasadena has a higher proportion of residents who are socioeconomically vulnerable than surrounding areas
- Nearly 70% of Pasadena's population is Hispanic/Latinx
- There is approximately 3,100 acres of parkland within the City of Pasadena. Of this total, the Pasadena Parks and Recreation Department owns and manages 483.4 acres. The City of Pasadena owns and manages 44 parks and eight recreation or senior centers.
- When Armand Bayou Nature Center is excluded from Pasadena's park acreage, the city has a relatively small amount of accessible park space compared with peer cities and national averages.
- Much of the land in Pasadena has already been developed
- Pasadena has fewer park employees and lower spending per resident than peer city and national averages. While Pasadena's level of service has been adequate, any cuts to funding for the Parks and Recreation Department would be very detrimental to the maintenance and management of the parks. Conversely, increases in employees and funding could substantially improve the level of service provided by the Parks and Recreation Department.
- The level of adaptive recreation services for people with disabilities provided by the City of Pasadena is unique. Most cities, even much larger and wealthier cities, do not have a specific center dedicated to adaptive recreation.

See online appendices for a detailed overview of existing conditions in Pasadena and Chapter 3 (Inventory, Assessment, and Benchmarking) for a deep dive into the city's park resources.

Key Community Engagement Results

- **Parks are one of the biggest contributors to positive quality of life in Pasadena.** Residents truly value Pasadena's parks and its Parks and Recreation Department staff. Local leaders see the park system as a key opportunity for attracting businesses and keeping young people from moving away.
- **Most Pasadena residents use local parks and are generally satisfied with the park system.** The Telephone Poll found that the majority of residents visit parks, and the Community Survey found that over 70% of participants visit Pasadena parks at least once per month on average, and 37% visit Pasadena parks more than once every week.
- **Residents use parks most often for exercise and fitness and for spending time with family and friends.** Exercise and fitness and spending time with family and friends were the dominant reasons for visiting parks in both the Community Survey and the Telephone Poll.
- **Playgrounds are the most frequently used amenity, followed by paved pathways.** Community Survey respondents indicated that the most commonly used park amenities, excluding restrooms and drinking fountains, are playgrounds (53%) and paved pathways (48%). Restrooms and drinking fountains are residents' highest priority park amenities, followed by playgrounds and pathways.
- **Residents love the trails in Pasadena's parks, and nearly half would like to be able to walk or bike to the park.** When asked their favorite thing about Pasadena parks, the most common answers were trails and access to nature. According to the Community Survey, over three-quarters (81%) of participants drive to the park now, but 49% would like to be able to walk or bike.
- **Lack of restrooms and water fountains, uncomfortable weather, maintenance concerns, are all significant barriers to park use.** Restrooms and drinking fountains came up as high priorities across all of the engagement for this project. The need for shade and other features to protect park visitors from the weather, especially extreme heat in the summer, is also a very high priority.

- **Safety concerns are a substantial, and complicated, barrier to park use.** Safety concerns were mentioned frequently, but were not rated as one of the most important barriers to using parks. Participants used the term "safety" to encompass a wide variety of issues from lack of comfort facilities and exposure to extreme weather to accessibility challenges for people with disabilities and fear about crime in and around parks.
- **More shade and more natural features are critical to making parks healthier, more relaxing, and more welcoming.** Increasing shade and natural features in Pasadena's parks emerged as high priorities across all types of engagement. Community Survey participants indicated strongly that they would like to see more nature and natural features in Pasadena's parks.
- **Pasadena has some unique resources for people with disabilities, but more can be done to improve accessibility.** The need for improved accessibility for people with disabilities emerged as an important issue for participants in all types of engagement. In particular, residents would like to see more adaptive facilities outside of the Verne Cox Multipurpose Recreation Center.
- **Expanding youth programming is the highest programming priority, followed by aquatics programming and special events.** These priorities are based largely on the results of the Telephone Poll, but emerged through other engagement as well.
- **Many residents are somewhat familiar with Pasadena Parks and Recreation facilities and programming, but there is room for improvement and targeting of outreach.** Word of mouth and social media are the most common ways that residents receive information about parks and programming, but residents who primarily speak Spanish currently have a more difficult time accessing information about parks and programming.

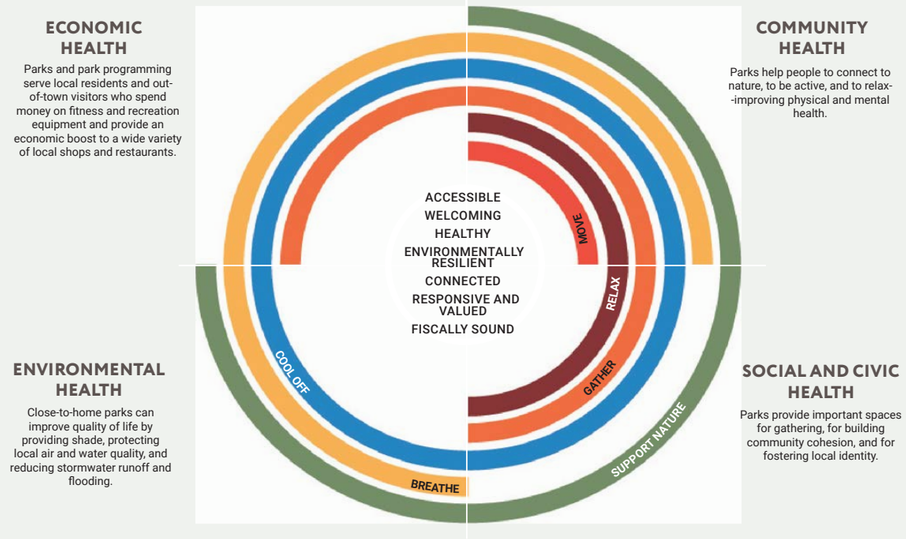
What recommendations does the Healthy Parks Plan make?

The recommendations in the Healthy Parks Plan are organized into seven overarching goals:

- **ACCESSIBLE**. Expand close-to-home access to high-quality parks with a focus on addressing equity, so that all residents have access to the benefits of parks.
- **WELCOMING**. Ensure that Pasadena's parks are safe, welcoming, and well-maintained, so that all residents want to spend time enjoying them.
- **HEALTHY**. Ensure that parks, trails, facilities, and programming are all improved in ways that help increase community health, particularly for residents facing the greatest levels of health inequity.
- **ENVIRONMENTALLY RESILIENT.** Use park design and park improvements to promote environmental resilience, connect people to nature, and reduce the vulnerability of Pasadena residents to the risks of air pollution, extreme heat, and flooding.
- **CONNECTED**. Expand connectivity of parks and trails in Pasadena so that all residents can safely use active transportation to reach parks and other community resources.
- **RESPONSIVE AND VALUED**. Ensure that the Parks and Recreation Department understands the evolving park and recreation priorities of Pasadena residents and that Pasadena residents value the many benefits provided by Pasadena's parks and its recreation programs.
- **FISCALLY SOUND.** Ensure that there are adequate financial and volunteer resources to support an exceptional park system in Pasadena.

These goals are further divided into nearly 70 objectives (listed in full in Chapter 6). The highest priority objectives (based on input from the Advisory Committee and Core Team) are shown below. The first objective, "**Improve existing parks by renovating and adding amenities where they are needed most**," is the highest priority.

Figure P-2. Parks and Health: Holistic Health and the Healthy Parks Plan



Highest Priority Objectives

1. Improve existing parks by renovating and adding amenities where they are needed most
2. Develop new multi-benefit parks where they are needed most by utilizing city-owned land, partnering with other land owners (such as Harris County Flood Control District), and acquiring land as necessary
3. Extend recreation programming into the southern area of Pasadena that does not have close-to-home access to existing recreation centers
4. Work with the Mayor and City Council to adopt a goal that everyone in Pasadena should live within a 10-minute walk of a high-quality park by 2050
5. Implement equity-focused environmental design principles that help prevent crime and promote positive behavior in parks where there are safety concerns (real and perceived)
6. Ensure that parks have adequate comfort amenities to feel welcoming
7. Add cultural and artistic elements to parks, add visual unity through signage and wayfinding
8. Adopt and implement the Healthy Parks Design Guidelines
9. Prioritize adding park features, especially trees, canopies, and pavilions that help protect park users from extreme heat
10. Develop an interconnected network of safe walking and biking trails connecting park trails, community trails, and regional trails
11. Create a Parks and Recreation Advisory Board that meets quarterly to help inform and support implementation of Parks and Recreation Department goals
12. Translate all major Parks and Recreation Department communications and materials into Spanish
13. Continue equity-driven community engagement with a focus on reducing barriers to participation in park planning
14. Monitor participation in and demand for programs and adjust offerings to meet the needs of the community with a focus on equity and health
15. Develop a financially sustainable park and recreation system by maximizing all available revenue sources
16. Work with Mayor, City Council, and Controller on a potential general obligation bond to support parks

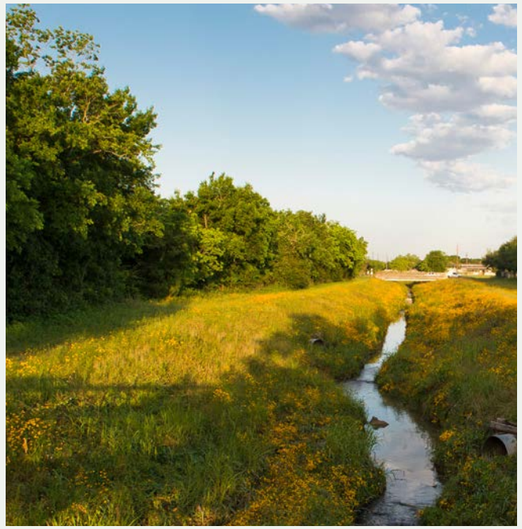
Priority Project Recommendations

In addition to these overall recommendations, there are additional, more specific, recommendations related to system-wide standards and priority projects, these include:

- Add 945 acres of new parkland to the Pasadena system by better leveraging existing public lands not currently being utilized as parks and by acquiring additional acreage, especially in priority areas.
- Make significant progress toward adding 945 acres of accessible parkland to meet the new park system standard. In addition, add 1,000 acres of natural lands with a focus on environmental benefits and nature-based recreation and, as appropriate, work with partners to create conservation easements to expand protection of natural areas.
- Strategically add the following amenities: 30 drinking fountains/water bottle filling stations; 8 playgrounds; 38 picnic tables; 3 pavilions; 3 exercise stations; 12 soccer fields; 1 splash pad; and 15.3 miles of paved and unpaved trails within parks
- Create a linear park with a greenway trail along Vince Bayou between Memorial and Strawberry Park
- Ensure existing trails between Strawberry Park and Burke Crenshaw meet quality and accessibility standards for multi-modal users
- Connect Burke Crenshaw Park east via connections to both Holly Bay Park and northeast to Bliss Meadows Park along an existing Centerpoint Energy Easement
- Extend trail systems within Armand Bayou north to both Holly Bay Park and Bliss Meadows
- Create a ROW-protected or grade-separated hike-and-bike trail between Armand Bayou and El Jardin Beach
- Support the implementation of connectivity improvements cited in the Pasadena Livable Centers Study

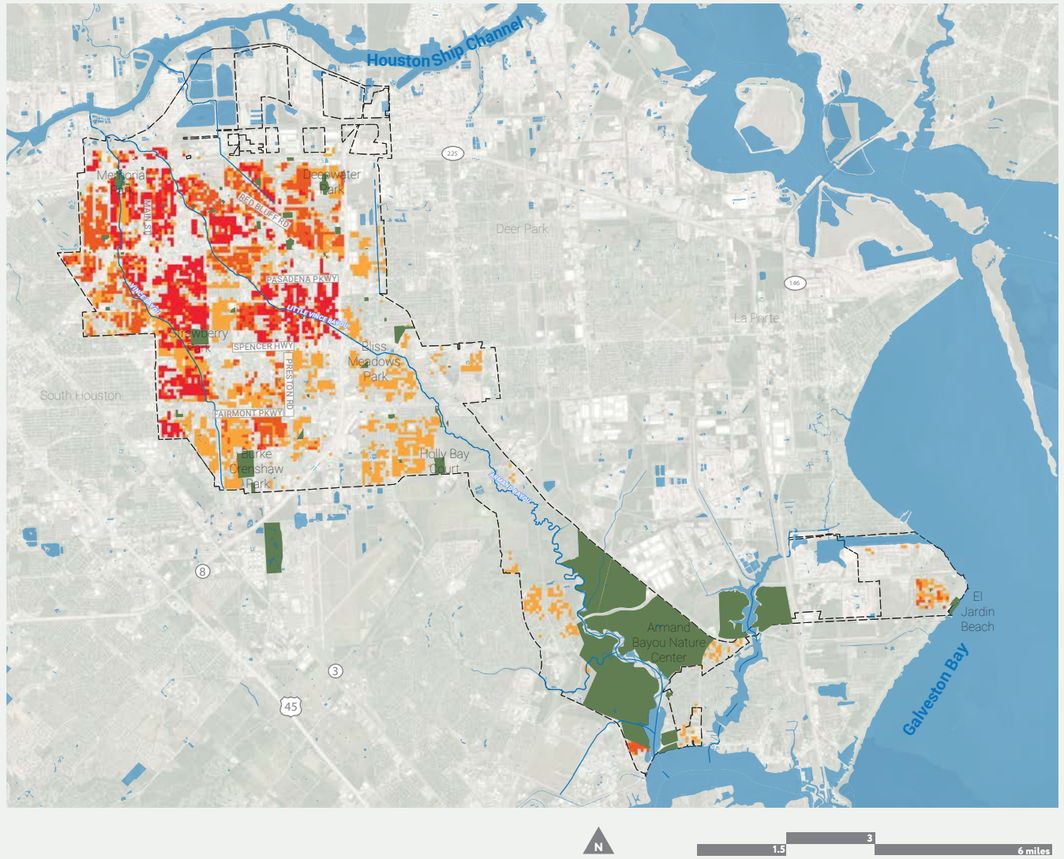
Chapter 6 (Goals and Standards) includes all of the objectives of the Healthy Parks Plan, along with details about who would lead and support implementation, resources required (funding and staff time), and timing for meeting each objective. Chapter 7 (Priority Projects and Capital Improvements) also includes more details about system-wide and site-specific priority projects, including park improvement recommendations for each of the ten priority parks.

The mapping analysis in Chapter 5 also identifies priority areas for park investments based on several indexes developed for this plan: Socioeconomic Vulnerability, Community Health, Environmental Risk and Value, and Park Access. These indexes were developed using the best available data and science and input from local and regional experts. Figure P-3 shows the Overall Priority map that combines the results of the individual indexes.



Holly Bay Court Source: pasadenatxphoto.net

Figure P-3. Overall Priorities Map





Resumen Ejecutivo

¿Qué es el Plan de Parques Saludables?

El Plan de Parques Saludables de Pasadena se basa en la premisa de que los parques son absolutamente esenciales para la salud y la calidad de vida. Mientras el Plan de Parques Saludables cumple con todos los requisitos de un plan maestro de sistema de parques tradicional, también va más allá al hacer de la salud y la equidad los lentes centrales para analizar las necesidades de los parques. La salud, tal como se aborda en este plan, incluye la salud física, mental, social y económica de los residentes de Pasadena y la salud ambiental y financiera de la Ciudad de Pasadena y su sistema de parques.

El objetivo del Plan de Parques Saludables es identificar las inversiones de mayor prioridad para garantizar que Pasadena continúe prosperando haciendo que sus parques sean saludables, acogedores y accesibles para todos. **La visión a largo plazo del Plan de Parques Saludables es un Pasadena saludable, próspero y conectado, donde los parques seguros, hermosos y acogedores garantizan que todos tengan un lugar al que pertenecer, estar activos y disfrutar de la naturaleza.**

El Plan de Parques Saludables se basa en la comunidad y los datos. El plan identifica las recomendaciones actuales y los proyectos prioritarios, pero también proporciona un conjunto de herramientas para que el Departamento de Parques y Recreación de Pasadena y sus socios las utilicen para la planificación y gestión adaptativa a medida que cambian las condiciones.

El desarrollo del Plan de Parques Saludables ha implicado: (1) Participación comunitaria impulsada por la equidad; (2) Incorporación de experiencia local, científica y de diseño; (3) Evaluación de los recursos de programación y parques existentes; y (4) Mapeo de índices clave que ayuden a identificar ubicaciones prioritarias para mejoras de parques y parques nuevos. La evaluación de los recursos del parque incluyó evaluaciones en profundidad de diez parques prioritarios (Parque Memorial , Parque Strawberry, Lote de juegos Ghana, El Jardín Beach, Parque Bliss Meadows, Lote de juegos Oaks Drive, Parque Tatar, Parque Sherwood, Parque Light Company y Lore de juegos Parklane). Los índices desarrollados a través del análisis de mapeo abordan la vulnerabilidad socioeconómica, la salud comunitaria, la vulnerabilidad ambiental y la necesidad de parques (ver Capítulo 5).

Además de las recomendaciones para todo el sistema y específicas del sitio, se desarrollaron normas de diseño de parques saludables (ver Capítulo 8) para promover la actividad física (Movimiento), expandir el acceso a los beneficios de salud mental de los parques (Relajación), unir a las personas para fomentar la conexiones (Congregación), reducir el calor extremo (Desaceleración), mejorar la calidad del aire (Respiración) y apoyar la salud ecológica en beneficio de las personas y la naturaleza (Apoyo a la naturaleza). El componente final del Plan es un diseño conceptual para mejoras por etapas en Memorial Park; este diseño reúne todas las herramientas y recomendaciones del Plan de Parques Saludables.

Visión y principios rectores

OBJETIVO GENERAL

Identificar las inversiones de mayor prioridad para asegurar que Pasadena prospere haciendo que sus parques sean saludables, acogedores y accesibles para todos.

VISIÓN

Nuestra visión es un Pasadena saludable, próspero y conectado, donde los parques seguros, hermosos y acogedores garantizan que todos tengan un lugar al que pertenecer, estar activos y disfrutar de la naturaleza.

El objetivo general de este proyecto fue identificado al principio del proyecto por el equipo central. La visión y los principios rectores fueron desarrollados en colaboración por el Comité Asesor con la orientación del equipo central. Los miembros del Comité Asesor votaron por unanimidad para afirmar la adopción de la visión y los principios rectores.

Principios rectores

1. **Un sistema de parques saludable es fundamental para la calidad de vida de Pasadena.** Los nuevos parques y las mejoras a los parques deberían maximizar los beneficios sociales, de salud, ambientales y económicos.
2. **Los parques son fundamentales para comunidades y personas saludables.** Los parques unen a las personas, mejoran la salud física y mental, generan orgullo cívico y fortalecen las economías locales.
3. **Los parques contribuyen a un medio ambiente saludable.** Los parques proporcionan una infraestructura verde que mejora la calidad del aire y el agua local y ayuda a proteger a los residentes de las inundaciones y el calor extremo. Cuando los parques incorporan elementos naturales, reducen los riesgos ambientales, proporcionan un hábitat para la vida silvestre y crean oportunidades de conexión con la naturaleza.
4. **Los parques mejoran la salud económica.** Los parques y caminos de alta calidad aumentan el valor de las propiedades, atraen negocios y visitantes y fomentan el desarrollo favorable.
5. **Los parques de Pasadena deberían ser verdaderamente accesibles para todos.** Esto significa garantizar que las personas de todas las edades y capacidades se sientan seguras y bienvenidas. Una red de parques saludable debe incluir conexiones seguras para caminar y andar en bicicleta a hogares, negocios y escuelas.
6. **El sistema de parques de Pasadena debe reflejar la diversidad y las necesidades de sus residentes.** Los parques deben proporcionar recursos para personas de todas las etnias, grupos de edad, antecedentes económicos y habilidades. Los parques deben ayudar a las personas a sentirse conectadas con la historia y las culturas de Pasadena. Se debe prestar especial atención a garantizar el acceso a los residentes que más lo necesitan.
7. **El desarrollo del Plan de Parques Saludables debe ser inclusivo, equitativo y transparente.** La planificación debe estar impulsada por la comunidad. Queremos escuchar a todos los residentes y trabajaremos para reducir las barreras a la participación, especialmente para los miembros de la comunidad que han sido desatendidos y subrepresentados.
8. **El éxito del Plan de Parques Saludables depende de una amplia participación, un análisis sólido y campeones decididos.** Las recomendaciones del Plan de Parques Saludables deben combinar las perspectivas de la comunidad con datos y conocimientos científicos. El éxito del Plan de Parques Saludables dependerá de campeones locales, incluidos funcionarios electos, líderes de negocio, grupos religiosos, escuelas y profesionales de la salud.
9. **Garantizar un sistema de parques saludable para las generaciones futuras depende de la administración a largo plazo.** Las comunidades y los parques prosperan juntos cuando los parques reflejan las necesidades de la comunidad y las comunidades se sienten empoderadas para ser administradores activos. Necesitamos trabajar con los residentes, los negocios locales y la industria para apoyar la administración continua de los parques de Pasadena.

¿Quién participó en la creación del Plan de Parques Saludables?

El equipo central para el desarrollo del Plan de Parques Saludables fue el Departamento de Parques y Recreación de Pasadena, Houston Parks Board, Asakura Robinson y Land and Water Connections Consulting. Cuarenta y tres miembros del Comité Asesor que representan a más de 30 organizaciones locales, regionales y estatales ayudaron a dar forma al Plan, junto con miles de residentes locales que participaron en el compromiso comunitario impulsado por la equidad del proyecto. La creación del Plan de Parques Saludables fue posible gracias a la generosa financiación de Houston Endowment y Pasadena Vibrant Community (un programa de MD Anderson financiado por Shell Oil).

Resumen de participación comunitaria

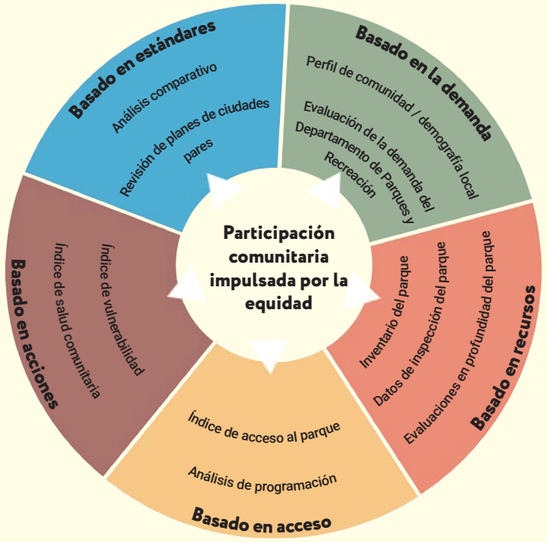
- 1,043 respuestas a la encuesta comunitaria
- 400 alcanzados a través de una encuesta telefónica demográficamente representativa
- 45 miembros de la comunidad de todas las edades asistieron a un taller comunitario en persona
- 79 cuentas separadas que iniciaron sesión para participar en un taller comunitario en línea a través de Facebook Live (muchas de esas cuentas representaban a grupos de miembros de familia que estaban conectados juntos, y desde entonces ha habido miles de vistas de dos videos publicados en el taller)
- 790 alcanzados a través de pláticas y encuestas de interceptación en eventos comunitarios
- 222 respuestas a preguntas clave de la participación de la Fase 2 a través de mensajes de texto y participación en el taller comunitario de Facebook Live
- 42 comentarios en el mapa interactivo del proyecto
- 21 líderes y expertos locales participaron en entrevistas
- 43 miembros del Comité Asesor participaron en las reuniones de planificación y proporcionaron otras aportaciones (enumeradas a continuación)

¿Cuáles son los hallazgos clave del Plan de Parques Saludables?

Resultados clave de la evaluación

- Actualmente, solo el 54% de la población de Pasadena vive a 10 minutos a pie de un parque. Incluso en áreas donde los residentes viven cerca de parques, es posible que no haya rutas seguras para caminar o andar en bicicleta al parque.
- Pasadena tiene una mayor proporción de residentes que son socioeconómicamente vulnerables a comparación de las áreas circundantes.
- Casi el 70% de la población de Pasadena es hispana / latina
- Hay aproximadamente 3,100 acres de áreas verdes dentro de la Ciudad de Pasadena. De este total, el Departamento de Recreación y Parques de Pasadena posee y administra 483.4 acres. La Ciudad de Pasadena posee y administra 44 parques y ocho centros recreativos o para personas mayores.
- Cuando el Centro de Naturaleza Armand Bayou se excluye de la superficie de parques de Pasadena, la ciudad tiene una cantidad relativamente pequeña de parques accesibles en comparación con las ciudades pares y los promedios nacionales.
- Gran parte del terreno en Pasadena ya se ha desarrollado
- Pasadena tiene menos empleados de parques y un gasto por residente más bajo que los promedios nacionales y de la ciudad. Si bien el nivel de servicio de Pasadena ha sido adecuado, cualquier recorte de fondos para el Departamento de Parques y Recreación sería muy perjudicial para el mantenimiento y la administración de los parques. Por el contrario, los aumentos de empleados y financiación podrían mejorar sustancialmente el nivel de servicio proporcionado por el Departamento de Parques y Recreación.
- El nivel de servicios de recreación adaptada para personas con discapacidades proporcionado por la Ciudad de Pasadena es único. La mayoría de las ciudades, incluso las ciudades mucho más grandes y ricas, no tienen un centro específico dedicado a la recreación adaptativa

Figura P-1. Evaluación de las necesidades del Plan de Parques Saludables



Consulte los apéndices en línea para obtener una descripción general detallada de las condiciones existentes en Pasadena y el Capítulo 3 (Inventario, evaluación y evaluación comparativa) para una inmersión profunda en los recursos para parques de la ciudad.

Resultados clave de la participación de la comunidad

- **Los parques son uno de los mayores contribuyentes a una calidad de vida positiva en Pasadena.** Los residentes realmente valoran a los parques de Pasadena y a el personal del Departamento de Parques y Recreación. Los líderes locales ven el sistema de parques como una oportunidad clave para atraer negocios y evitar que los jóvenes se muden.
- **La mayoría de los residentes de Pasadena utilizan los parques locales y, en general, están satisfechos con el sistema de parques.** La encuesta telefónica encontró que la mayoría de los residentes visitan los parques, y la encuesta comunitaria encontró que más del 70% de los participantes visitan los parques de Pasadena al menos una vez al mes en promedio, y que el 37% visita los parques de Pasadena más de una vez a la semana.
- **Los residentes usan los parques con mayor frecuencia para hacer ejercicio, estar en forma y para pasar tiempo con familiares y amigos.** El ejercicio, estar en forma y pasar tiempo con la familia y los amigos fueron las razones dominantes para visitar los parques tanto en la encuesta comunitaria como en la encuesta telefónica.
- **Los patios de juego son los servicios que se utilizan con más frecuencia, seguidos por los caminos pavimentados**. Los encuestados de la comunidad indicaron que los servicios del parque más utilizados, excluidos los baños y las fuentes de agua potable, son los patios de juego (53%) y los caminos pavimentados (48%). Los baños y las fuentes de agua potable son las comodidades del parque de mayor prioridad para los residentes, seguidas de los patios de juego y los caminos.
- **A los residentes les encantan los caminos en los parques de Pasadena, y casi la mitad le gustaría poder caminar o andar en bicicleta hasta el parque**. Cuando se les preguntó qué era lo que más les gustaba de los parques de Pasadena, las respuestas más comunes fueron los caminos y el acceso a la naturaleza. Según la encuesta comunitaria, más de las tres cuartas partes (81%) de los participantes conducen al parque ahora, pero al 49% le gustaría poder caminar o andar en bicicleta.
- **La falta de baños y fuentes de agua, clima incómodo, preocupaciones de mantenimiento, son barreras importantes para el uso del parque**. Los baños y los bebederos surgieron como una alta prioridad durante toda la consulta comunitaria de este proyecto. La necesidad de sombra y otras características para proteger a los visitantes al parque del clima, especialmente el calor extremo en el verano, también es una prioridad muy alta.
- **Las preocupaciones de seguridad son una barrera importante y complicada para el uso del parque**. Los problemas de seguridad se mencionaron con frecuencia, pero no se calificaron como una de las barreras más importantes para el uso de parques. Los participantes utilizaron el término "seguridad" para abarcar una amplia variedad de problemas, desde la falta de instalaciones cómodas y la exposición a condiciones climáticas extremas hasta los desafíos de accesibilidad para las personas con discapacidades y el miedo a la delincuencia en los parques y sus alrededores.

- **Más sombra y más características naturales son fundamentales para hacer que los parques sean más saludables, más relajantes y más acogedores**. El aumento de la sombra y las características naturales en los parques de Pasadena surgieron como altas prioridades en todos los tipos de participación. Los participantes de la encuesta comunitaria indicaron enfáticamente que les gustaría ver más naturaleza y características naturales en los parques de Pasadena.
- **Pasadena tiene algunos recursos únicos para personas con discapacidades, pero se puede hacer más para mejorar la accesibilidad**. La necesidad de mejorar la accesibilidad para las personas con discapacidad surgió como un tema importante para los participantes en todos los tipos de participación. En particular, a los residentes les gustaría ver instalaciones más adaptadas fuera del centro de recreación multipropósito, Verne Cox.
- **La mayor prioridad de programación es expandir la programación para jóvenes, seguida de la programación de deportes acuáticos y eventos especiales**. Estas prioridades se basan en gran medida en los resultados de la encuesta telefónica, pero también surgieron a través de otras consultas. .
- **Muchos residentes están algo familiarizados con las instalaciones y la programación de los Parques y Recreación de Pasadena, pero hay espacio para mejorar y focalizar el alcance**. El boca a boca y las redes sociales son las formas más comunes en que los residentes reciben información sobre parques y programación, pero los residentes que hablan principalmente español actualmente tienen más dificultades para acceder a información sobre parques y programación.

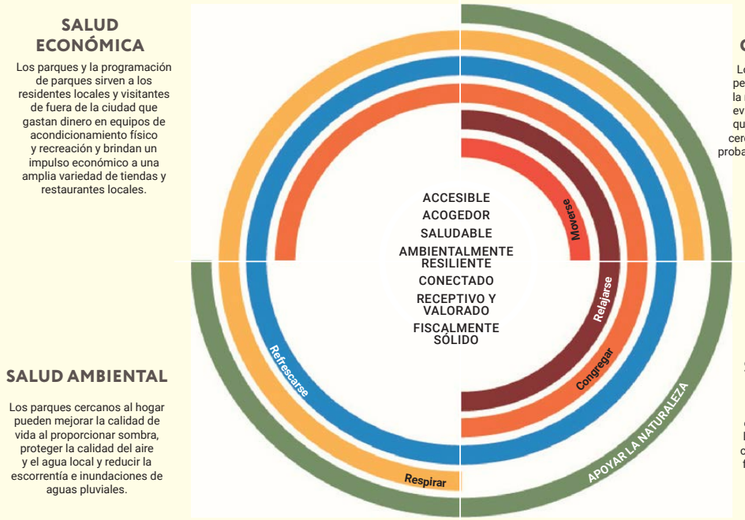
¿Qué recomendaciones hace el Plan de Parques Saludables?

Las recomendaciones del Plan de Parques Saludables se organizan en siete objetivos generales:

- **ACCESIBLE**. Ampliar el acceso cercano al hogar a parques de alta calidad con un enfoque en abordar la equidad, para que todos los residentes tengan acceso a los beneficios de los parques.
- **ACOGEDOR**. Asegurar que los parques de Pasadena sean seguros, acogedores y estén bien mantenidos, para que todos los residentes quieran pasar tiempo disfrutandolos.
- **SALUDABLE**. Asegurar que los parques, caminos, instalaciones y programación se mejoren de manera que ayuden a mejorar la salud de la comunidad, particularmente para los residentes que enfrentan los mayores niveles de inequidad en salud.
- **AMBIENTALMENTE RESILIENTE**. Utilizar el diseño del parque y las mejoras del parque para promover la resiliencia ambiental, conectar a las personas con la naturaleza y reducir la vulnerabilidad de los residentes de Pasadena a los riesgos de contaminación del aire, calor extremo e inundaciones.
- **CONECTADO**. Ampliar la conectividad de los parques y caminos en Pasadena para que todos los residentes puedan usar el transporte activo de manera segura para llegar a los parques y otros recursos comunitarios.
- **RECEPTIVO Y VALORADO**. Asegurar que el Departamento de Parques y Recreación comprenda las prioridades cambiantes de parques y recreación de los residentes de Pasadena y que los residentes de Pasadena valoren los muchos beneficios y programas de recreación que brindan los parques de Pasadena.
- **FISCALMENTE SÓLIDO**. Asegurar que haya recursos financieros y voluntarios adecuados para apoyar un sistema de parques excepcional en Pasadena.

Estos objetivos se dividen aún en casi 70 objetivos (enumerados en su totalidad en el Capítulo 6). Los objetivos de mayor prioridad (basados en las aportaciones del Comité Asesor y el Equipo Central) se muestran a continuación. El primer objetivo, "**Mejorar los parques existentes renovando y agregando servicios donde más se necesitan**", es la máxima prioridad.

Figura P-2. Parques y salud: salud holística y el plan de parques saludables



Objetivos de máxima prioridad

1. Mejorar los parques existentes renovando y agregando servicios donde más se necesitan
2. Desarrollar nuevos parques de beneficios múltiples donde más se necesitan utilizando terrenos de propiedad de la ciudad, asociándose con otros propietarios de terrenos (como el Distrito de Control de Inundaciones del Condado de Harris) y adquiriendo terrenos según sea necesario
3. Ampliar la programación de recreación en el área sur de Pasadena que no tiene acceso cercano al hogar a los centros de recreación existentes.
4. Trabajar con el alcalde y el concejo municipal para adoptar el objetivo de que todos en Pasadena vivan a 10 minutos a pie de un parque de alta calidad para el 2050.
5. Implementar principios de diseño ambiental centrados en la equidad que ayuden a prevenir el crimen y promuevan un comportamiento positivo en parques donde existen preocupaciones de seguridad (reales y percibidas)
6. Asegurar que los parques cuenten con las comodidades adecuadas para sentirse acogedor.
7. Agregar elementos culturales y artísticos a los parques, agregar unidad visual a través de señalización y letreros de orientación.
8. Adoptar e implementar las directrices de diseño de parques saludables.
9. Dar prioridad a la adición de características del parque, especialmente árboles, marquesinas y pabellones que ayuden a proteger a los usuarios del parque del calor extremo.
10. Desarrollar una red interconectada de caminos seguros para caminar y andar en bicicleta que conecten los caminos del parque, los caminos comunitarios y los caminos regionales.
11. Crear una Junta Asesora de Parques y Recreación que se reúna trimestralmente para ayudar a informar y apoyar la implementación de las metas del Departamento de Parques y Recreación.
12. Traducir todas las comunicaciones y materiales importantes del Departamento de Parques y Recreación al español.
13. Continuar la participación comunitaria impulsada por la equidad con un enfoque en la reducción de las barreras a la participación en la planificación del parque.

14. Monitorear la participación y la demanda de programas y ajustar las ofertas para satisfacer las necesidades de la comunidad con un enfoque en la equidad y la salud.

15. Desarrollar un sistema de parques y recreación financieramente sostenible maximizando todas las fuentes de ingresos disponibles.

16. Trabajar con el alcalde, el concejo municipal y el controlador en un posible bono de obligación general para apoyar los parques.

Recomendaciones de proyectos prioritarios

Además de estas recomendaciones generales, hay recomendaciones adicionales, más específicas, relacionadas con los estándares de todo el sistema y los proyectos prioritarios, que incluyen:

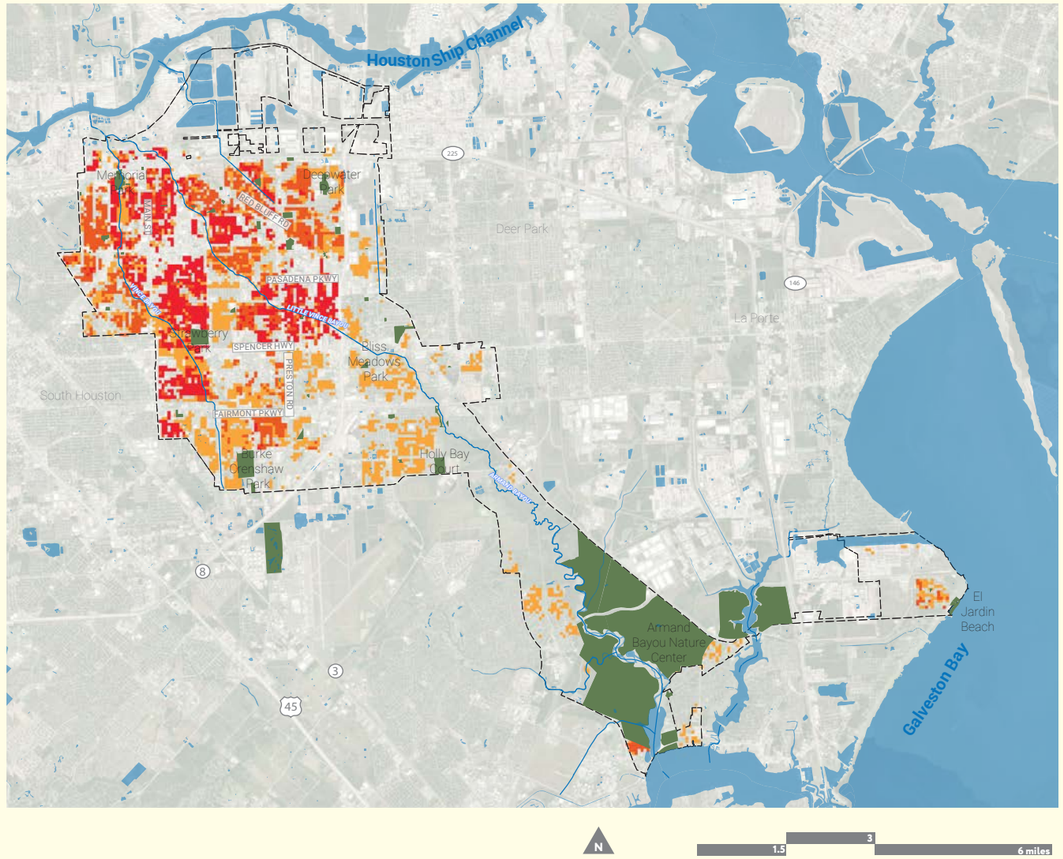
- Agregar 945 nuevos acres de áreas verdes al sistema de Pasadena aprovechando mejor las tierras públicas existentes que no se utilizan actualmente como parques y adquiriendo áreas adicionales, especialmente en áreas prioritarias.
- Hacer un progreso significativo hacia la adición de 945 acres de áreas verdes accesibles para cumplir con el nuevo estándar del sistema de parques. Además, agregar 1,000 acres de tierras naturales con un enfoque en los beneficios ambientales y la recreación basada en la naturaleza y, según corresponda, trabajar con socios para crear servidumbres de conservación para expandir la protección de áreas naturales.
- Agregar estratégicamente las siguientes comodidades: 30 bebederos / estaciones de llenado de botellas de agua; 8 patios de juego; 38 mesas de picnic; 3 pabellones; 3 estaciones de ejercicio; 12 canchas de fútbol; 1 áreas de splash; y 15.3 millas de caminos pavimentados y sin pavimentar dentro de los parques
- Crear un parque lineal con un camino de vía verde a lo largo de Vince Bayou entre los parques Memorial y Strawberry
- Asegurar que los caminos existentes entre los parques Strawberry y Burke Crenshaw cumplan con los estándares de calidad y accesibilidad para usuarios multimodales
- Conectar el parque Burke Crenshaw hacia el este a través de conexiones con el parque Holly Bay y el noreste hasta el parque Bliss Meadows a lo largo de una servidumbre de Centerpoint Energy existente
- Extender los sistemas de caminos dentro de Armand Bayou hacia el norte hasta los parques Holly Bay y Bliss Meadows
- Crear un camino para caminar y andar en bicicleta protegido por el derecho de paso o separado por grados entre Armand Bayou y la playa El Jardín.
- Implementar mejoras de conectividad citadas en el estudio de centros habitables de Pasadena

El Capítulo 6 (Metas y estándares) incluye todos los objetivos del Plan de Parques Saludables, junto con detalles sobre quién lideraría y apoyaría la implementación, los recursos requeridos (fondos y tiempo del personal) y el tiempo para cumplir con cada objetivo. El Capítulo 7 (Proyectos prioritarios y mejoras de capital) también incluye más detalles sobre proyectos prioritarios específicos del sitio y de todo el sistema, incluidas las recomendaciones de mejora del parque para cada uno de los diez parques prioritarios.



Holly Bay Court Source: pasadenatxphoto.net

Figura P-3. Mapa de Prioridades Generales















1 A Healthy Parks Plan: Why and How

Introduction

The Pasadena Healthy Parks Plan is based on the premise that parks are absolutely essential to health and quality of life. Since its inception, the aim of the Healthy Parks Plan has been to identify the highest priority investments to ensure that Pasadena continues to thrive through making its parks healthy, welcoming, and accessible to all.

Health, as addressed by this plan, includes the physical, mental, social, and economic health of Pasadena residents and the environmental and financial health of Pasadena and its park system. The Pasadena Healthy Parks Plan encourages various health-enhancing park features. Walking paths and sports fields promote fitness while tree cover and native vegetation reduce extreme heat and support wildlife. Quiet areas and water features encourage relaxation. The Healthy Parks Plan addresses health inequities faced by socioeconomically vulnerable community members. It also acknowledges the reality that to have true access to parks, residents of all ages, abilities, and backgrounds need to feel safe and welcome. In the wake of COVID-19, the importance of park access and the impacts of health inequity have become even clearer.

The long-term vision for the Healthy Parks Plan is a healthy, thriving, and connected Pasadena where safe, beautiful, welcoming parks ensure that everyone has a place to belong, be active, and enjoy nature. The Healthy Parks Plan is community- and data-driven, backed by input from local and regional experts. The plan identifies current priority projects, but also establishes robust criteria and guidance for ongoing decision making and priority-setting as conditions and opportunities change. Through the course of the project's equity-driven community engagement and its deep-dive needs assessment, the following goals were developed for Pasadena's park system.

Pasadena Parks Plan Goals

1. Accessible

Expand close-to-home access to high-quality parks with a focus on addressing equity, so that all residents have access to the benefits of parks.

2. Welcoming

Ensure that Pasadena's parks are safe, welcoming, and well-maintained, so that all residents want to spend time enjoying them.

3. Healthy

Ensure that parks, trails, facilities, and programming are all improved in ways that help increase community health, particularly for residents facing the greatest levels of health inequity.

4. Environmentally Resilient

Use park design and park improvements to promote environmental resilience, connect people to nature, and reduce the vulnerability of Pasadena residents to the risks of air pollution, extreme heat, and flooding.

5. Connected

Expand connectivity of parks and trails in Pasadena so that all residents can safely use active transportation to reach parks and other community resources.

6. Responsive and Valued

Ensure that the Parks and Recreation Department understands the evolving park and recreation priorities of Pasadena residents and that Pasadena residents value the many benefits provided by Pasadena's parks and its recreation programs.

7. Fiscally Sound

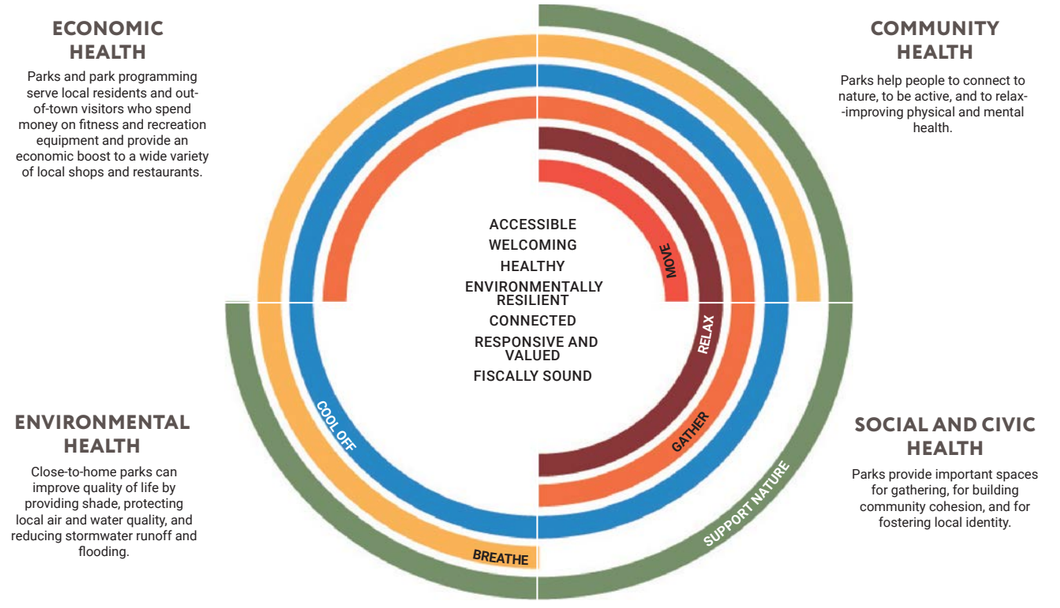
Ensure that there are adequate financial and volunteer resources to support an exceptional park system in Pasadena.

Why a Healthy Parks Plan?

While the Healthy Parks Plan meets all the requirements of a traditional park system master plan, it also goes deeper by making health and equity the central lenses for looking at park needs. This project looks at health holistically. Parks promote community health, social and civic health, environmental health, and economic health.[1] All of these aspects of health contribute to making Pasadena more resilient and each is described in more detail below. Community health, social health, and environmental health are each woven into the Healthy Parks Design Guidelines in Chapter 8 as well.

Evidence connects close-to-home access to parks with improved physical and mental health. Two key elements—access to opportunities for exercise and connection to nature—are described in the Community Health section below. Two other important aspects that contribute to physical and mental health are described under Social/Civic Health and Environmental Health. Finally, parks can help boost Economic Health. When communities see equitable economic gains, the other aspects of health can be improved as well. Figure 1-1 shows the holistic view of health that is the foundation of the Healthy Parks Plan.

Figure 1-1. Parks and Health: Holistic Health and the Healthy Parks Plan



Community Health

Close-to-home access to parks and nature is linked to lower rates of obesity, lower rates of chronic diseases, including heart disease, diabetes, and asthma;[2] lower risk of preterm birth and low birth weight;[3] lower levels of depression and anxiety;[4] reduced symptoms of post-traumatic stress disorder;[5] increased cognitive ability;[6] reduced stress;[7] improved immune function;[8] lower mortality;[9] and increased overall well-being.[10] One large-scale study showed that living within 0.6 miles of green space is tied to lower rates of 15 major diseases, including heart disease (15% lower), diabetes (20% lower), and depression (25% lower).[11] Importantly, research indicates that low-income/socioeconomically vulnerable communities often benefit the most from nearby access to green space.[12]

In addition to helping people connect to nature and relax, evidence shows that people who live near parks are more likely to exercise outdoors, and increasing physical activity is one of the most powerful things that people can do to improve their health.[13] Nationally, only one-third of young people and one-half of adults meet recommended guidelines for exercise.[14] The Centers for Disease Control and Prevention (CDC) estimates that lack of physical activity leads to $117 billion in annual health care costs in the United States.[15] One factor contributing to sedentary lifestyles is time spent indoors in front of screens; young people now spend an average seven hours per day in front of a screen.[16] Safe, welcoming, close-to-home parks and trails can play a key role in making it easier and more enjoyable for people to get more exercise.[17]

Community health is a way of looking at the physical and mental health and well-being of all the people in an area—rather than at individual-level health outcomes. Understanding health inequity is central to understanding community health. Health inequity is systematic, avoidable, and unjust disparities in health outcomes and access to health care resources. In public health practice, the term "community health" implies an approach that relies on using culturally appropriate strategies to work with communities to optimize health and quality of life. As discussed elsewhere in this report, community health is determined by a wide range of factors, including socio-economic conditions and the physical environment. In this project, the primary measures included in the Community Health Index (Chapter 5) are rates of poor health outcomes and access to healthcare resources.

Health, Parks, and COVID-19

The COVID-19 pandemic has drawn increasing attention to two of the major tenets of the Healthy Parks Plan: (1) Inequitable health outcomes for socioeconomically vulnerable residents, especially people of color, are an enormous problem; and (2) There needs to be more equitable access to the benefits of parks and open space.

A recent editorial from the Journal of the American Medical Association argued that "COVID-19 is a magnifying glass that has highlighted the larger pandemic of racial/ethnic disparities in health."[18] Early reports indicate that African Americans have died of COVID-19 at over two times the rate of white Americans.[19] Among those aged 45-54, Black and Hispanic/Latinx death rates are at least six times higher than for non-Hispanic/Latinx whites.[20]

These disparities in COVID-19 deaths are partially explained by Black and Latinx workers being overrepresented in essential services and other jobs that do not allow working from home. The disparities are also a result of myriad systemic factors, including racism and discrimination in healthcare, housing, criminal justice, and education, that impact social determinants of health. Particularly relevant to Pasadena, the American Public Health Association has pointed out that Hispanic/Latinx people may have challenges accessing healthcare information because of immigration status, stigmatization, income inequalities, and language barriers.[21]

In the face of these inequities, public parks can provide access to a wide range of benefits (discussed in detail elsewhere in this chapter), that can help improve community health. As Catherine Nagel, Executive Director of the City Parks Alliance, put it "The role of our local parks and recreation as essential civic infrastructure has never been more apparent."[22]

The City of Pasadena's parks were closed March 20 to May 10 and June 29 - August 9. From March through early June 2020, the Pasadena Parks and Recreation Department restricted access to park playgrounds, restrooms, water fountains, and basketball courts to minimize the risk of COVID-19 exposure. During this time the Parks and Recreation Department made a special effort on social media to draw attention to underutilized parks in order to help avoid crowding and provided extra reminders to residents to bring their own water and other supplies to the parks. In general, residents have been very conscientious about following social distancing guidelines while taking advantage of time outdoors in Pasadena's parks during the pandemic.

Social and Civic Health

Strong social connections and civic institutions help make individuals and communities healthier. Parks provide important spaces for gathering, for building community cohesion, and for fostering local identity.[23] Studies have shown that loneliness and lack of social connections may be even more strongly linked to poor health outcomes than lack of physical activity.[24] Parks bring together friends, families, and neighbors, sports teams and volunteers, and many other groups of residents. In the process, they help create social connections and "social capital," which is viewed by many experts to be as important as traditional financial capital in creating strong, healthy communities—including increasing economic growth and reducing crime.[25]

Environmental Health

Parks can play important roles in creating safer, healthier environmental conditions for local residents. Close-to-home parks can improve quality of life by providing shade, protecting local air and water quality, and reducing stormwater runoff and flooding.[26] Nationally, urban trees (many of which are found in parks) provide the equivalent of $3.8 billion of air pollution removal.[27] Trees and other vegetation in parks help reduce "urban heat islands," the increased temperatures created by surfaces in cities (such as sidewalks, streets, and roofs) absorbing and retaining heat during hot days. The economic cost of rising temperatures will likely be over twice as high in cities because of the urban heat island effect.[28] Extreme heat is especially dangerous to elderly people, people with preexisting health conditions, and outdoor workers.[29]

Economic Health

Parks support economic health in a variety of ways. Parks can promote jobs and spending through the economic activity of residents and visitors who exercise and recreate in parks. Since parks promote community health, they can help avoid healthcare costs. And because parks promote civic health and social connections and reduce stress, they may also help reduce additional economic impacts of poverty and crime.

Statewide, Texas's local parks and recreation agencies generate over $7.7 billion in economic activity each year and support over 60,000 jobs.[30] Outdoor recreation in Texas directly supports 411,000 jobs—nearly twice as many as the oil and gas industry.[31] Parks and park programming serve local residents and out-of-town visitors who spend money on fitness and recreation equipment and provide an economic boost to a wide variety of local shops and restaurants. Parks also play a key role in creating a positive quality of life that helps attract and retain all kinds of local businesses.[32] Because they make neighborhoods more appealing, parks help increase property values and add to the tax base of local governments.[33] Through helping to improve residents' physical and mental health, parks can also help reduce absenteeism and healthcare costs for local employers.

While increased property values can benefit homeowners and build a larger tax base, they can also lead to gentrification and the displacement of low-income residents.[34] In order to prevent gentrification and displacement, it is important to ensure that park and trail projects are developed with resident leadership; that they meet the needs of local communities, especially low-income families; and that, if gentrification and displacement are potential concerns, that parallel policy efforts are made to protect tenants and preserve and expand affordable housing.



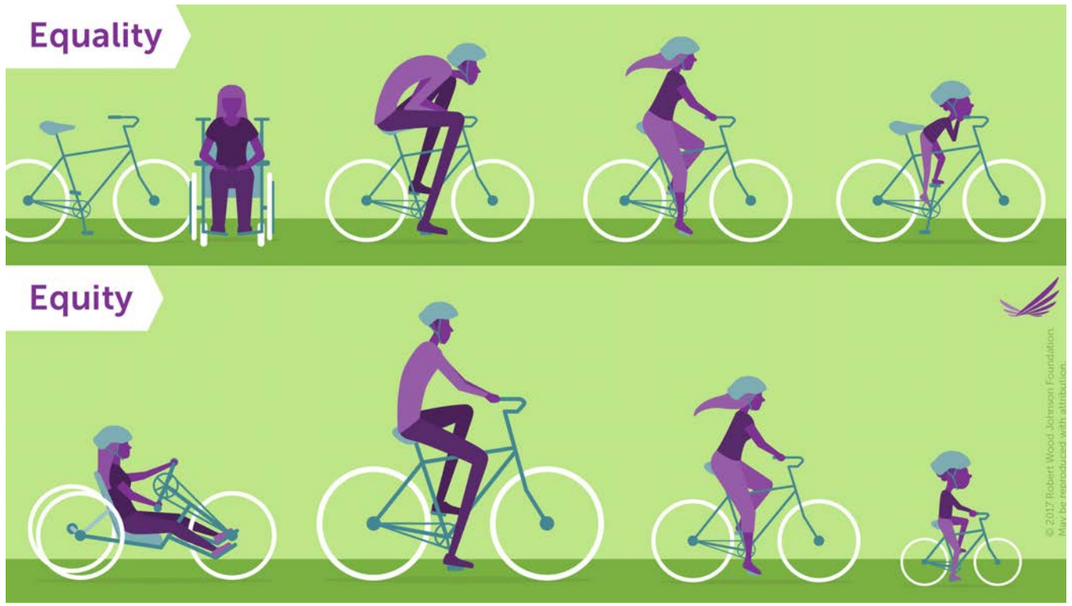
PISD Parks Cleanup Source: pasadenatxphoto.net

Equity

Promoting equity is one of the driving forces of the Healthy Parks Plan. The project's definition of equity has three components: (1) Equity is access to resources needed to thrive; (2) Equity is the work of ending biases and removing the predictability of success or failure that currently correlates with any social or cultural factor; and (3) Because of the reality of systemic inequities, achieving equity means providing increased support to those with the fewest resources. Figure 1-2 below illustrates the difference between equity and equality. The most important equity takeaway for this project is that different communities, neighborhoods, and individuals have different needs. This means that recommendations are not the same for every area or every demographic group in Pasadena. In particular, the Healthy Parks Plan approach assumes that socioeconomically vulnerable residents (particularly those facing economic hardships and poor health outcomes) may have more need for and will likely benefit more from certain kinds of investments and interventions. Aspects of socioeconomic vulnerability and health inequity are explored in more detail in Chapter 5 (Mapping Priorities).

The process and products of the Healthy Parks Plan have been designed with all of the benefits described previously in mind—and with increasing equitable access to these benefits as a central focus. The following section describes how the Healthy Parks Plan approached this.

Figure 1-2. Equity versus Equality (from the Robert Wood Johnson Foundation)



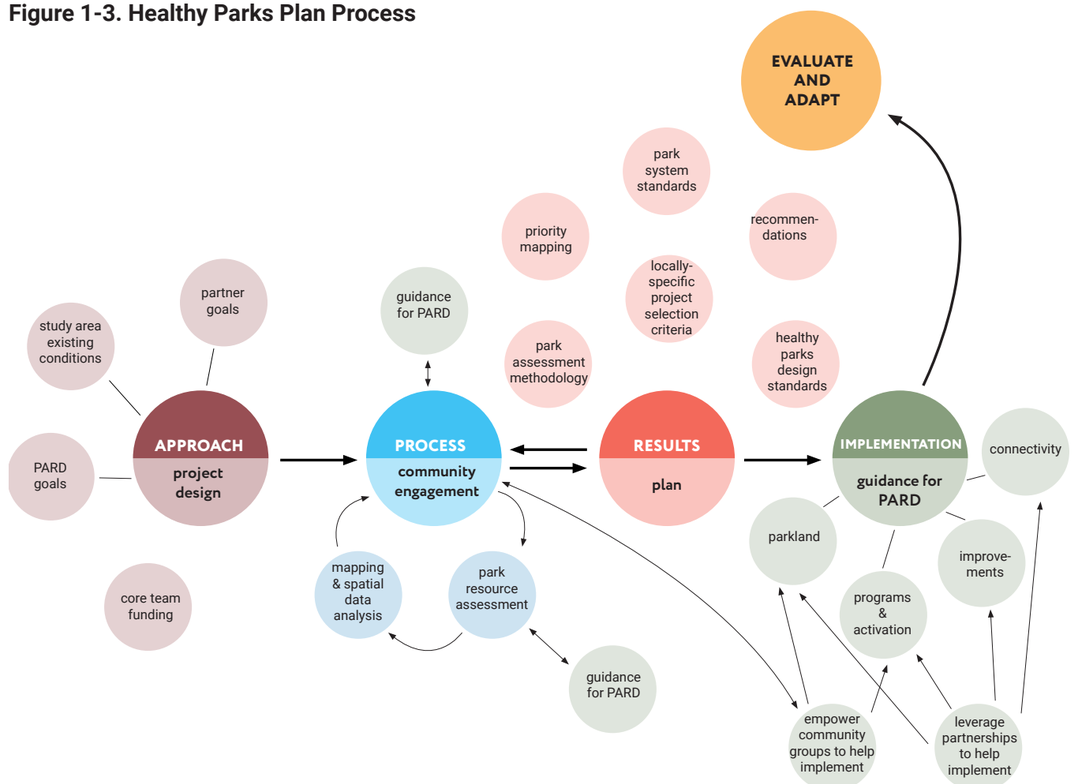
Healthy Parks Plan Approach

The process of developing the Healthy Parks Plan involved more approaches and strategies than a typical parks master plan. This project brought together several key elements:

1. Equity-driven community engagement;
2. Incorporation of local, scientific, and design expertise;
3. Assessment of existing park and programming resources; and
4. Mapping of key indexes that impact the need for and siting of parks.

Creating the Healthy Parks Plan was an iterative process, with community input and data analysis shaping and reshaping every element of the project along the way. As shown in Figure 1-3, the process will continue to be iterative over time as new community input and ongoing evaluation of project implementation inform evolving priorities.

Figure 1-3. Healthy Parks Plan Process



Community Engagement

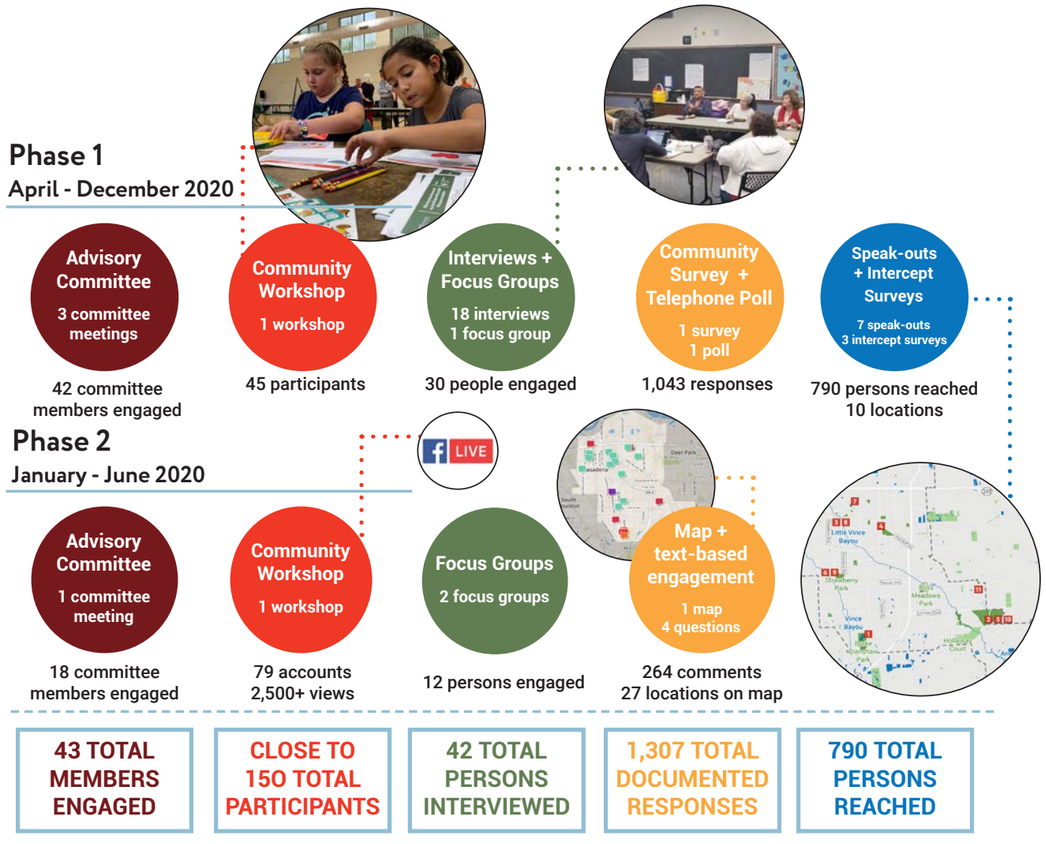
The project's extensive community engagement was equity-driven, with the central goal of reducing barriers to participation and ensuring that the perspectives of underrepresented and underserved community members were heard, respected, and incorporated into recommendations. The project team also engaged local leaders and experts through the Core Team, Advisory Committee, Interviews, and Focus Groups. The Core Team was made up of representatives from the Pasadena Parks and Recreation Department, Houston Parks Board, Asakura Robinson, and Land and Water Connections Consulting. Members of the Core Team, Advisory Committee, and interview participants are listed in the Preface of this report.

A combined overview of engagement results is included in Chapter 4 (Community Priorities), and more detailed summaries of individual types of engagement are included in the Online Appendices.

The community engagement for the Healthy Parks Plan involved:

- Convening an Advisory Committee made up of over 40 local leaders and experts representing over 30 organizations and agencies who helped guide the creation of the plan.
- Holding two interactive Community Workshops to create fun and meaningful opportunities for community members to provide deeper input. The first workshop (in June 2019) was held in-person and the second (in May 2020) was held online via Facebook Live. Over 120 people participated in the community workshops and nearly 3,000 have viewed the Facebook videos of the second workshop.
- Leading ten Speak-Outs and Intercept Surveys (reaching nearly 800 people) to provide easy opportunities for residents, especially those who might otherwise not be able to participate in the planning process, to answer key questions while attending local events (for example the ABC Dental Fair and a dance at the senior center).
- Gathering responses to a Community Survey (online and hard copy with 1,043 nearly demographically representative responses) and a Telephone Poll (with 400 demographically representative responses) to get input from the widest possible group of residents.
- Conducting 21 Interviews with local experts to provide overall context and three Focus Groups specifically addressing the needs of people with disabilities and their families, opportunities for integrating nature into parks, and challenges related to perceptions of park safety.
- Using Mobile Phone Texting and an Interactive Online Map to help answer final key questions after COVID-19 prevented in-person engagement at the end of the planning process.

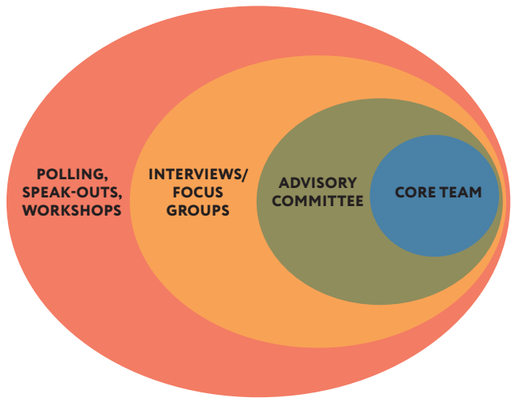
Figure 1-4. Community Engagement Summary



Principles of Equity-Driven Engagement

- Transparency, accountability, empathy, and humility are critical
- Community members are experts on their own needs
- It is our responsibility to identify and reduce barriers to participation
- Acknowledge our own implicit biases and the limits of our cultural competency
- Share decision-making and leadership
- Need to have (and set) flexible and realistic expectations
- Coalition-building, collaboration, and partnerships are key
- Continually evaluate process and be willing to change course
- Engagement should help empower community members and build healthier, more resilient communities

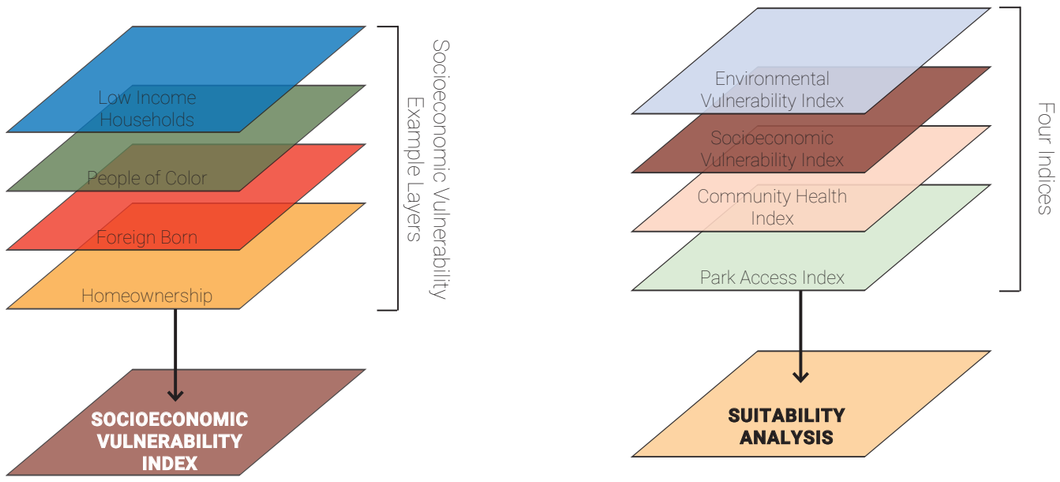
Figure 1-5. Nested Levels of Community Involvement



Mapping of Key Indexes

The mapping process is described in more detail in Chapter 5 (Mapping Priorities). The key indexes created for the Healthy Parks Plan are Socioeconomic Vulnerability, Community Health, Environmental Vulnerability, and Park Access. Figure 1-6 shows the project's basic approach to weighting and stacking data layers in order to identify the best multiple benefit opportunities for park sites and park improvements.

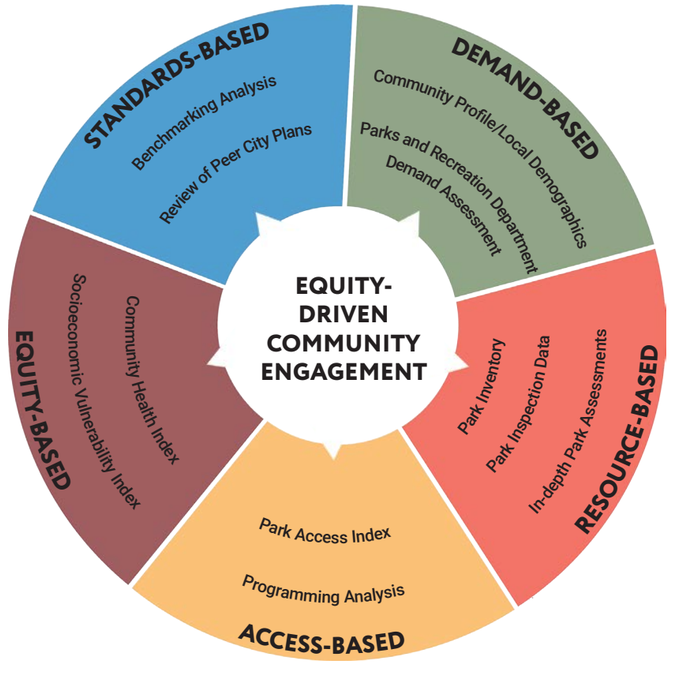
Figure 1-6. Mapping Process



Needs Assessment

The Needs Assessment for the Healthy Parks Plan involved many components, including the community engagement and mapping analysis described above. Important additional elements included (1) Park and programming inventories; (2) Benchmarking (comparison with peer cities and national averages); and (3) In-depth assessments of ten priority parks. Each of these is described in more detail in Chapter 3 (Park Inventory, Benchmarking, and Assessments). The needs assessment for this project is equity-based, access-based, resource-based, demand-based, and standards-based. The combined result of all the engagement and analysis for the Healthy Parks Plan, including all of the quantitative and qualitative data gathered, is an objective determination of the investments that will do the most to help Pasadena thrive through expanding access to healthy and welcoming parks. Figure 1-7 shows how all of the components of the Needs Assessment fit together, with the project's equity-driven engagement informing each element of the assessment.

Figure 1-7. Healthy Parks Plan Needs Assessment













2 Pasadena Profile

Pasadena Profile

The City of Pasadena stretches across approximately 45 square miles from the Houston Ship Channel in the north to Clear Lake and Galveston Bay in the south and east. Pasadena is 20 miles southeast of downtown Houston, and it is surrounded by the cities of South Houston, Deer Park, Galena Park, and La Porte. The Pasadena Freeway (State Highway 225) and the Sam Houston Tollway (Beltway 8) pass through Pasadena, and Interstate 45 is just southwest of the city. (See Figure 2-1.) Pasadena is a mid-sized city in a very large metropolitan area.

History

The Galveston Bay region was occupied by Native Americans for at least 7,000 years—particularly by the Karankawa and Atakapan tribes. European settlers began arriving in the early 1800s. Because the last battle of the Texas Revolution took place in 1836 near where Pasadena is located now, Pasadena is sometimes referred to as the "Birthplace of Texas." In the second half of the 1800s, much of the area that is now Pasadena was used for grazing—particularly the Allen Ranch, which was established by Sam Allen in 1843 and became one of the longest-running ranches in the history of the United States.

In response to a hurricane in 1900 that damaged much of Pasadena, the American Red Cross sent the city over a million strawberry plants. The city subsequently claimed to be the "strawberry capital of the world" in the 1930s, and it still hosts an annual strawberry festival. The "World Port" of Houston was opened in 1914, followed quickly by large refineries being established along the shipping channel. The City of Pasadena was incorporated in 1928. The area subsequently became a major industrial center during World War II, and Pasadena's population quickly expanded. While ranching and farming have a long history in Pasadena, and continue to play a role in small areas of the city, petrochemical plants in and around Pasadena, including some of the largest refineries in the United States, are now major drivers of the region's economy.[35] Pasadena is home to petrochemical corporations from over a dozen countries.

People Profile

Population and Demographics

With nearly 154,000 residents, Pasadena is the second largest city in Harris County and the seventeenth most populous city statewide. Harris County overall has a population of 4.5 million—the third largest of any county in the United States. In the 1950s and 1960s, Pasadena grew extremely quickly, increasing from a population of 22,000 in 1950 to nearly 90,000 in 1970.[36] The city's population increased by only 4,000 people between 2010 and 2017. The Houston-Galveston Area Council projects a relatively steady rate of growth for Pasadena with a projected population of nearly 171,000 by 2045.[37]

Pasadena is a predominately Hispanic/Latinx community (67.7%), with smaller populations of non-Hispanic white (27.1%), black (2.4%), and Asian (1.8%) residents. Pasadena has the highest proportion of Hispanic/Latinx residents of any city in Greater Houston. Over 44% of residents speak a language other than English at home. It also has a lower median age (and percentage of the population under 18) than the average for Harris County. Table 2-1 shows this demographic breakdown.

Economy and Employment

Pasadena's economy is closely tied to petrochemical companies, maritime shipping, aerospace, healthcare, and education. According to the Pasadena Economic Development Corporation, there are about 14,000 jobs related to education in the city and 33,000 in jobs associated with petrochemical plants.[38] The Houston Ship Channel and the Port of Houston both play important roles in the local and regional economy. The Houston Ship Channel connects Houston to Galveston Bay and the Gulf of Mexico; it is one of the busiest waterways in the country.[39] The Port of Houston is a 25-mile long complex of facilities along the Houston Ship Channel.

Overall employment in Harris County increased by 260 percent (from 861,786 to 3,100,007) between 1970 and 2016. Population grew 162 percent during the same time period. Pasadena's unemployment rate was 8% in January 2017, but dropped to 5.3% by December 2018. This was still substantially higher than the statewide rate of 3.7% unemployment, and higher than the unemployment rate in surrounding cities.[40]

Table 2-1. Demographic Breakdown of Pasadena[41]

	Pasadena		Harris County		United States	
Total population	153,909		4.5M		321M	
Age Distribution						
Median age (years)	31.1		33.1		37.8	
Population under 18	46,298	30.1%	1.2M	27.1%	74.0M	22.8%
Population 65 and over	14,546	9.5%	432,729	9.6%	38.7M	15.2%
Race/Ethnicity						
Hispanic/Latinx (any race)	104,130	67.7%	1.9M	42.2%	56.5M	17.6%
Not Hispanic/Latinx	49,779	32.3%	2.6M	57.8%	264.5M	82.4%
White alone	41,653	27.1%	1.4M	30.6%	197.3M	61.5%
Black/African American alone	3,730	2.4%	838,235	18.5%	39.4M	12.3%
Asian alone	2,802	1.8%	307,109	6.8%	17.0M	5.3%
American Indian alone	224	0.1%	8,078	0.2%	2.1M	0.7%
Two or more races	1,018	0.7%	62,712	1.4%	7.5M	2.3%
Other race	327	0.2%	9,681	0.2%	715,432	0.2%
Language						
Speak only English	78,275	55.7%	2.3M	56.3%	237M	78.7%
Speak language other than English	62,210	44.3%	1.8M	43.7%	64.2M	21.3%
Speak Spanish	58,735	41.8%	1.4	34.6%	40.0M	13.2%
Speak English less than "very well"	33,356	23.7%	851,542	20.4%	25.7M	8.5%

Table 2-2. Income and Poverty Rate Comparison[42]

	Pasadena		Harris County		United States	
Income						
Per capita income	$22,178		$30,856		$31,177	
Median household income	$50,207		$57,791		$57,652	
Poverty						
People below poverty	29,473	19.3%	751,985	16.8%	45.6M	14.6%
Families below poverty	5,748	16.0%	148,255	13.9%	8.2M	10.5%

Figure 2-1. Pasadena Region[43]

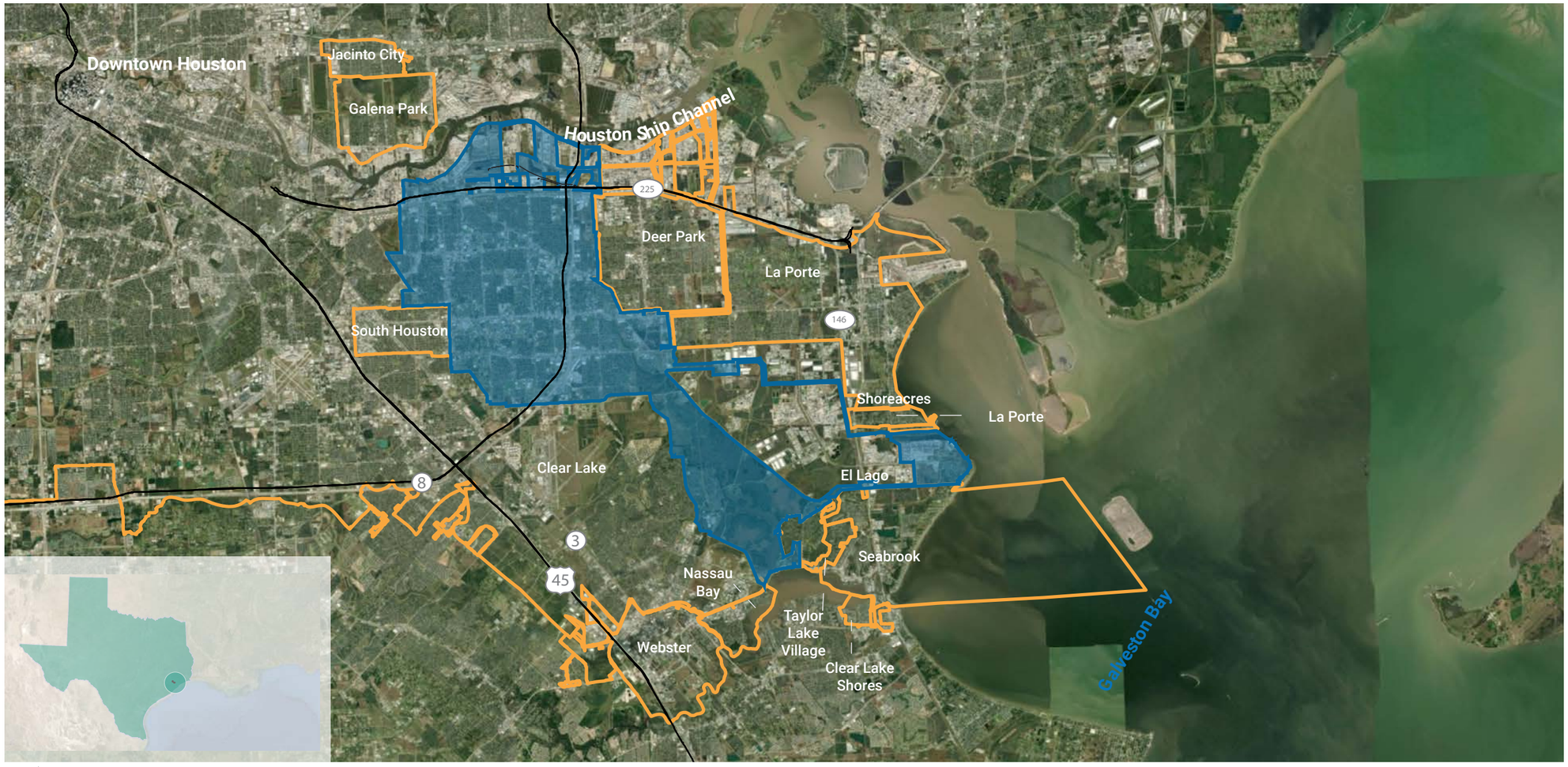
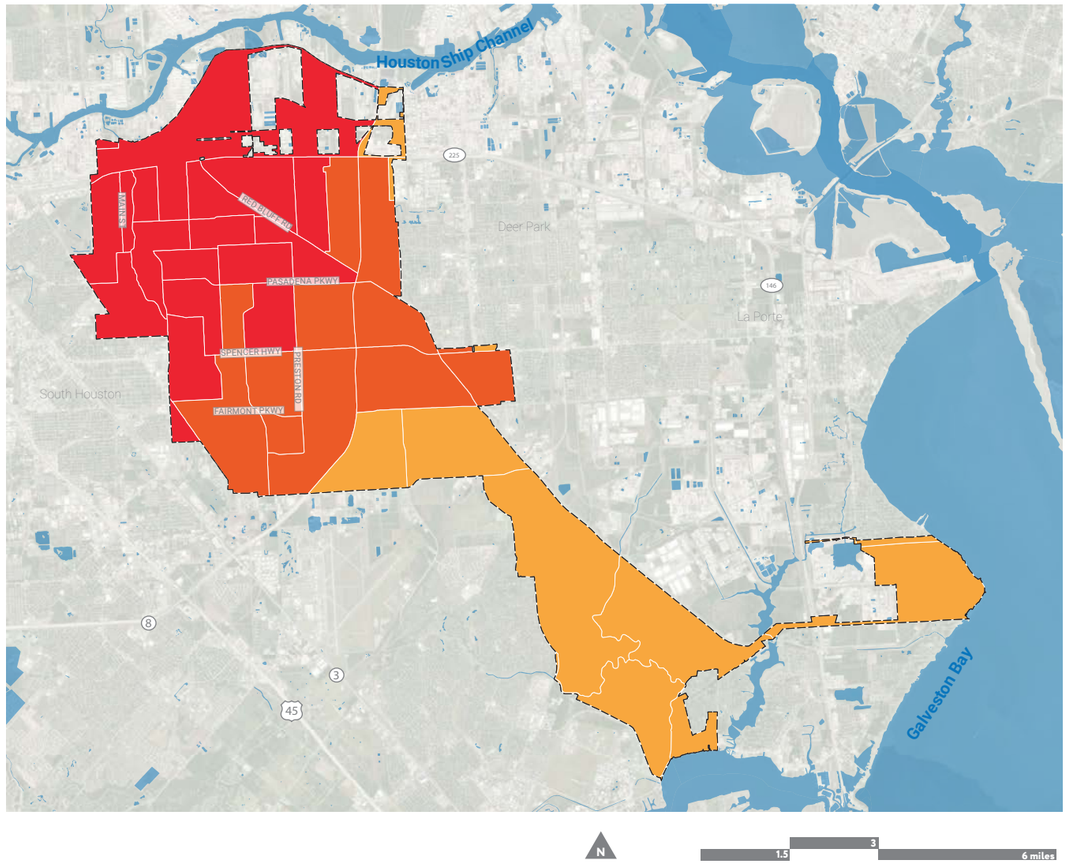
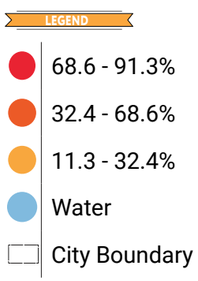


Figure 2-2. Percent of Population that is Hispanic/Latinx[44]





Socioeconomic Vulnerability

Pasadena has a higher proportion of residents who are socioeconomically vulnerable than surrounding areas. (See Chapter 5, Mapped Priorities, for more detailed information about socioeconomic vulnerability.) In addition to a higher level of unemployment than surrounding communities, Pasadena residents have relatively low per capita income, higher rates of poverty, and lower rates of educational attainment. (See Table 2-2.) Median household income in Pasadena is just over $50,200, and over 19% of residents live below the poverty line. Poverty rates are particularly high in north Pasadena where over 1/3 of census tracts have poverty levels at or above 30%.[45]

Schools and Education

Pasadena is home to several important college and university campuses, including University of Houston-Clear Lake, San Jacinto Community College, and Texas Chiropractic College. Most of the city's elementary through high school students are served by Pasadena Independent School District, which serves 55,000 students at 67 schools. Of those students, 92% are students of color, 80% qualify for free or reduced price lunch, and 58% are considered academically at-risk. Pasadena has a much larger percentage of residents with no high school degree (28.8%) than Harris County overall (only 19.5%).

Housing and Transportation

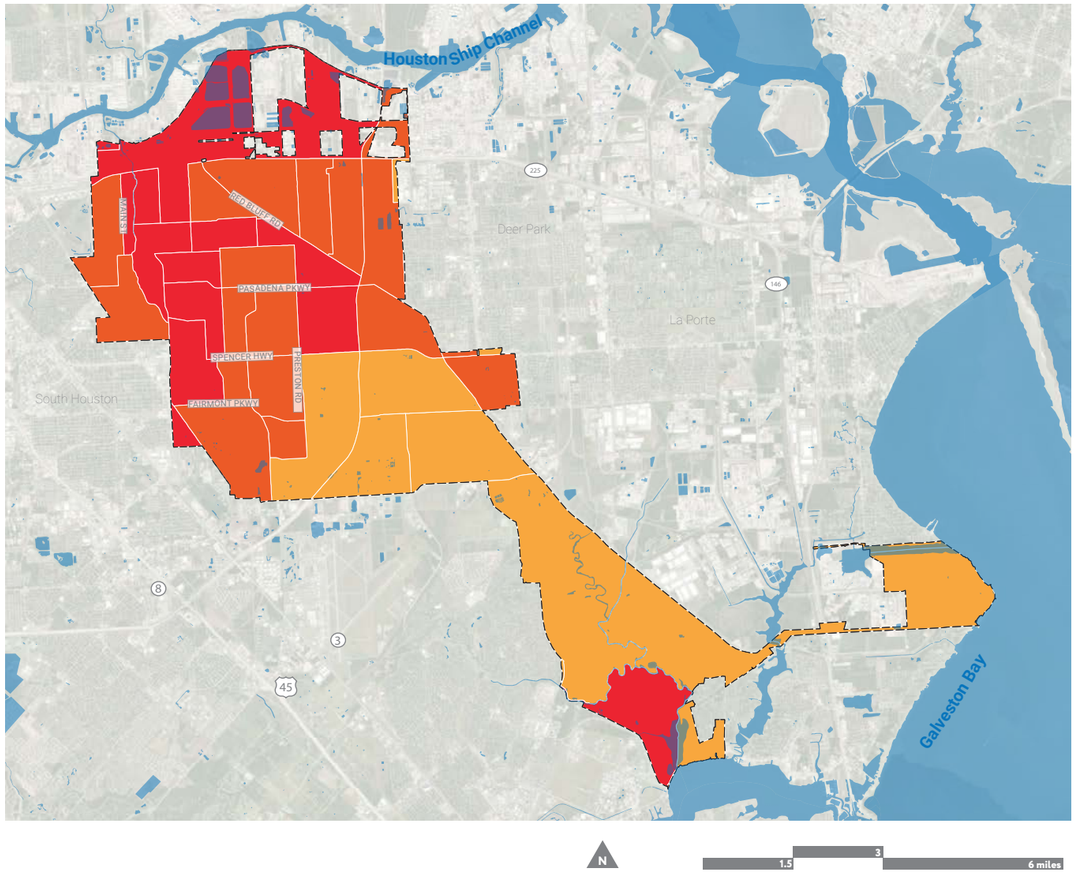
Pasadena has 53,817 housing units, of which approximately 9.1% were vacant in 2019. Most of the city's housing has been built since 1970, but only 891 units have been built since 2010. Owners occupy 53.3% of housing, and 46.7% of housing is renter-occupied. Nearly 50% of renter households pay more than 30% of their monthly income in rent—indicating that they are cost-burdened by housing.[46]

Transportation in Pasadena is very dependent on private vehicles. There is no public transportation that specifically covers the City of Pasadena. Over 94% of Pasadena residents drive to work, with over 80% of these driving alone. Less than 0.5% of residents take public transportation to work or bicycle to work, and only 1.5% walk to work. Over 6% of households in Pasadena have no vehicle, and over 34% have only one vehicle.[47] A small portion of Pasadena is served by Harris County METRO's Baytown/La Porte shuttle. Major highways and interstates in Pasadena include Beltway 8, State Highway 225, and Interstate 45.

Table 2-3. Housing in Pasadena compared with Harris County and US Overall[48]

	Pasadena	Harris County	United States
Owner-occupied housing rate	53.3%	54.7%	63.8%
Median value of owner-occupied housing units	$108,700	$154,100	$193,500
Median monthly owner costs with a mortgage	$1,278	1,539	$1,515
Median gross rent	$867	$976	$982

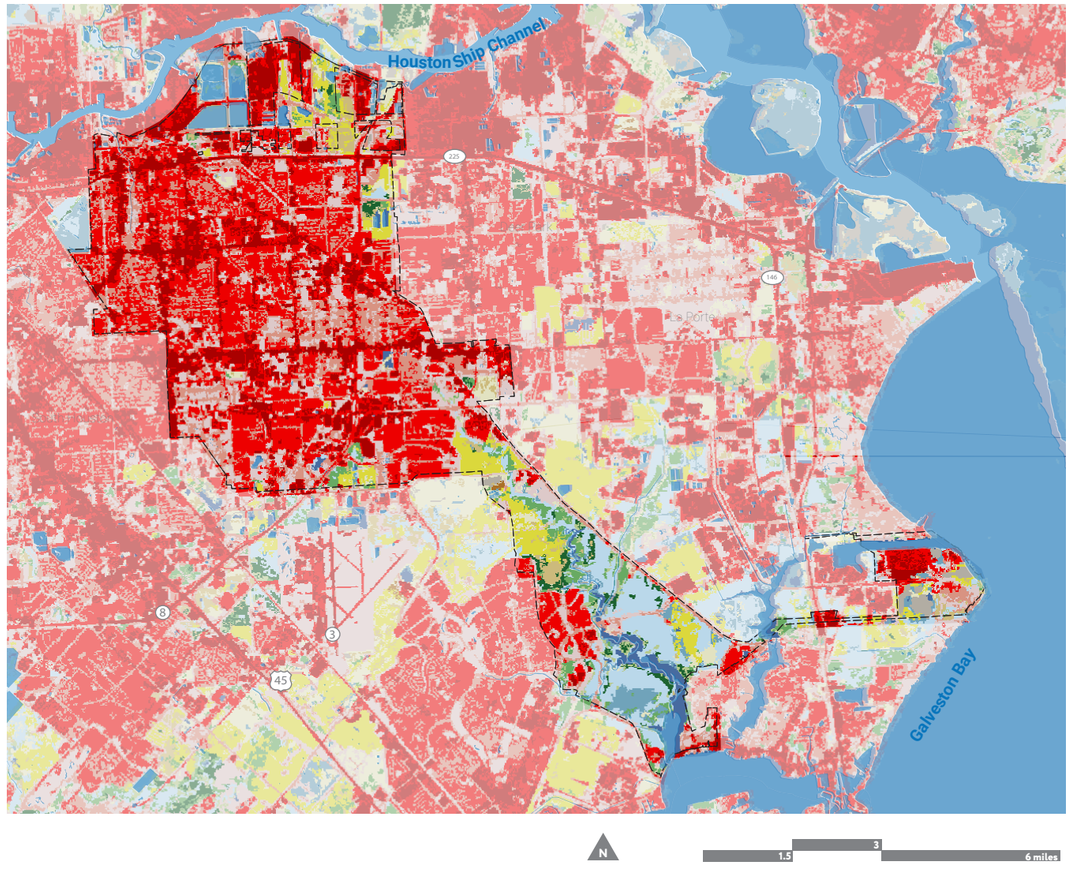
Figure 2-3. Percent of Population Classified as Low-Income[49]



LEGEND

- 42.8 - 61.9%
- 23.7 - 42.8%
- 4.70 - 23.7%
- Water
- City Boundary

Figure 2-4. Land Cover Map[50]



LEGEND

- Perennial Ice/Snow
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Grasslands/Herbaceous
- Pasture/Hay
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands
- Open Water
- City Boundary

Land Use

Nearly 26% of the land in Pasadena is dedicated solely to residential use. Just over 9% of the land in Pasadena is used for commercial purposes and 13% for industrial use—both mostly in the northernmost area of the city. In addition to residential areas, southern Pasadena is devoted to open space, industrial uses, and some pasture land.[51] According to the City's Economic Development Strategic Plan, "with the exception of a handful of undeveloped properties in the southeastern section of the city…there are no remaining large sites for development. The city is fast approaching a 100 percent developed state."[52] Pasadena is one of only two cities in the country with populations over 100,000 that does not have zoning; the other is Houston.[53] Although the city does not have zoning regulations that formally separate land uses, commercial areas are mostly located along arterial roads.[54]

Community Health

In Pasadena, as elsewhere, broader patterns of social and economic inequity are reflected in community health outcomes. According to the federal Office of Disease Prevention and Health Promotion, social determinants of health are "conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks."[55] The key social determinants of health are economic stability, education, social and community context, health care access, and neighborhood and built environment.[56] In their analysis of the long-running Houston Area Survey, Kinder Institute researchers found that "education, income, ethnicity, and age are... decisive, pervasive, and independent correlates of the health disparities in Harris County."[57] Pasadena has similar or higher rates of poor health outcomes as Harris County overall. Table 2-4 shows several key health indicators for Pasadena and Harris County based on data compiled by Houston State of Health.

Figure 2-7 looks at the total number of non-institutionalized populations within a census tract who have a disability. The Non-institutionalized population refers to those who are not inmates of institutions (such as penal or mental facilities) or are not on active duty in the Armed Forces. A higher weighting was given to areas where the percent of persons with a disability is higher. There are only two census tracts that have a high number of people living with a disability.

Table 2-4. Community Health Indicators

	Pasadena	Harris County
Adults with health insurance	67.1%	72.5%
Children with health insurance	84.7%	87.4%
Adults with diabetes	11.7%	11.0%
Adults with asthma	8.0%	5.1%

Figure 2-5. Percent of Residents Without Health Insurance[58]

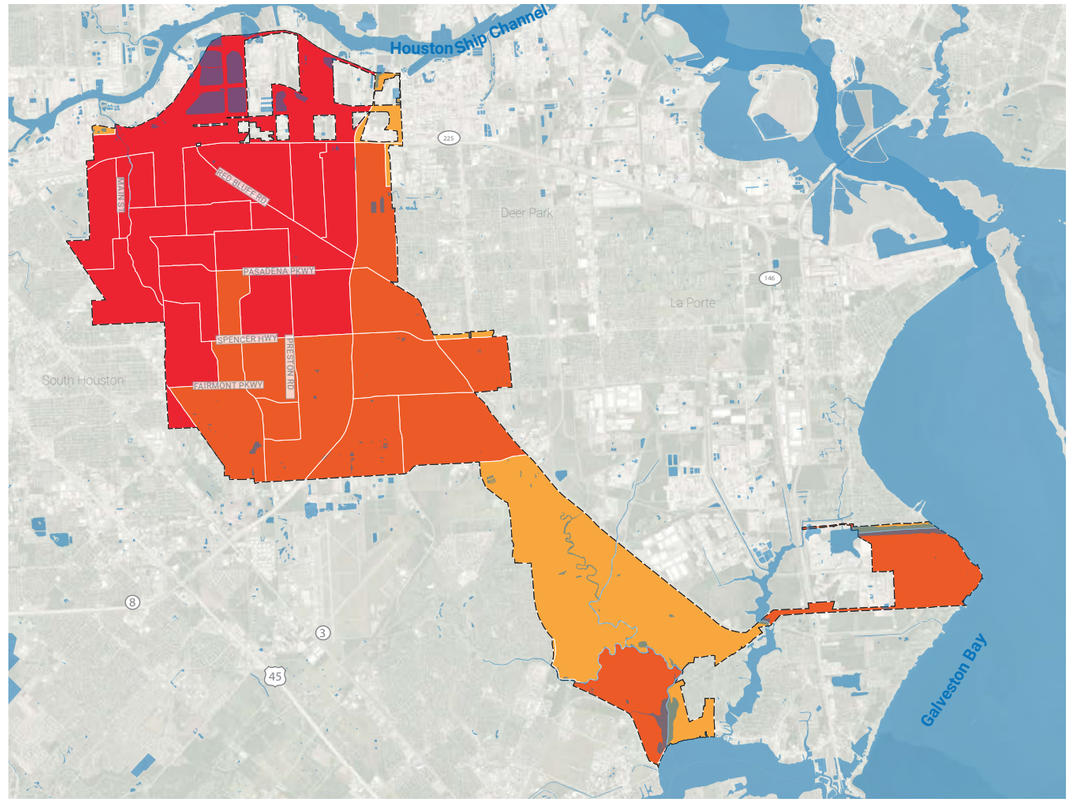
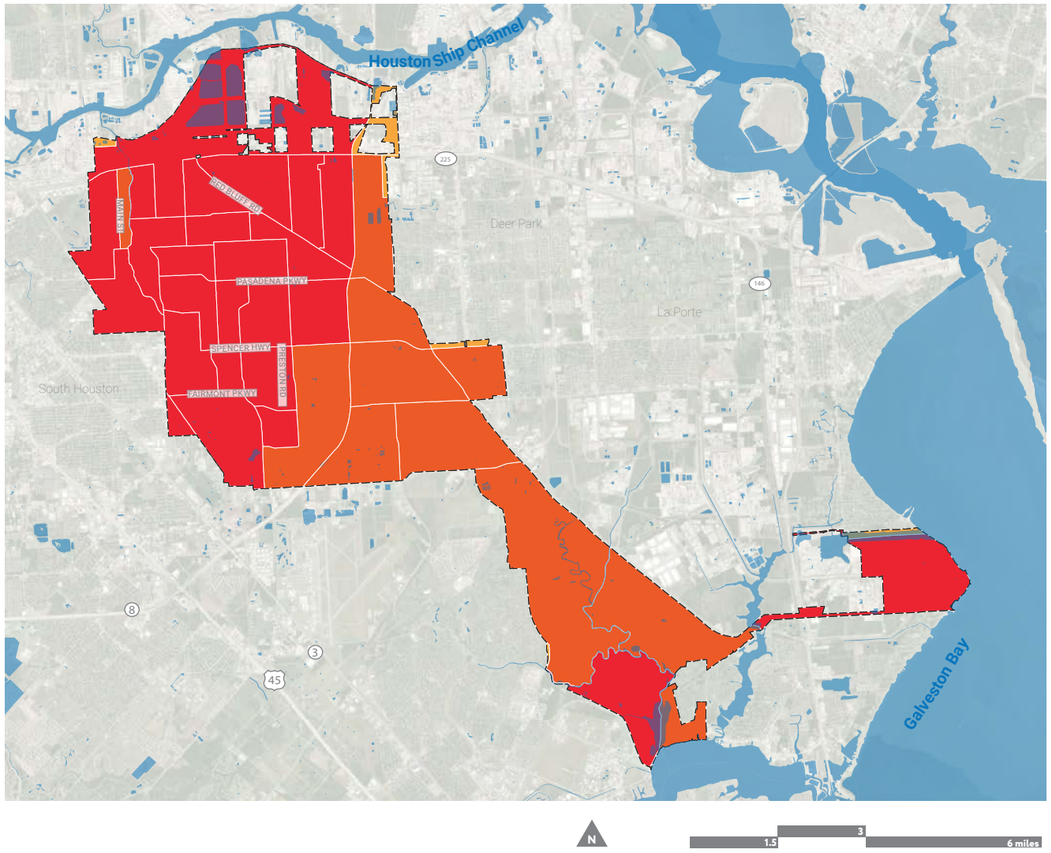


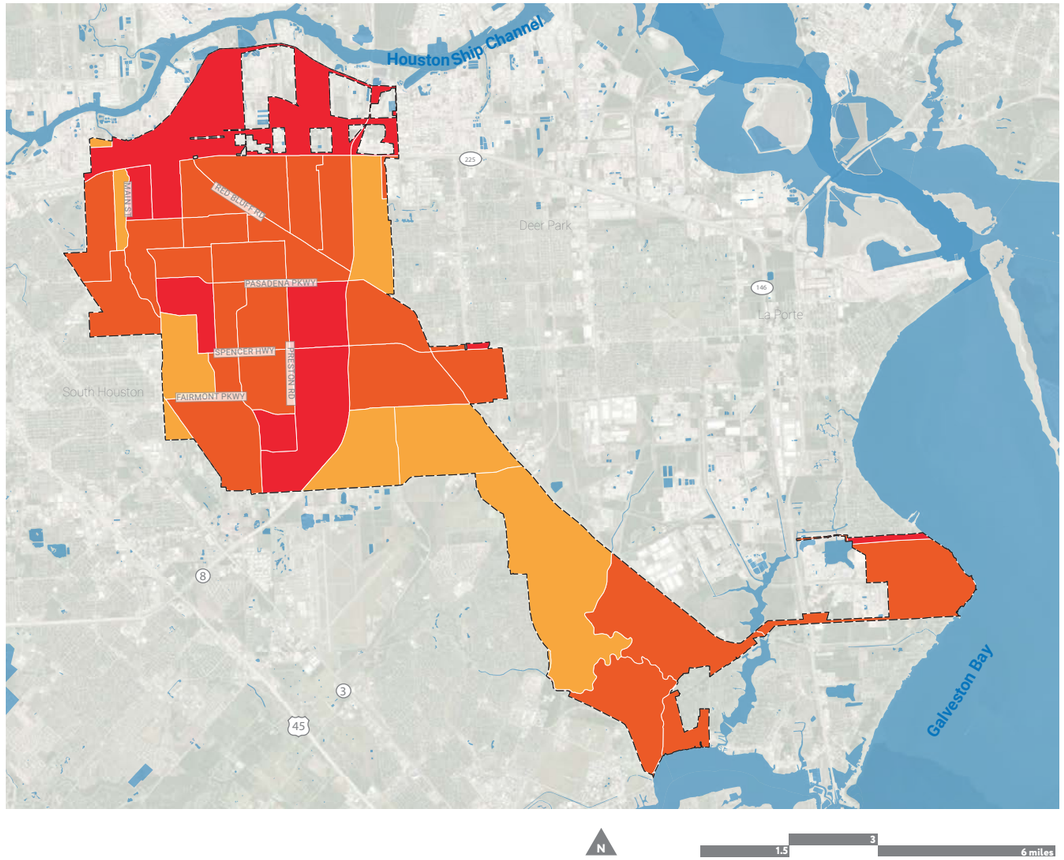
Figure 2-6. Percent of Residents With Heart Disease[59]



LEGEND

- 6.8 - 8.4%
- 4.5 - 6.8%
- 3.7 - 4.5%
- Water
- Census Tracts

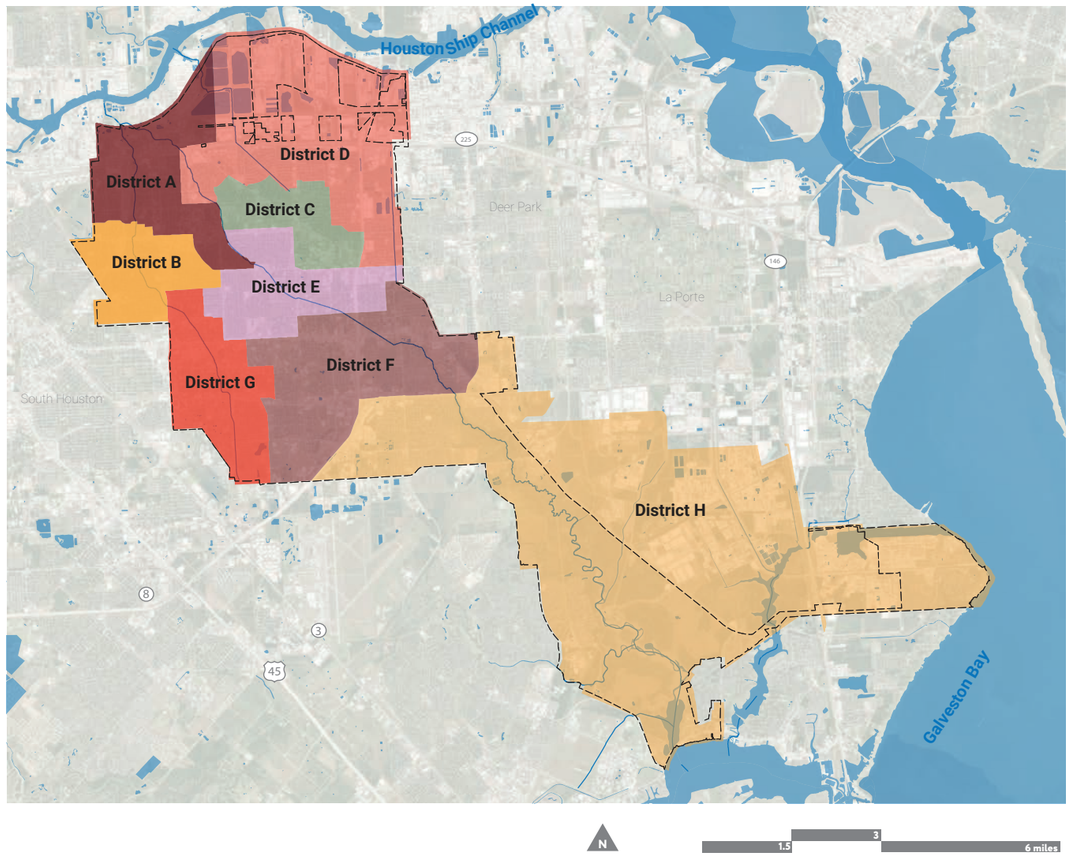
Figure 2-7. People with Disabilities[60]



LEGEND

- 14.6 - 19.2%
- 10.0- 14.6%
- 5.4 - 10.0%
- Water
- City Boundary

Figure 2-8. Pasadena City Council Districts (Current City Council Members)[61]



LEGEND

- **A** Ornaldo Ybarra
- **B** Bruce Leamon
- **C** Don Harrison
- **D** Sammy Casados
- **E** Cody Ray Wheeler
- **F** Phil Cayten
- **G** Cary Bass
- **H** Thomas Schoenbein
- Water

Politics and Civic Engagement

The City of Pasadena is currently led by its mayor, Jeff Wagner, and eight city council members. Mayor Wagner was sworn in on July 1, 2017. He previously represented City Council District F. The city is divided into eight City Council Districts as shown in Figure 2-8.

There is a long history of real and perceived division along both demographic and geographic lines between the northern and southern areas of Pasadena. As shown in Figure 2-2 (Hispanic/Latinx Population) and Figure 2-3 (Low-Income Population), the northern (historic) areas of the city are predominantly Hispanic/Latinx and, in general, have a higher percentage of low-income residents. Although the northern areas of the city have more registered voters than the area south of Spencer Highway, voter turnout is generally lower in the north.

Environment Profile

Geography and Climate

Pasadena is approximately 30 feet above sea level. Harris County and the City of Pasadena have a humid subtropical climate with hot, humid summers and relatively mild winters. Average high temperatures range from 90 to 93°F during the summer and average low temperatures drop to the upper 40s in the winter. Rainfall averages almost 54 inches annually and is relatively evenly distributed throughout the year. In addition to its bayous, much of the city was once dominated by flat coastal prairies.[62]

Wildlife Habitat and Native Ecosystems

Pasadena sits in two ecoregions: Gulf Coast Prairies/ Marshes and Post Oak Savannah. Although much of the City of Pasadena is highly developed, there are still some ecologically important habitat areas, particularly in the southern portion of the city. Important habitats in Pasadena include deciduous woodlands and forests, grasslands, herbaceous and forested wetlands, coastal tidal flats, and shrublands. Harris County lost 15,000 acres (29%) of its remaining freshwater wetlands between 1992 and 2010, and evidence suggests that developers in the county have often avoided complying with mitigation requirements for impacts to wetlands.[63] A number of species found locally are listed as federally endangered or threatened under the Endangered Species Act. These include West Indian manatee, green sea turtle, hawksbill sea turtle, Kemp's Ridley sea turtle, leatherback sea turtle, loggerhead sea turtle, least tern, piping plover, red knot, and the Texas prairie dawn-flower. There are also a large number of protected migratory birds who breed in or pass through wetlands and coastal areas in the vicinity.[64]

Climate Change and Extreme Weather

Pasadena faces extreme heat during much of the summer, which can pose major health risks particularly to people who work outdoors and for people who are very young, elderly, or medically vulnerable. Paved urban areas exacerbate extreme heat by creating "urban heat islands" where streets, roofs, and pavement retain and radiate excessive heat. Hotter temperatures increase peak energy demand, particularly for air conditioning, negatively affect air and water quality, and cause higher rates of heat-related illnesses and mortality. According to a recent study, the cost of rising temperatures will likely be over twice as high in cities because of the urban heat island effect. Urban trees and green spaces—like those provided by parks—can help reduce urban heat islands.

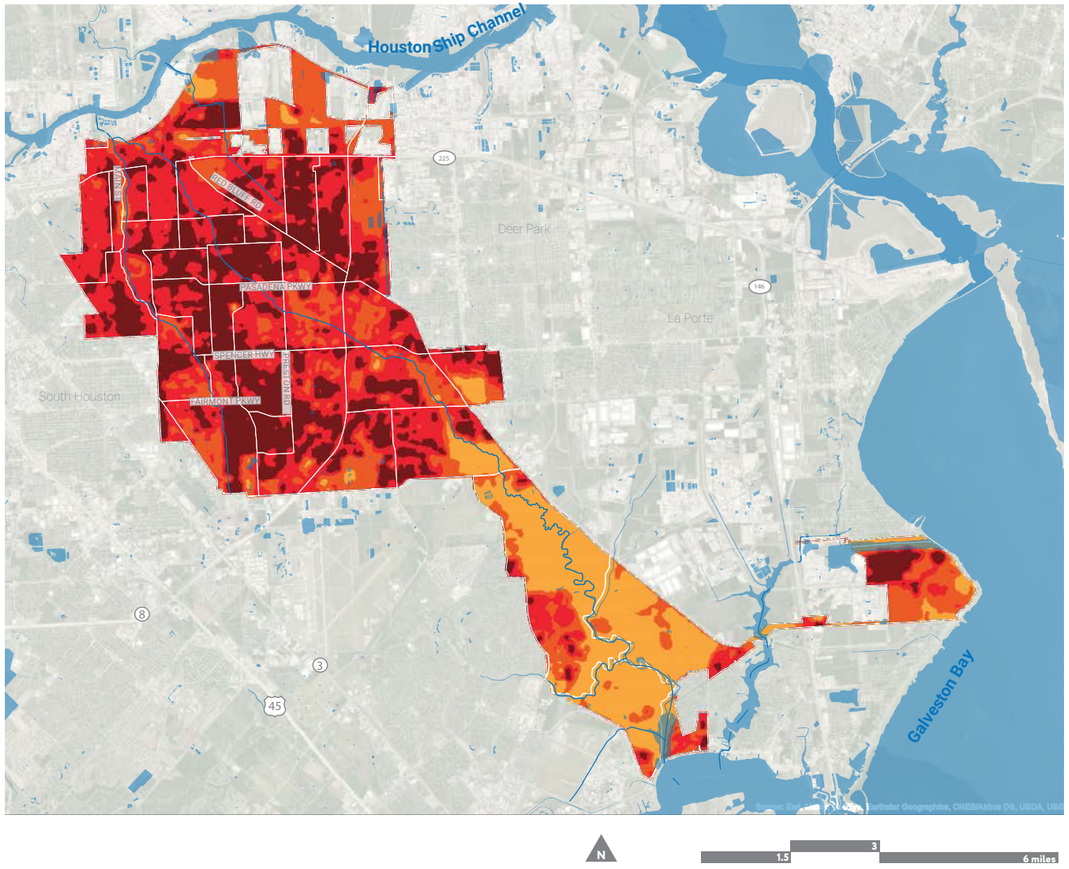
Climate/Weather Disasters in Harris County

Harris County is particularly vulnerable to disasters caused by extreme weather. According to the Federal Emergency Management Agency (FEMA), there have been 35 federally declared disasters in Harris County since 1973.[65] These include Tropical Storm Alison (2001), Hurricane Ike (2008), the Tax Day Flood (2015), and Hurricane Harvey (2017). Nearly all of the 35 disasters were climate and weather-related. In 2019, seven of the fourteen of the most severe climate- and weather-related disasters in the United States (each causing at least $1 billion in damage) were in Texas.[66] According to the Harris County Flood Control District, "a major flood occurs somewhere in Harris County about every two years."[67] In recent years, major flooding events have been even more frequent. Particularly relevant to the equity focus of the Healthy Parks Plan: A 2018 study showed that the economic impacts of disasters tend to exacerbate existing socioeconomic inequities.[68]

Hurricane Harvey in Pasadena

During Hurricane Harvey in 2017 nearly 46 inches of rain fell in Pasadena.[69] The hurricane killed at least 88 people and damaged more than 200,000 homes in the region.[70] In Pasadena alone, Hurricane Harvey flooded about 5,800 homes—more than 10% of the city's housing. The National Oceanic and Atmospheric Administration estimates that the hurricane caused $125 billion in damage.[71] Because warmer air can hold more moisture, scientists recently concluded that the record amount of rainfall from Hurricane Harvey was 38 percent higher than would have occurred in the absence of climate change.[72] The Federal Emergency Management Agency (FEMA) awarded Pasadena $79.4 million in December 2018 (with $26.4 million in matching funds from the city) to fund flood prevention and recovery projects north of Spencer Highway—including along roughly 25 miles of residential streets and roadways.[73] The Harris County Flood Control District flood mitigation projects identified in Pasadena include the Baywood Stormwater Detention Basin improvements and widening of Armand Bayou near the Sam Houston Tollway.[74]

Figure 2-9. Urban Heat Islands in Pasadena[75]



LEGEND

- 81-93 Degrees (F)
- 77-81 Degrees (F)
- 74-77 Degrees (F)
- 68-74 Degrees (F)
- Water
- City Boundary

Figure 2.9 illustrates that areas in Pasadena vary widely in temperature, with areas near Armand Bayou being up to 25 degrees cooler than the hottest places in the City.

In addition to rising temperatures, the intensity and frequency of storms in the region is likely to increase as a result of climate change, leaving Pasadena vulnerable to flooding and storm surges. Flood zones are shown in Figure 2-10. Much of the soil in Pasadena does not absorb water quickly, and developed areas include large areas of impermeable surfaces—both of which exacerbate the risk of flooding. The Harris County Flood Control District manages 2,500 miles of bayous, channels, and ditches, and an expanding network of detention basins. However, this infrastructure is increasingly overwhelmed by extreme storms, and secondary flooding means that areas that have not been considered flood-prone historically are now vulnerable to flooding. Streams and bayous are showing in Figure 2-11.

According to the National Climate Assessment, sea level rise resulting from climate change will be 1 to 4 feet along the Texas Gulf Coast—twice the global average; rising temperatures will cause an additional 1,300 premature deaths per year; and up to $21 billion in coastal property may be flooded as early as 2030.[76] The Houston-Galveston Area Council's (H-GAC) Foresight Panel on Environmental Effects has identified key recommendations for helping the region adapt to climate change.

Water Resources

Pasadena stretches from the Houston Ship Channel in the north to Clear Lake and Galveston Bay in the south and east. A network of streams and bayous runs through Pasadena. The city is located in the San Jacinto River Basin and San Jacinto-Brazos Coastal River Basin and above the Gulf Coast Aquifer.[77] Historically, groundwater extraction in the region has depleted groundwater supplies and caused subsidence, which has damaged structures and increased flood risks.[78] Areas of NASA's Johnson Space Center along the shore of Clear Lake subsided up to a foot in the 1960s and 1970s as a result of groundwater extraction. The City of Pasadena obtains its drinking water from both surface waters and wells.[79]

As in other areas of Harris County, agricultural and urban runoff, including malfunctioning wastewater treatment and septic systems, poses challenges to maintaining water quality. All, or nearly all, the water quality monitoring stations in and near Pasadena show levels of toxins and/or bacteria that could endanger human health through contact or through consuming fish caught in the area.[80] The EPA showed all the local waterways as polluted in 2010, including Little Vince Bayou, Vince Bayou, Buffalo Bayou, Berry Bayou, Hunting Bayou, Sims Bayou, Armand Bayou and Greens Bayou. The Lower Armand Bayou is one of just a few unchannelized stream segments in the metro area.[81]

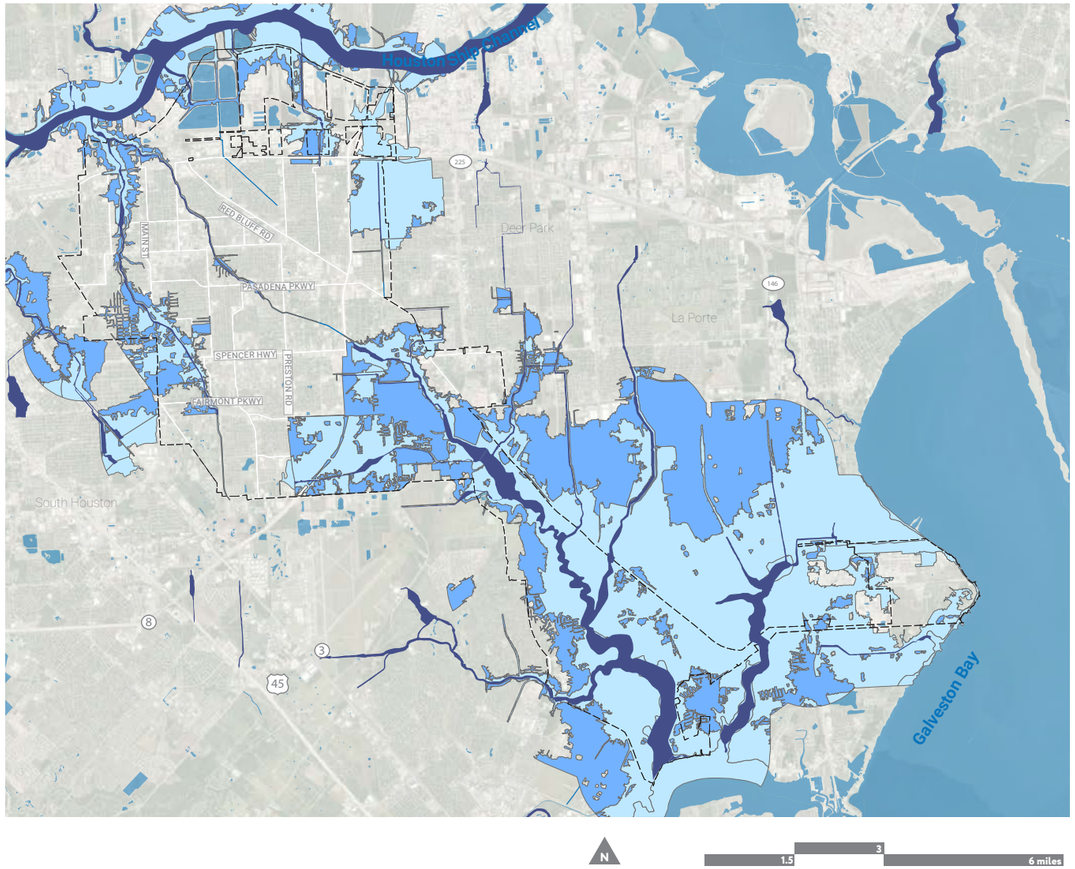
Air Quality

In general, regional air quality has improved significantly since the late 1990s when Houston briefly surpassed Los Angeles for the title of the smoggiest city in America.[82] Despite these regional improvements to air quality, some areas, including eastern Harris County and Pasadena, remain seriously impacted by local air quality issues. Like many port cities along the Gulf Coast, the air quality in and around the Pasadena is affected by industrial pollution from refineries and petrochemical facilities—many of which are located just outside of Pasadena's boundaries in Harris County.

Table 2-5. H-GAC Foresight Panel Recommendations for Climate Change Adaptation (Elements that can be incorporated into park siting and design)

• Utilize tree plantings and green roofs for shading, energy conservation and stormwater detention. • Develop heat wave management plans to prepare for increased temperatures. • Use alternative paving products that require less maintenance when exposed to higher temperatures and that reduce heat island effect. • Enhance shoreline erosion management, including reinforcement of existing levees and seawalls.	• Preserve wetland and riparian zones to provide flood protection and protect water quality. • Build "livable centers" to alleviate traffic congestion and to become more resilient after extreme events. • Avoid new development in areas particularly vulnerable to flooding and sea level rise

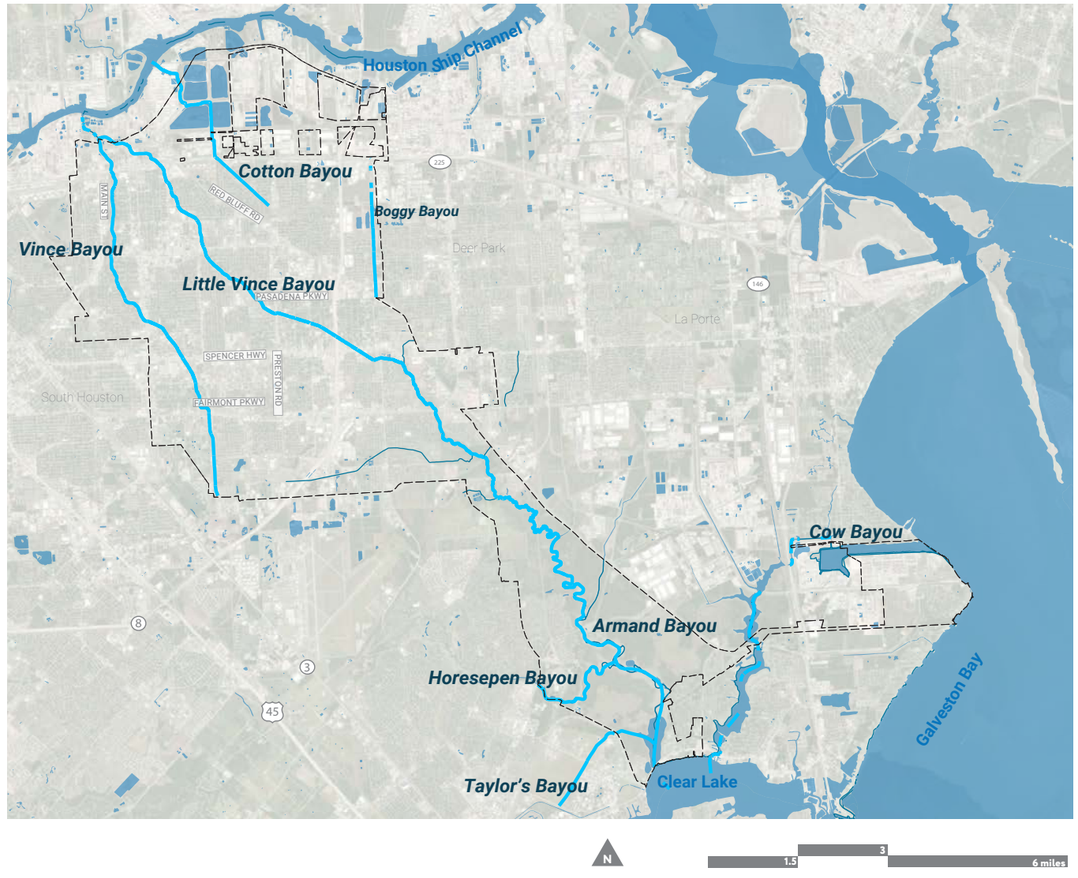
Figure 2-10. Flood Zones[83]



LEGEND

- FEMA effective 500-year floodplain
- FEMA effective 100-year floodplain
- Floodway
- Water

Figure 2-11. Streams and Bayous[84]



LEGEND

- Streams
- Water
- City Boundary

According to the EPA's Toxic Release Inventory, a federal program that tracks certain industrial pollutants with the potential to harm human health, there are at least 116 facilities within a mile of Pasadena that manufacture, process, or use toxic chemicals in reportable quantities.[85] In 2018, these 116 facilities cumulatively reported over 2.7 million pounds of air toxic emissions to the program.[86] Data from the Toxic Release Inventory is used in the EPA's Risk-Screening Environmental Indicator model, which helps communities and policymakers to identify industrial facilities that may pose health risks to local communities.[87] The Risk-Screening Environmental Indicator model evaluates the amount of each toxic chemical released, their relative toxicity, and the potential for human exposure to that chemical in the environment.[88] While useful, the Toxic Release Inventory and Risk-Screening Environmental Indicator model are limited in that they do not consider other sources of air pollution emissions that affect Pasadena air quality such as on and off-road transportation, pipelines, oil and gas terminals, and port operations—all sources that are likely to contribute significantly to adverse air quality impacts in Pasadena.

A separate EPA program called the National Air Toxics Assessment estimates potential impacts of local outdoor air quality conditions in a way that more fully considers the total effects of chronic exposure to industrial and non-industrial emission sources.[i] Table 2-6 shows average county, state, and national values for two health risk categories: Average Cancer Risk and Respiratory Hazard Risk.

i The National Air Toxics Assessment models air quality based on 38 emission source categories and estimates the potential for relative health risks. The most recent version of National Air Toxics Assessment is an analysis of emissions from 2014 that was released to the public in 2018.

Figure 2-12. Non-Cancer Respitory Hazard Index

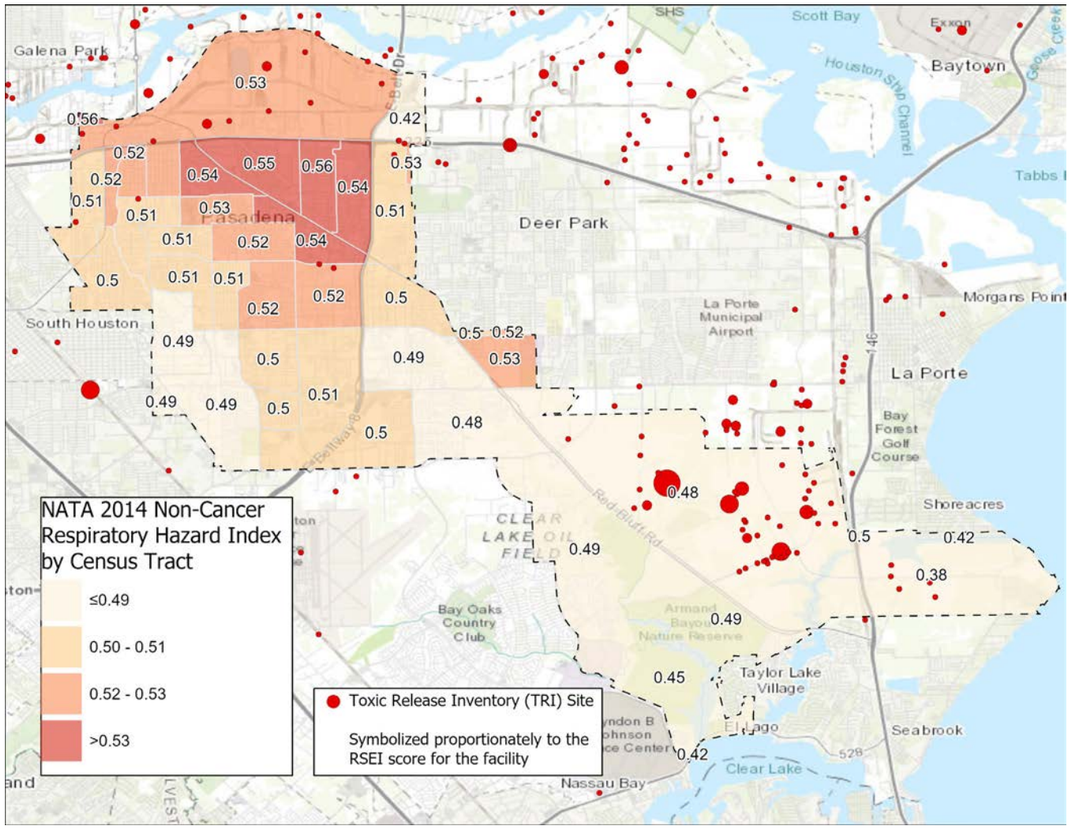
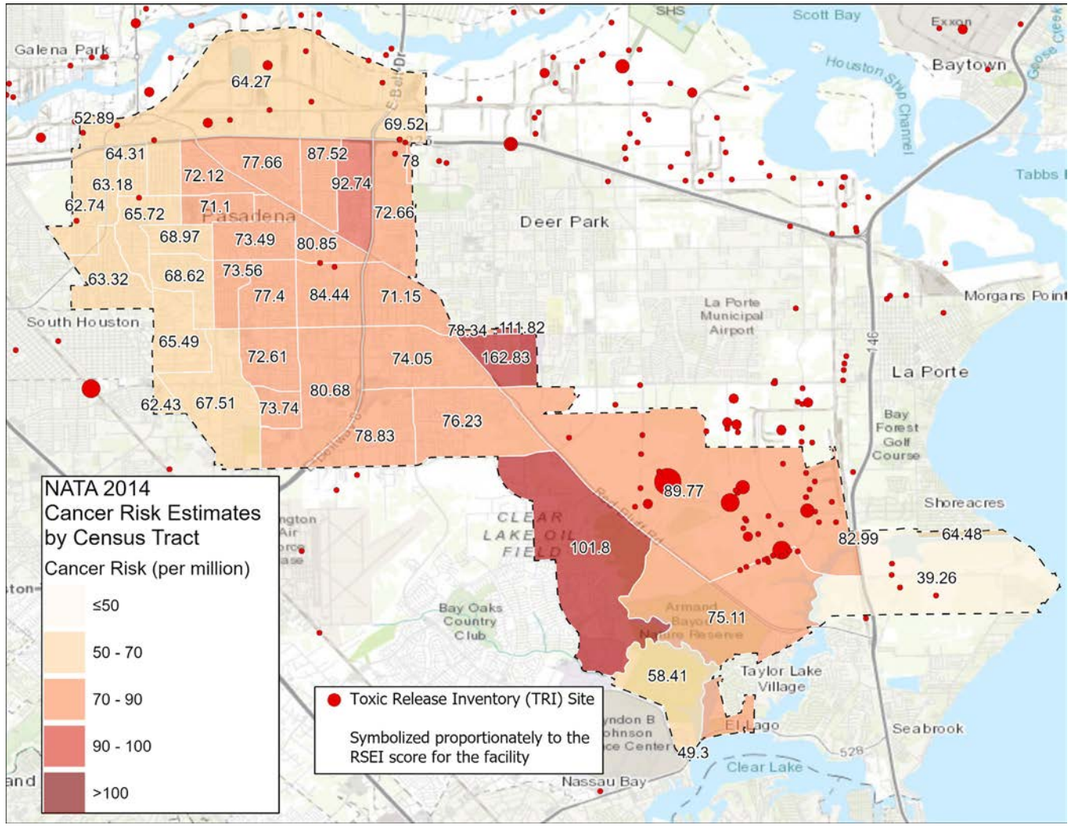


Table 2-6. National Air Toxics Assessment: Cancer Risk and Respiratory Hazard Index

	Average Cancer Risk (per million)	Respiratory Hazard Index
United States	31.76	0.44
Texas	34.81	0.43
Harris County	45.89	0.51

Figures 2-12 and 2-13 show combined data from the Toxic Release Inventory, Risk-Screening Environmental Indicator Model, and the National Air Toxics Assessment. Toxic Release Inventory sites (red dots) are symbolized in proportion to their Risk-Screening Environmental Indicator scores. That is, larger red dots indicate sites associated with proportionately higher risks. Figure 2-13 displays the National Air Toxics Assessment estimate for the number of people in a population of one million that could potentially contract cancer from a lifetime of exposure to air quality conditions within each census tract. The EPA considers a risk level of less than 100-in-1 million (or 1-in-10,000) as acceptable.[89] There are several census tracts in Pasadena—and more outside of the city—where this risk level is exceeded. Figure 2-12 displays the National Air Toxics Assessment Respiratory Hazard Index, which is a relative measurement of non-cancer respiratory health impacts that may result from a lifetime of exposure in a census tract. The EPA considers it unlikely that the air quality conditions in an area with a health index score of less than 1 will result in adverse respiratory health impacts over a lifetime of exposure.[90] All of the census tracts in Pasadena fall below this level, but there are areas of relatively higher risk in northern Pasadena.

Figure 2-13. Cancer Risk Estimates













3 Inventory, Assessment, & Benchmarking

Inventory, Assessment, and Benchmarking

Park Overview

Park Access

Close-to-home park access is typically assessed by looking at the number of residents who live within a 10-minute walk (approximately one half mile) of park.[ii] Currently, only 54% of Pasadena's population lives within a 10-minute walk of a park. For more detailed information on park access in Pasadena, see Chapter 5 (Mapping Priorities).

Park Acreage

There is approximately 3,100 acres of parkland within the City of Pasadena. Of this total, the Pasadena Parks and Recreation Department owns and manages 483.4 acres, including the 150-acre golf course, which is outside the city boundary. Parks owned by homeowners associations (HOAs) are counted in the City of Pasadena's total parkland acreage, but are not considered fully accessible parks in the Park Access Index in Chapter 5. Table 3-1 shows the breakdown of park acreage and ownership.

Based on the 3,100-acre total, there is approximately 20 acres of parkland per 1,000 Pasadena residents. Much of this total acreage is not fully accessible. If Armand Bayou Nature Center (Harris County; 2,174 acres), Kipper Mease Sports Complex (Harris County; 283 acres), the Pasadena Golf Course (PARD, but not within the city boundary; 150 acres), and HOA parks (25 acres) are excluded, that leaves 469 acres of accessible parkland. This means there are 3.1 acres of accessible parkland per 1,000 residents. Please note that while Harris County Flood Control District owns parcels and easements within the City of Pasadena, these areas are not currently accessible as parkland, so they are not included in the totals here.

ii In 2018, the Trust for Public Land, the National Recreation and Park Association, and the Urban Land Institute launched a nationwide campaign to ensure that there is a park within a 10-minute walk of every person in every city across America.

Table 3-1. Pasadena Park Acreage

Owner	Acreage
City of Pasadena	**483.4**
Golf Course only	150
City of Pasadena (minus Golf Course)	333.4
Harris County	**2,592.70**
Armand Bayou Nature Center only	2,173.60
Harris County (minus ABNC)	419.1
Homeowners Associations (HOA)	**24.7**
Total Acreage	**3,100.80**

Note: Only the totals in bold are included here in the overall total acreage. The additional breakdown of the Golf Course and Armand Bay Nature Center is included for information purposes.

Armand Bayou Nature Center

The parklands with the city boundary include the 2,174-acre Armand Bayou Nature Center.[iii] Armand Bayou Nature Center is a nature preserve along the western edge of Galveston Bay. The preserve is managed by a nonprofit organization incorporated in 1974. The Nature Center houses remnants of coastal tallgrass prairie and bottomland forest and provides habitat for hundreds of species of wildlife—including finfish, shellfish, bobcats, and owls.

Additional Parks

In addition to Armand Bayou Nature Center, there are 10 parks in Pasadena that are owned/managed by entities other than the City of Pasadena. These parks are listed at right in Table 3-2. The Healthy Parks Plan uses the typology shown in Table 3-3 to categorize parks as Pocket, Neighborhood, Community, Regional, or Regional Plus parks. Harris County also operates the East Harris County Activity Center and the Bay Area Community Center.

Table 3-4 (Park Acreage and Typology) shows the breakdown of park acreage in Pasadena.

iii The Armand Bayou Nature Center website indicates that ABNC covers 2,500 acres. The 2,174-acre total included here is based on GIS analysis and consultation with Mark Kramer (Chief Naturalist for ABNC) and Jed Aplaca (Pasadena Parks and Recreation Director).

Table 3-2. Non-PARD Parks in Pasadena

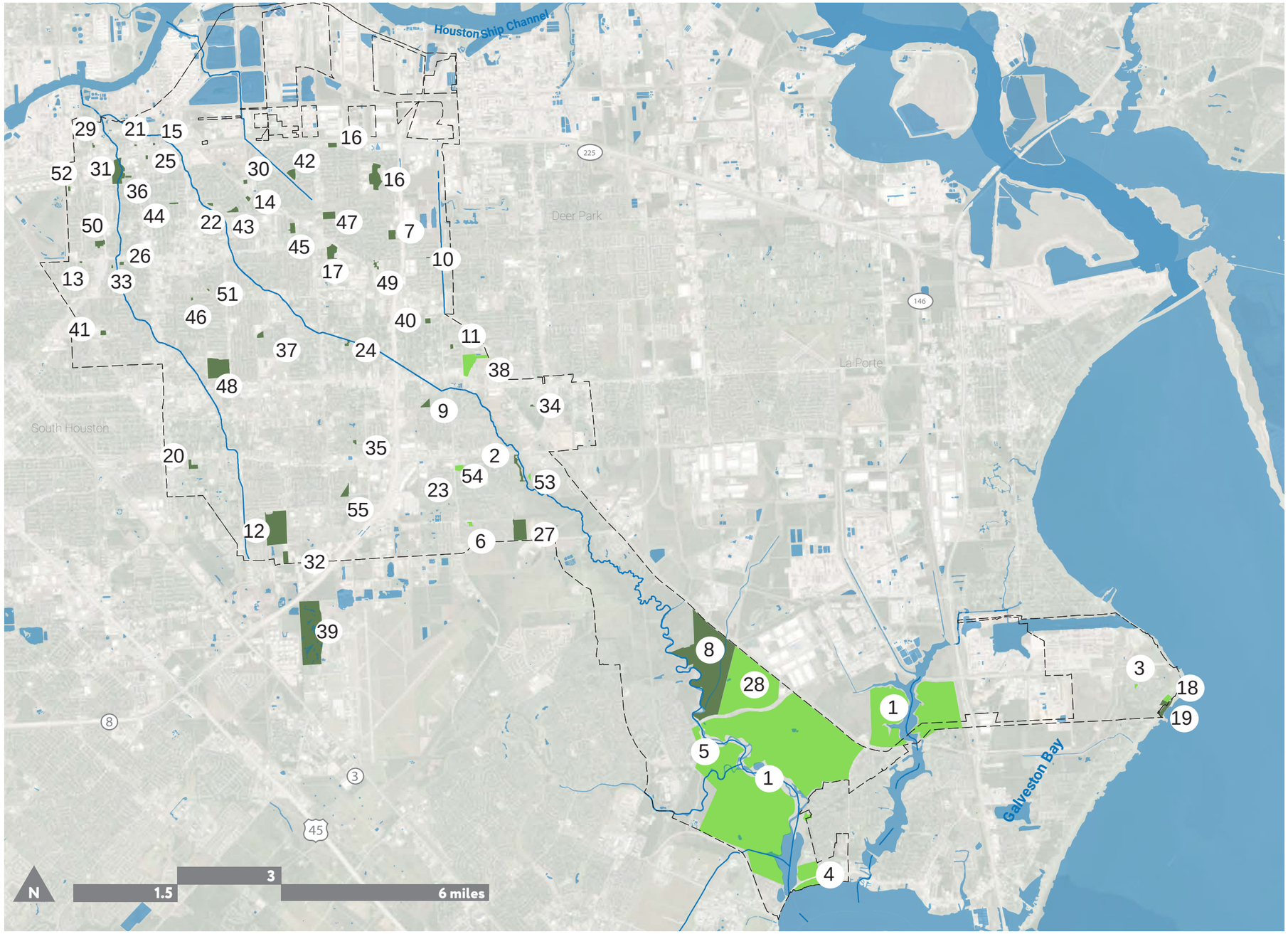
Park	Owner	Park Type	Park Size	Notable Features
Armand Bayou NC	Harris County	Regional Plus	2,173.60	Nature preserve
Bay Area Park	Harris County	Regional	55.5	Includes a dog park
Partnership Park	Harris County	Community	28.4	Includes a dog park
Clear Lake Park	Harris County	Regional	51.9	Water access
Kipper Mease Sports Complex	Harris County	Regional Plus	283.3	Largely inaccessible
El Jardin Park	HOA	Neighborhood	4.3	Water access
Ashley Weiss	HOA	Neighborhood	1.2	
Barronridge Park	HOA	Neighborhood	5.4	Water access
Village Grove North	HOA	Neighborhood	4.7	
Baywood Oaks	HOA	Neighborhood	2	
Village Grove East	HOA	Neighborhood	1.6	

Table 3-3. Healthy Parks Plan Park Typology

Park Type	Acres	Service Area	Definition
Pocket	<1	0.25 miles	Pocket parks are generally very small and serve only the immediate neighborhood. Pocket parks are frequently created on a single vacant building lot or on small, irregular pieces of land. These areas provide a landscaped respite from neighborhoods and often offer places to sit. The parks may contain limited assets such as a bench or picnic table or may house small playgrounds or basketball hoops.
Neighborhood	1-15	0.5 miles	Neighborhood parks serve surrounding neighborhoods within ½ mile radius (10-15 minute walk) for multiple uses. Park development may include play areas, small fields, benches, picnic tables, and improved paths. Neighborhood parks often do not include restroom facilities.
Community	15-30	2 miles	Community parks meet the recreational needs of several neighborhoods and may also preserve unique landscapes and open spaces. These parks serve multiple uses and provide recreational facilities and often accommodate more group activities than neighborhood parks. Community park sites should be accessible by arterial and/ or collector streets.
Regional	30-200	5 miles	Regional parks are distinguished by their large size. Like community parks, they may preserve unique landscapes and open spaces. Regional parks may have established regional recreation facilities or the potential to provide the opportunities for regional facilities such as swimming, fishing, camping, and boating. Regional Parks may also contain outstanding natural features including significant flora and fauna.
Regional Plus	200+	10 miles	Regional Plus parks are larger versions of Regional parks with more emphasis on preservation of nature and on unique recreational opportunities.
Linear Parks*			Linear parks are greenways of open space for pedestrians and bicyclists.

*Please note that there are no designated linear parks currently owned and managed by the City of Pasadena. However, there are a number of recommendations related to proposed new linear parks in Chapter 7.

Figure 3-1. Park Overview Map[91]



1 Armand Bayou Nature Center
2 Armand Bayou Trail
3 Ashley Weiss (HOA)
4 Barronride Park (HOA)
5 Bay Area Park & Dog Park
6 Baywood Oaks
7 Ben Brier Park
8 Big Island Slough
9 Bliss Meadows Park
10 Bowling Green Park
11 Bramley Park
12 Burke Crenshaw Park
13 Cascade Park
14 Community Park
15 Crane Park
16 Deep Water Park
17 East Southmore Park
18 El Jardin (HOA)
19 El Jardin Beach Park
20 Fairmont Park
21 Friendship Gardens
22 Gardens Park
23 Ghana Park
24 Golden Acres Park
25 Heritage Park & Museum
26 Highlands Park
27 Holly Bay Park
28 Kipper Mease Sports Complex
29 Light Company Park
30 Madison Jobe Senior Center
31 Memorial Park
32 Multipurpose Center and Park
33 Oaks Park
34 Olson Park
35 Parkgate Park
36 Park Lane Park
37 Parkview Park
38 Partnership Park & Dog Park
39 Pasadena Golf Course
40 Pine Park
41 Queens Park
42 Red Bluff Park
43 Revlon Park
44 Rusk Park
45 Satsuma Park
46 Sherwood Park
47 South Street Soccer Park
48 Strawberry Park
49 Sunrise Meadows Park
50 Sunset Park
51 Tatar Park
52 Vermilion Park
53 Village Grove East (HOA)
54 Village Grove North (HOA)
55 Yellowstone Park

LEGEND

- Pasadena City Owned
- Other Public Ownership
- Water
- City Boundary

Parks and Park Amenities

Table 3-4. Park Acreage and Park Typology

Park Type	Pasadena	Harris County	HOA	Total
Pocket	6.25	0	0	6.25
Neighborhood	112.5	0	24.68	137.18
Community	59.42	28.44	0	87.87
Regional	305.23	107.37	0	412.6
Regional +	0	2,456.87	0	2,456.87
Total	483.39	2,592.69	24.68	3,100.77

The City of Pasadena owns and manages 44 parks and eight recreation or senior centers. (Recreation and Senior Centers are described in more detail in the Programming Overview.) Table 3-7 on the next couple of pages shows all of the parks owned and managed by the Pasadena Parks and Recreation Department. The City of Pasadena's parks include 33 playgrounds, 28 sports fields (20 for baseball/softball and eight for soccer), 60 basketball hoops, 15 tennis courts, four swimming pools, three splash pads, one skate park, one disc golf course, and one kayak/canoe launch. The parks also have 12 walking trails, covering a total of 15.1 miles. The recreation and senior centers managed by the Pasadena Parks and Recreation Department are:

1. Golden Acres Recreation Center (Golden Acres Park)
2. Madison Jobe Senior Center
3. Odell Harrison Recreation Center (Red Bluff Park)
4. PAL Gymnasium (East Southmore Park)
5. Peter Fogo Recreation Center (Sunset Park)
6. Rusk Recreation Center (Rusk Park)
7. Strawberry Recreation Center (Strawberry Park)
8. Verne Cox Adaptive Recreation Center (Universal/All-Access Park)

The Parks and Recreation Department conducted counts of park users in August and September 2017. They visited each park twice. The most-visited parks based on these user counts are shown in Table 3-5.



Big Island Slough Source: pasadenatxphoto.net

Table 3-5. Most Visited Parks Based on PARD User Counts (August/September 2017)[92]

Park	User Count (combined)
Strawberry Park (including water park and center)	2,056
Holly Bay Court	539
El Jardin Beach	535
Fairmont Park	240
Burke/Crenshaw Park	164
Big Island Slough	110
Multipurpose Center Complex	90
Memorial Park	79
Golden Acres Park / Recreation Center	48

Park Resources

In fiscal year 2020, the Pasadena Parks and Recreation Department had a staff of 91 full-time equivalent (FTE) employees and an annual budget of $10.8 million, of which $3.6 million was dedicated to maintenance expenses.

Table 3-6. Trails in Pasadena Parks and Recreation Department Parks[93]

Park Trails	Miles
Strawberry Trail	2.80
Crenshaw Rd Hike & Bike	1.08
Crenshaw Park Walking Trail	0.86
Armand Bayou Hike and Bike Trail	4.92
Armand Bayou Hike and Bike (Center)	0.39
Armand Bayou Hike and Bike Trail (Fairmont)	0.41
Memorial Park Running Track	0.26
Strawberry Walking Trail	0.99
Pine Park Walking Trail	0.24
Satsuma Walking Trail	0.30
Red Bluff Walking Trail	0.38
Sunset Walking Trails	0.33
Rusk Walking Trail	0.50
Holly Bay Walking and Running Trail	0.57
Highlands Trail	0.42
Deepwater Running Trail	0.66
TOTAL	**15.11**

Park Assessment Summary

In May 2020, a team from Asakura Robinson (a planner and a landscape designer) conducted in-depth site assessments for ten priority parks in Pasadena. These ten parks were chosen based on: (1) a priority value assigned to each park based on the mapping process described in Chapter 5; (2) adjustment for geographic distribution to ensure that the team assessed parks across northern and southern Pasadena. The final park assessment list was approved by the Director of the Pasadena Parks and Recreation Department. The ten priority park assessments, all of which can be found in the online appendices, are intended to provide an analysis to help assess and compare existing park quality, provide a baseline for future evaluations, inform decision-making regarding future investments, and accurately map accessibility for Pasadena residents. Data from these assessments informed the park improvement recommendations in Chapter 7. The remaining parks managed by the City of Pasadena will be evaluated by staff from the Parks and Recreation Department by 2021. The efficiency of the Park Evaluation Tool methodology makes it possible to repeat the assessment periodically to track progress for system-wide park improvements and park quality.

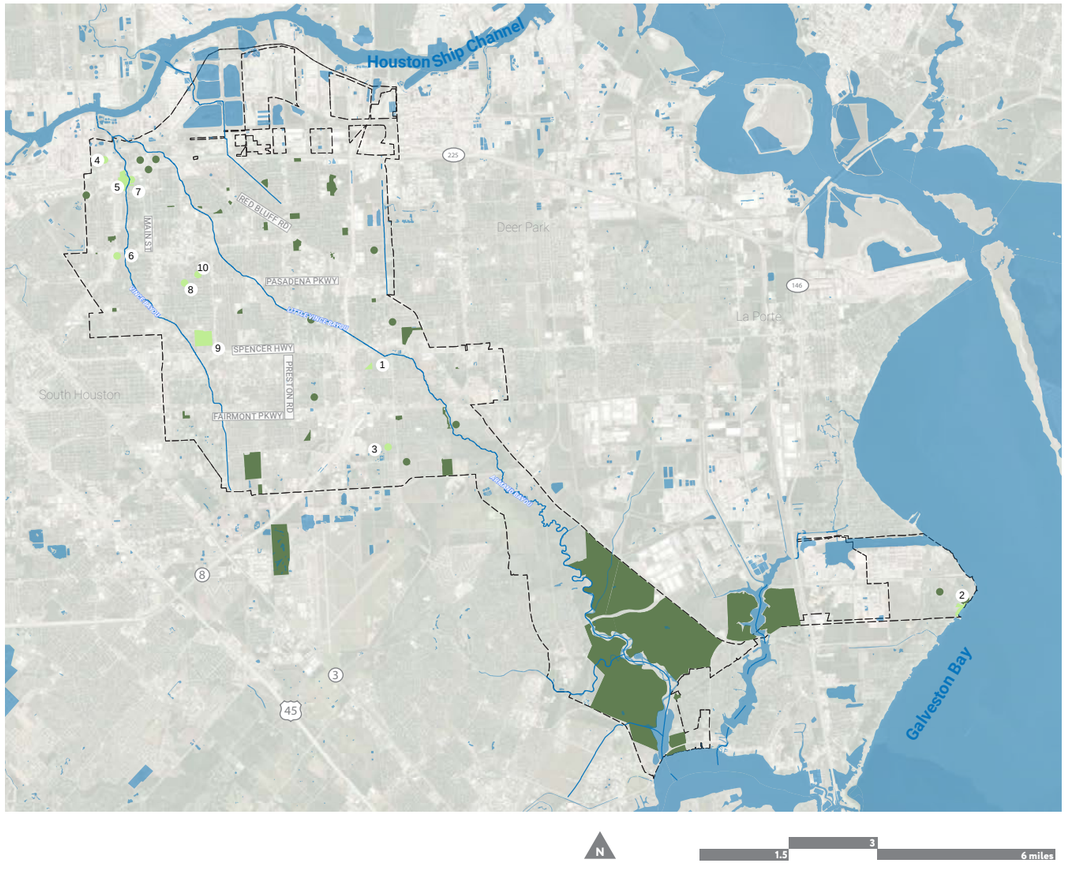


Amand Bayou Source: pasadenatxphoto.net

Table 3-7: City of Pasadena Park Matrix[94]

Park Name & Location	Park Type	Acres	Backstop	Ball Fields	Basketball Hoops	Benches	Canoe/Kayak Launch	Disc Golf	Dog Parks	Exercise Station	Fishing	Gazebo	Lake/Bayou	Pavilion	Picnic Tables	Playground	Recreation Center	Restrooms	Skate Park	Soccer Field	Splash Pad	Swimming Pool	Swing Sets	Tennis Court	Walking Trail	Water Fountains	Address
TOTAL	**44**	**483.4**	**14**	**20**	**60**	**113**	**1**	**1**	**1**	**6**	**3**	**7**	**4**	**9**	**123**	**33**	**8**	**52**	**1**	**8**	**3**	**4**	**33**	**15**	**12**	**31**	
Ben Briar Park	Neighborhood	7.5		3												1		2					1			2	1115 Bennett Pasadena, TX 77503
Big Island Slough Park	Neighborhood	3.0				4	1						1	1	6										1	1	9800 Red Bluff Rd, Pasadena, TX 77507
Bliss Meadows Park	Neighborhood	5.1	1		1								1		3	1											5900 S. Meadows Dr Pasadena, TX 77505
Bowling Green Park	Pocket	0.5			1	1										1							1				4200 Wyatt St. Pasadena, TX 77503
Bramley Park	Neighborhood	1.5				1																	1				6500 Bramley Dr Pasadena, TX 77503
Burke Crenshaw Park	Regional	77.5		3		25		1	1	1	1	1	1	1	2	1		6					1		1	3	4950 Burke Rd. Pasadena, TX 77504
Cascade Park	Pocket	0.5			1										1								1				1298 Southmore Ave Pasadena, TX 77502
Community Park	Neighborhood	1.8	1		1											1											1600 Community Dr Pasadena, TX 77506
Crane Park	Pocket	0.5			2										3	1							4				100 Spooner St. Pasadena, TX 77506
Deepwater Park Complex	Community	29.8		2		3				1					2	1		2		4					1	2	503 Parkwood Dr Pasadena, TX 77503
East Southmore Park/ PAL Gym	Neighborhood	13.4		4	2												1	4					1				2910 E. Southmore Ave Pasadena, TX 77503
El Jardin Beach Park	Neighborhood	4.3				3					1				3												500 El Jardin Dr. Seabrook, TX 77586
Fairmont Park	Neighborhood	6.0		2											4												714 Fairmont Pkwy Pasadena, TX 77504
Friendship Gardens Park	Pocket	0.4				3									2												112 Shaw Ave Pasadena, TX 77506
Gardens Park	Neighborhood	1.4													2	1							1				1300 Scott St Pasadena, TX 77506
Ghana Playlot	Pocket	0.1			1										2								1				6146 Ghana Ln Pasadena, TX 77505
Golden Acres Park	Neighborhood	1.8			1	2								1	4	1	1	2					1			1	5001 Oak St Pasadena, TX 77503
Golf Course	Regional	149.7																									1000 Duffer Ln Houston, TX 77034
Heritage Park and Museum	Pocket	0.8				2									2												204 Main St., Pasadena, TX 77506
Holly Bay Park	Regional	30.1				4				1		1			4	1		2					1		1	1	7102 Crenshaw Rd Pasadena, TX 77505
Light Company Park	Pocket	1.0			4	2									4	1											1004 W. Shaw Ave. Pasadena, TX 77506
Madison Jobe Senior Center	Neighborhood	1.7												2			1	2									1700 Thomas Ave Pasadena, TX 77506
Memorial Park	Community	29.6	2		6	6				1	1	1	1		8	3		4	1	1	1		2			3	500 W. Jackson Ave. Pasadena, TX 77506
Multipurpose Center Complex	Neighborhood	6.6		1		2						1				1	1	2			1		2			2	5200 Burke Rd. Pasadena, TX 77504
Oaks Drive Park	Pocket	0.6			2										2	1							1				1400 Oaks Dr. Pasadena, TX 77502
Olson Park	Pocket	0.8				1										1							1				7300 Olson Ln Pasadena, TX 77505
Parkgate North Park	Neighborhood	1.2			1	1									2	1							1				3900 Zuni Trail Pasadena, TX 77505
Parklane Playlot	Neighborhood	1.3																									200 W. Jackson Ave Pasadena, TX 77506
Parkview Park	Neighborhood	3.6	1		2	2						1			1	1							1				2400 Burke Rd. Pasadena, TX 77502
Pasadena Highlands Park	Neighborhood	1.5			2	2								1	10	1							1		1		400 Juanita Circle Pasadena, TX 77502
Pine Park	Neighborhood	2.8	1		2	3									1	1							1		1		6100 Pine Ave Pasadena, TX 77503
Queens Park	Neighborhood	2.8			6									1	3	1									1	1	800 Queens Rd Pasadena, TX 77502
Red Bluff Park	Neighborhood	6.9	2		6	6						1		1	6	1	1	4		1	1	1	1		1	4	415 Delta St. Pasadena, TX 77506
Revelon Park	Neighborhood	4.0	3		1										2	1							1				900 Foster Ave Pasadena, TX 77506
Rusk Park	Neighborhood	1.5			2	2									1	1	1								1		708 Witter St. Pasadena, TX 77506
Satsuma Park	Neighborhood	5.9	1		6							1			8	1		2					1		1	1	1001 Satsuma St. Pasadena, TX 77506
Sherwood Park	Pocket	0.7			2										1	1											909 Sherwood Dr. Pasadena, TX 77502
South Street Soccer Park	Neighborhood	10.2																2		3						2	801 South St. Pasadena, TX 77503
Strawberry Park	Regional	47.9		5	2	28				2				1	22	2	1	14				1	2	15	1	5	2900 Lafferty Pasadena, TX 77502
Sunrise Meadows Park	Neighborhood	2.5													1												3541 Glowing Horizon Rd. Pasadena, TX 77503
Sunset Park	Neighborhood	6.3	1		6	6									6	1	1	4			1	1	1		1	3	914 W Hart Ave Pasadena, TX 77506
Tatar Park	Pocket	0.5													2	1							1				1900 Pasadena Blvd. Pasadena, TX 77502
Vermillion Park	Neighborhood	1.1	1			2									3	1							1				500 Vermillion Dr. Pasadena, TX 77506
Yellowstone Park	Neighborhood	6.8				2										1							1				4800 Yellowstone Dr. Pasadena, TX 77505

Figure 3-2. Top 10 Priority Parks Map[95]



Park Assessment Methodology

The Park Evaluation Tool used for the assessments is included in Chapter 8 (Additional Tools). The tool facilitates assessment of seven criteria: (1) park access, (2) park features, (3) supportive facilities, (4) safety and maintenance, (5) aesthetics, (6) health, and (7) culture and convenience.

An average score for each of the seven criteria was calculated and then weighted as follows to yield an overall park score: park access (x3), safety and maintenance (x3), health (x3), culture and convenience (x2), supportive facilities (x1), aesthetics (x1), and park features (x1). For each criterion, all parks had the possibility of achieving a perfect score of 5.0 on a scale of 1.0–5.0, in which:

- 5.0 = abundant, well provided, very attractive, excellent condition, no concerns, true, and other similar characterizations.
- 1.0 = scarce, very unappealing, very concerning, false, and other similar characterizations.

If a park did not have an element listed in the criteria, e.g., no drinking fountains present, it received a score of "N/A." All the scores shown in the assessments below are the average combined scores of the two project team members who conducted the park assessments.



Memorial Park, Source: flickr user Patrick Feller

Table 3-8. Park Assessment Scores for Priority Parks (ranked highest to lowest)

	Park Name	Park Type	Weighted Final Score
1	Memorial Park	Community	4.13
2	Strawberry Park	Regional	3.80
3	Ghana Playlot	Pocket	3.52
4	El Jardin Beach	Neighborhood	3.50
5	Bliss Meadows Park	Neighborhood	3.49
6	Oaks Drive Playlot	Pocket	3.43
7	Tatar Park	Pocket	3.35
8	Sherwood Park	Pocket	3.18
9	Light Company Park	Pocket	3.00
10	Parklane Play Lot	Neighborhood	2.98

Programming Overview

Note: Figures and tables related to programming are all based on data from the Pasadena Parks and Recreation Department.

To assess currently available programming, this section distinguishes between core programming and other kinds of programming. Core programs enhance quality of life because they: are a source of stability (appear in PARD's program guides, have been consistently offered over the years, and are expected by community members); are extensively used (approximately 1 in 5 program participants use one of these programs, or a significant portion of a specific population is served); have dedicated resources (programs have allotted facilities and staff); are relevant and welcoming (these programs are currently desired, accessible, inclusive, and foster individual and community pride).

Currently, Pasadena has five core programming areas and four other programming areas. Core programming areas include recreational center programming, aquatics, athletics, programming for seniors, and adaptive recreation. Other programming areas include tennis, golf, museum/cultural programming, and special events. We assessed general strengths, weaknesses, opportunities, and threats for each of the core programming areas. These are shown in Table 3-12 at the end of this section.

Of the programs offered by the Parks and Recreation Department, athletics, aquatics, senior programming, and recreational center programming are the most utilized, each with approximately 30,000 (non-unique) participants in fiscal year 2019[iv]. The adaptive recreation program, based out of the Verne Cox Multipurpose Recreation Center, has a smaller annual usage (more than 4,000 participants in fiscal year 2019) that reflects a smaller potential user group. This program likely serves a higher proportion of its relevant audience than other forms of park programming—and it attracts participants from outside of Pasadena as well. Finally, the growing tennis program had more than 8,400 participants in fiscal year 2019.

iv It is important to note that participation numbers do not necessarily reflect unique participants, since the same individual may participate in programs and be counted more than once (for example, an individual participating in youth softball and summer track would be counted twice; likewise, an individual participating in programming at the Madison Jobe Senior Center in October and in April would be counted separately in each month).

Figure 3-3. Annual Participation in Core Programming FY-2019

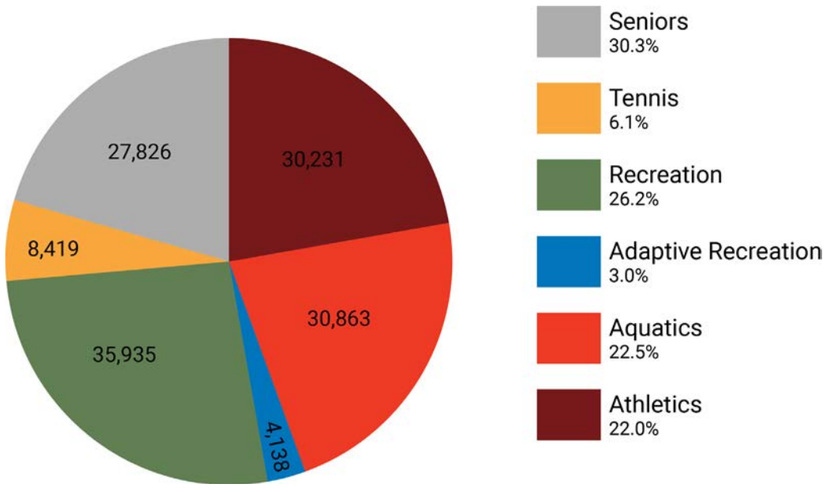


Figure 3-4. Recreation Center Use by Month (Fiscal Year 2019)

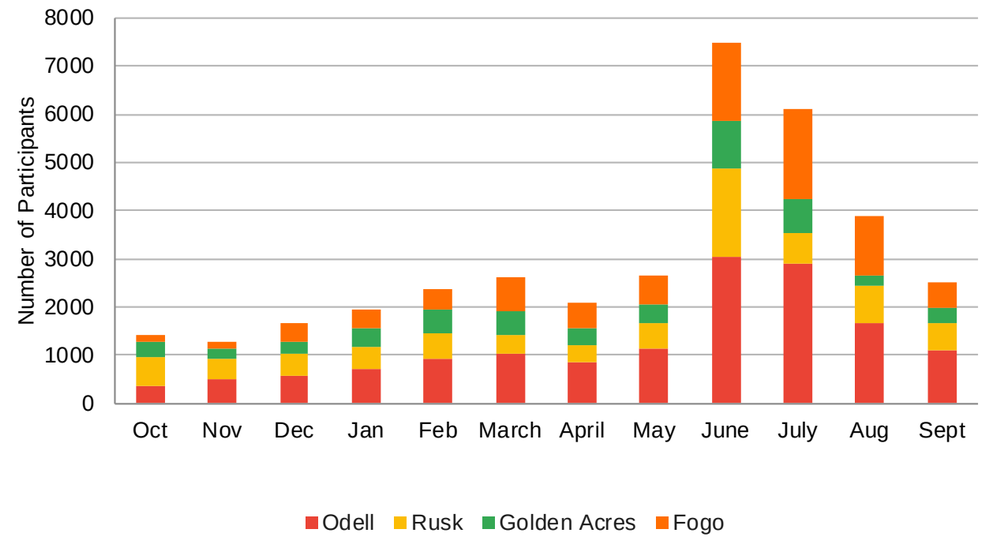


Table 3-9. Park Amenities and Affiliated Programming

Park Amenities	Affiliated Programming
Strawberry Water Park	Aquatics
PAL Gymnasium	Youth, Family Recreation
Golden Acres Recreation Center	Youth, Family Recreation
Golf Course	Golf
Heritage Park & Museum	Culture & History
Madison Jobe Senior Center	Seniors
Odell Harrison Recreation Center	Youth, Family Recreation
Peter C. Fogo Recreation Center	Youth, Family Recreation
Red Bluff Pool	Aquatics
Sunset Pool	Aquatics
Verne Cox Multipurpose Recreation Center	Adaptive Recreation

Figure 3-5 shows the locations of programming and special events offered by the Pasadena Parks and Recreation Department.

Figure 3-5. Pasadena Programming Map

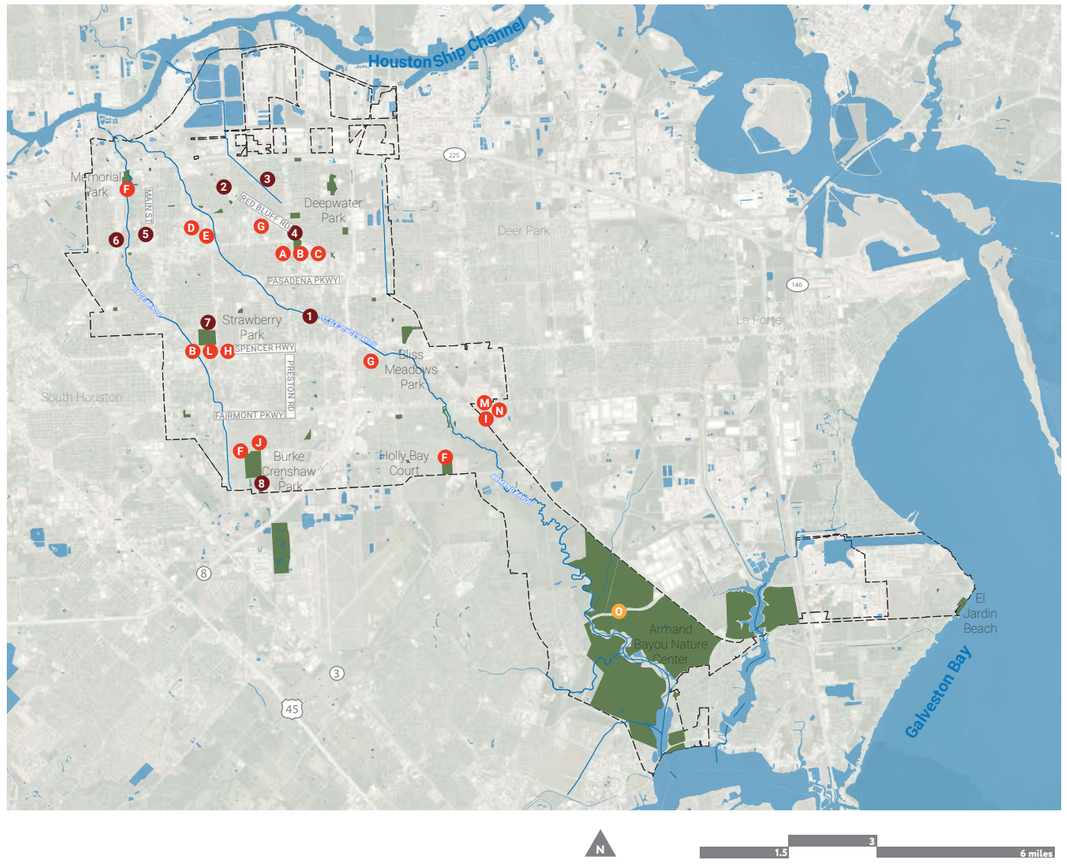


Table 3-10. Pasadena Programming (Key for Figure 3-5)

Assignment/ Event	Date(s)	Location	Map Label
Food Truck Friday	9/27/2019	PAL Gym	A
Food Truck Friday	10/25/2019	PAL Gym	A
Food Truck Friday	11/8/2019	PAL gym	A
Philharmonic and Food Trucks	10/5/2019	Strawberry	B
Monster Mash- PAL Gym	10/26/2019	PAL Gym	C
Monster Mash PAL Gym	10/31/2020	PAL Gym	C
PPD Trunk or Treat	10/31/2019	City Hall Parking Garage	D
Christmas Tree Lighting/ Open Market/ Food Truck	12/6/2019	Old City Hall Lawn	E
Movie in the Park	12/27/2019	Crenshaw	F
Movie in the Park	2/28/2020	Memorial	F
Movie in the Park	4/24/2020	Holly Bay/ Partnership	F
Pop up Park	1/25/2020	Bliss Meadows	G
Pop Up Park	3/28/2020	Satsuma	G
Easter Eggstravaganza/ Open Market	4/4/2020	Strawberry	H
Ms Pasadena Senior Pageant	April	Convention	I
Outdoor Recreation Event	5/2/2020	Crenshaw	J
Wheelchair Windup (Wheelchair Softball Tournament)	5/23, 5/24, 5/25	Multipurpose Center Ballfields	K
Concert in the Park	5/22/2020	Strawberry	L
Fourth Fest- Saturday	7/4/2020	Convention	M
Wheelchair Shoot Out (Wheelchair Basketball Tournament)	9/5, 9/6. 9/7	Convention	N
Armand Bayou Programming	Year Round	Armand Bayou	O

Recreation Center Programming

There is Recreation Center Programming at Golden Acres Recreation Center, Odell Harrison Recreation Center, Rusk Recreation Center, and Peter C. Fogo Recreation Center. These recreation centers are distributed throughout Pasadena. There is also adaptive recreation programming for people with disabilities at the Verne Cox Multipurpose Center. That is discussed in the Adaptive Recreation Programming section below.

Overall, in fiscal year 2019, the recreational centers saw almost 36,000 participants—more than any other core program. Recreation center use sharply increases in the summer months. Based on the last several years, average participation in June is approximately 7,300 and in November average participation is 2,000. The Odell Harrison Recreation Center, which has the most participants, is the northernmost of the recreation centers. Recreation center programming in Pasadena focuses on youth, providing movie nights, culinary arts, video games, board games, homework help, and summer camps to young people ages 5-18, as well as partnering with other organizations to put on annual events. In partnership with The University of Texas MD Anderson Cancer Center and Pasadena Vibrant Community, the recreation centers have also been offering free fitness classes for non-senior adults (see sidebar). The recreation centers do not offer childcare and require adult supervision for children under 8 years old. Staff offer programming on weekday afternoons and evenings, on summer days and evenings, and on Saturdays. Except for summer camp, programs at the recreation centers are free. In the summer, free lunches and snacks are provided during weekdays for youth under the age of 18. The Parks and Recreation Department earns revenue through rentals of the recreation center facilities.

Aquatics Programming

The aquatics program has dedicated facilities at Red Bluff Pool, Strawberry Water Park (where its office is located), Sunset Pool, and at three splash pads (at Memorial, Red Bluff, and Sunset Parks). All of the dedicated aquatics facilities are located in the central (Strawberry) or northern (Red Bluff, Sunset) areas of Pasadena. Aquatics programs had 30,863 participants in fiscal year 2019, with the majority of these using the pool at Strawberry Water Park.[v] The aquatics division noted that in fiscal year 2019, there was increased overall use of the program, particularly water exercise classes. The program's swim lessons cater to all ages, particularly youth. Its water exercise programs, including river walking, lap swimming, and aqua jogging/water aerobics are offered for adults and seniors. The lifeguard program, including training and instructor classes, water safety instructor classes, and junior lifeguarding, is particularly relevant for youth and young adults. Most of the lifeguard program classes are offered at an indoor facility outside of Pasadena.[vi] General recreation is available throughout the summer months (June through August) at all locations. There are limited openings for Memorial Day in May and the Strawberry Park facility remains open over Labor Day weekend. The aquatics program earns revenue through pool amenity rentals, after-hours pool rentals, party rentals, admissions fees (day passes and season passes), and exercise program fees (day passes and season passes). Fees are higher for non-residents. Other tiered fee assessments, such as peak vs. off-hours fees, are not currently employed.

v The participation data available doesn't distinguish non-programming pool use from pool use specifically for aquatics programs.

vi Lifeguard training classes, lifeguard instructor classes, water safety instructor classes, and junior lifeguarding are offered outside the summer season at Williams Indoor Pool and Rec. Center in Webster, TX.

Exercise for Life Classes

In the past, the Parks and Recreation Department (PARD) has not had enough staff to offer programming for non-senior adults. Exercise for Life is supported by Pasadena Vibrant Community, an initiative of The University of Texas MD Anderson Cancer Center made possible by an investment with and collaboration with Shell Oil Company. PARD has been able to build relationships with community partners and bring more people into the park system through exercise classes for adults. Exercise for Life provides several types of classes (low impact aerobics, Zumba, yoga, aquatic river walking) at recreation centers throughout the city during the day and in the evening. This is filling a critical gap in programming and helping to support physical fitness for local residents who may not have access to other low- or no-cost options.

In addition to social media outreach, to recruit class participants, the City of Pasadena worked with Memorial Hermann and the YMCA as well as organizations in the Healthy Living Matters coalition to advertise to residents throughout the city. Funding from Pasadena Vibrant Community also provided for a coordinator who engaged community members at local special events and health fairs. The Exercise for Life Program started with just two classes and 43 participants in Summer 2018. The program closed this fiscal year with 10 classes over 6 locations and 129 unique participants with more than 8,500 minutes of exercise time in just 6 months.



Strawberry Water Park

Figure 3-6. Aquatics Facility Use by Facility and by (Summer) Month

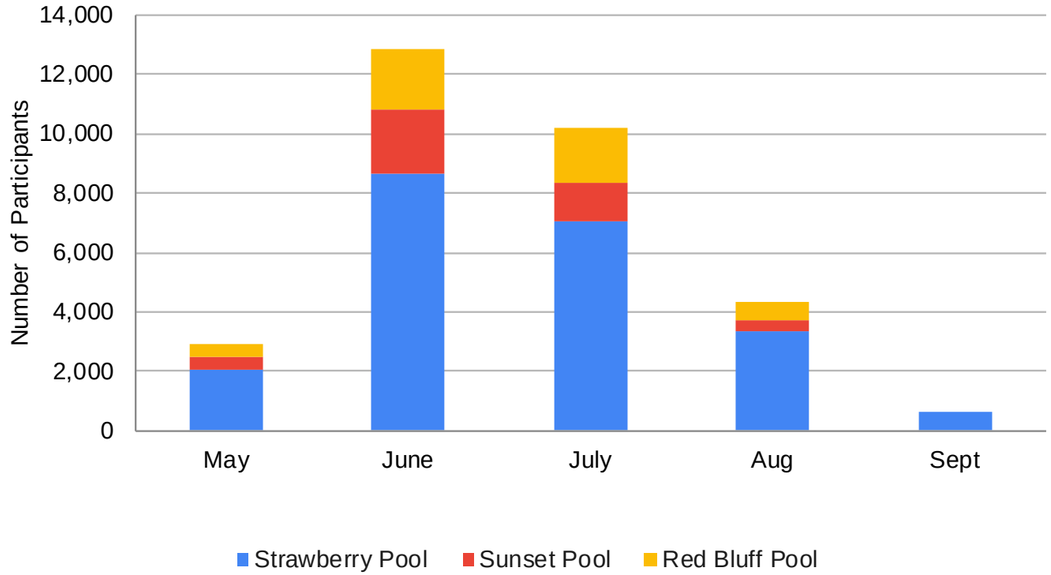


Figure 3-7. Athletics Participation by Sport

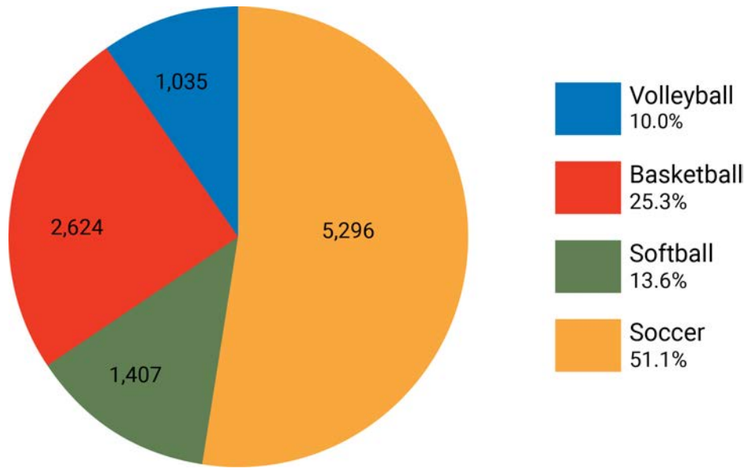
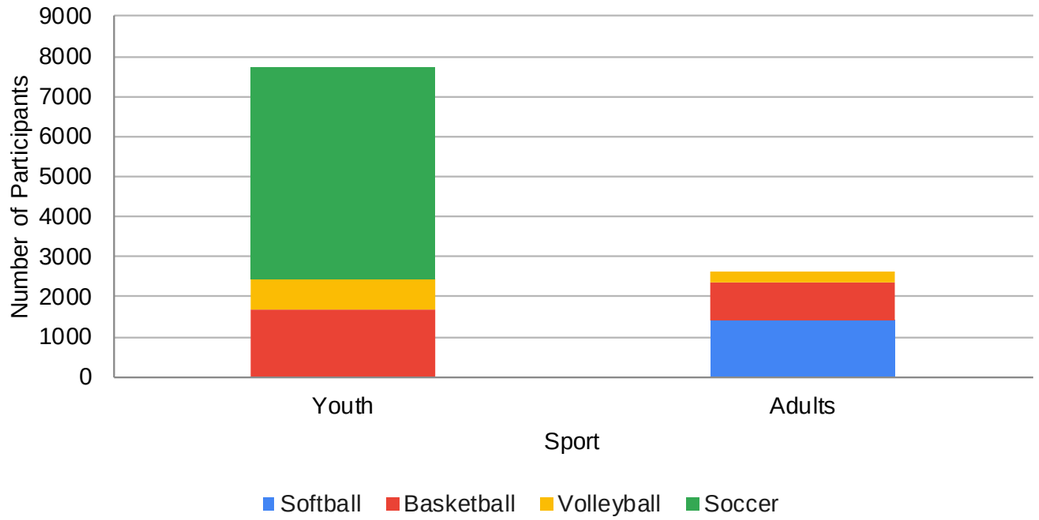


Figure 3-8. Athletics Participation: Youth versus Adult



Athletics Programming

The mission of the Athletics Office is "to offer affordable athletic and related recreational activities to citizens of Pasadena that foster sportsmanship, fairness, self-esteem and proper sports etiquette resulting in enriching experiences that improve the quality of life for those who participate." The athletics program serves youth and adults at various facilities, including PAL Gymnasium, the Kipper Mease Softball Complex, Deepwater Soccer Fields, and the South Street fields. Participants can enjoy open play sessions, softball, volleyball, basketball, outdoor and indoor soccer, ultimate football, flag football, kickball, and track and field in leagues, tournaments, and clinics, and in co-ed and gender-specific groups. Other activities are also available, including pickleball, Zumba, kickboxing, and others. Athletics programming is offered on evenings, on weekends, during after-school/work hours on weekdays, and during daytime hours (open play) throughout the year, though the availability of certain programs is seasonal. The Athletics Office earns revenue for PARD by assessing a range of participation fees collected on a player or team-wide basis and via facility rentals. Costs are differentiated between residents and non-residents in some programs. Scholarships are available to individuals and families, prioritizing youth under 18 but also making allowances for adults.

The most popular athletics programming by participation is soccer, which is currently only offered as a co-ed youth program. Participation in soccer made up more than 50 percent of participation in the Athletics Program. Basketball—offered to adults, co-ed youth, and specifically for boys and girls via youth programs—was the next most popular, with 25 percent of the share of participation. Interest and participation in soccer and basketball appears to be increasing alongside the rise in the Hispanic/Latinx population in Pasadena. In the Community Survey, Hispanic/Latinx respondents were more likely than white respondents to have used soccer fields in the last year (18.3 percent vs. 3.9 percent), as well as more likely to have used basketball courts (22.9 percent vs. 8.7 percent), for example. In the Telephone Poll, more Hispanic respondents than white respondents expressed an interest in having more basketball courts and soccer fields. More white respondents than Hispanic/Latinx respondents expressed an interest in having more baseball fields. Substantially more youth than adults participated in the Athletics Program in fiscal year 2019. There was no softball program offered to youth, but it was the most popular of the adult programming offered.

Programming for Seniors

The mission of PARD's programming for seniors is "to improve the quality of life of older adults and create opportunities for social interaction, personal growth, health and well-being through ever changing and creative programs designed for the specific needs of the senior population." The Senior Center has offerings on weekdays, including daily and weekly free activities, monthly and annual special events, classes, day trips, and information sessions. In partnership with the City of Pasadena, the Center also coordinates the Transportation RIDES Program, a transportation service for qualifying low-income residents 65 years old and older, as well as people with disabilities or who are otherwise unable to drive. Most programs are offered to seniors for free or for $10 or less. The Senior Center also collects revenue through special events such as the Senior Expo. The Madison Jobe Senior Center served 27,826 participants in fiscal year 2019. Evaluated in terms of Pasadena's over-65 population of 14,546, this is a very large number—even though many participants are likely to be counted multiple times. The Senior Center hosts free activities and classes on a daily and weekly basis, including special events, various classes, day trips, and information sessions. In fiscal year 2019, staff of the Center observed increased use of the Senior Center and increased participation in programming, though quantitative increases were not recorded.

Adaptive Recreation Programming

The Adaptive Recreation Program is housed in the Verne Cox Multipurpose Recreation Center, which aims to provide "affordable recreation programming, innovative therapeutic recreation services and an outlet to promote healthy use of leisure time for people with disabilities." The Center grew out of a legacy of pioneering programming that predated the passage of the Americans with Disabilities Act (ADA) of 1990. The specialized center features facilities designed with accessibility in mind, including a pool, sports and fitness facilities, a kitchen, and activity rooms. It is staffed by therapeutic recreation specialists.

The level of adaptive recreation services provided by the City of Pasadena is unique. Most cities, even much larger and wealthier cities, do not have a specific center dedicated to adaptive recreation. Pasadena's Adaptive Recreation Program serves people of all ages with both intellectual and physical disabilities, along with their families. The Verne Cox Multipurpose Recreation Center offers arts and cultural programs, fitness programs, wheelchair sports, an afterschool program, summer camps, special events, and other innovative therapeutic recreation services. It hosts monthly dances on weekday evenings, wheelchair sports on weekday evenings, and an afterschool program running Monday through Thursday afternoons during the academic year. Special events hosted by the Verne Cox Multipurpose Recreation Center include the Texas International Shootout Wheelchair Basketball Tournament, which is world-renowned. In fiscal year 2019, the Center's wheelchair softball team played in the national wheelchair softball tournament.

Although the Adaptive Recreation Program accounts for a small proportion of participants overall, with 4,138 participants recorded in fiscal year 2019, this program is a centerpiece of PARD's programming. The Verne Cox Multipurpose Recreation Center represents an area where Pasadena has been, and remains, on the forefront of inclusivity, particularly for a city of its size and resources. The City of Pasadena funds the Verne Cox Multipurpose Recreation Center, enabling it to offer programming for free or at low cost to participants. Scholarship funding is available through the Recreation Department, for all who qualify, for any program offered that charges a fee.

One Community Survey respondent raved that the "Verne Cox Multipurpose Recreation Center provides outstanding programs for children and adults with disabilities." Reviews of the programs at Verne Cox available via Facebook echo this sentiment:

"I have the most fun and amazing time at Verne Cox Multipurpose Center when I volunteer at the various programs there. The staff is so supportive and encouraging to all athletes! I have the most respect for the staff, volunteers and participants who go there. They have a well rounded view on all aspects for a person's growth and encouragement toward a better future!"

"The staff is knowledgeable, passionate and fun with what they do. So many programs for everyone to enjoy life. Always enjoy going there either playing sports, volunteering or dancing. Great place to learn"

Spotlight: Verne Cox Multipurpose Center and Pasadena's Unique Focus on Adaptive Recreation

"It's very unique to have as broad a scale as the Verne Cox Center's programming does—from play to recreational sports to competitive, traveling sports teams for those living with physical disabilities, and a similar range of offerings from recreational play up to the Special Olympics-level for those living with intellectual disabilities. There have been families—and there still are some today—who came to visit or had heard about the programs at the Verne Cox Center and who will tell you that they relocated their families from another city or state to live in Pasadena because of those programs. In just about every city in America, families will be able to find some kind of education or schooling and healthcare for their child with a disability, but to find a structured recreation and sport program—that isn't everywhere." (Peggy Turner, former Recreation Director for the City of Pasadena, current Adapted Sports Coordinator for TIRR Memorial Hermann)

Historic Innovators

A plucky staff motivated by Peggy Turner, a Certified Therapeutic Recreation Specialist, turned a small building called the Sherwood Center into a hub of early adaptive recreation in advance of the passage of the Americans with Disabilities Act of 1990. Before sports wheelchairs were invented, the staff took hospital chairs to a local gym so adaptive athletes could have an opportunity to play basketball and football. Pasadena built the nation's first dedicated field for wheelchair softball in 1996.[96] The Sherwood Center inspired today's Verne Cox Multipurpose Recreation Center. No other local or state organization provided services like this for people with disabilities.

Current and Future Leaders

The City of Pasadena and the Verne Cox Multipurpose Recreation Center have been integral to the formation of organizations around the world that support recreational opportunities for people living with disabilities. Today, the Verne Cox Multipurpose Recreation Center is funded through the City; its programs are offered at low or no cost to citizens. Its staff continue to provide recreation opportunities for people of all abilities, carrying on Pasadena's legacy of leading the nation in adaptive programming.



Verne Cox 2016 Wheelchair Windup



Verne Cox 2018 Wheelchair Windup

Other Programming

Tennis Program

The tennis program had more than 8,400 participants in fiscal year 2019. Tennis venues include Harry Taylor Tennis Center in Strawberry Park and outdoor courts in a variety of parks. The tennis program offers weekday and weekend tennis lessons in various formats, including private lessons, groups of youth, and groups of adults. Residents can also purchase annual court permits. The tennis program generates revenue through per-person fees for lessons and permits, as well as for racket stringing. In 2019, two singles players and a doubles team from Pasadena's program advanced to the State tournament in Waco, Texas. Only 7% of Community Survey respondents reported their households using tennis courts in the last year.

Golf Program

The golf program is based at the Pasadena Municipal Golf Course. It is open for play daily, sunrise to sunset. The facility assesses fees based on age, weekday versus weekend, and time of day. They also collect revenue from trail fees and range ball fees. Interest in golf may be limited by cost and accessibility. Only 3% of Community Survey respondents reported their households using the golf course in the past year.

Museum Program

Pasadena's Museum programs are organized by the Pasadena Historical Society at the Pasadena Heritage Park and Museum. Their stated mission is "to deepen the understanding of the origins of our city and residents, to strengthen the bonds of the community through archiving and preserving collections of past, present, and future generations, and honoring those that carved out this thriving community." The Museum is currently closed for renovations. However, the Museum is a key partner in various special events throughout the year, such as the fall family picnic and Christmas open house. Given community leaders' and members' expression of a desire to honor art and culture elsewhere in the Healthy Parks Plan, the Museum presents many opportunities for bringing vibrant, innovative cultural programming to Pasadena. The Museum contributes revenue to the park system via private rentals for special events.

Special Events

The Parks and Recreation Department offers and partners with others to offer a wide variety of special events each year. Special events hosted at local parks include the annual Monster Mash, Easter Eggstravaganza, and Christmas Tree Lighting, along with Food Truck Fridays and Movies in the Park. PARD also helps to host events at the Convention Center and Fairgrounds such as Fourth Fest and the Strawberry Festival.



Easter Eggstravaganza, 2018

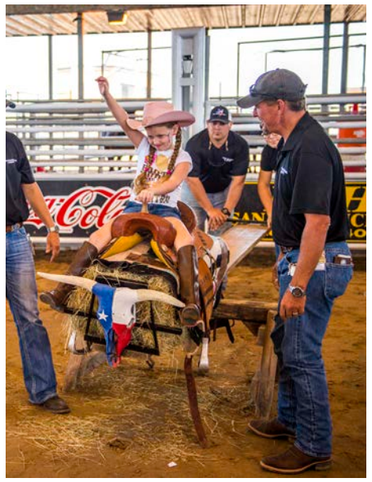


Museum Christmas Open House, 2018

Table 3-11. Typical Special Events in Pasadena Parks

Food Truck Friday (4-6 times per year)	PAL Gym, other parks
Philharmonic and Food Trucks	Strawberry
PPD Trunk or Treat	City Hall Parking Garage
Christmas Tree Lighting/Open Market/ Food Truck	Old City Hall Lawn
Movie in the Park	Crenshaw
Pop up Park	Bliss Meadows
Movie in the Park	Memorial
Pop Up Park	Satsuma
Easter Eggstravaganza/Open Market	Strawberry
Ms Pasadena Senior Pageant	Convention
Movie in the Park	Holly Bay/ Partnership
Outdoor Recreation Event	Crenshaw
Wheelchair Windup (Wheelchair Softball Tournament)	Multipurpose Center Ballfields
Concert in the Park	Strawberry
Fourth Fest	Convention
Wheelchair Shoot Out (Wheelchair Basketball Tournament)	Convention
Monster Mash PAL Gym	PAL Gym

Note: As a result of COVID-19, not all of these events have been or will be held in 2020.



Little Wranglers Rodeo, 2015

Source: pasadenatxphoto.net



Christmas Tree LIghting, 2017

Source: pasadenatxphoto.net



4th Fest, 2018

Source: pasadenatxphoto.net

Programming Assessment

Table 3-12 shows a brief assessment of the strengths, weaknesses, threats, and opportunities for Pasadena's core programming.

Table 3-12. Strengths, Weaknesses, Threats, and Opportunities for Pasadena's Core Programming

Recreation Centers	
Strengths	Widely used by youth
Weaknesses	Childcare is not provided for adult programming, reducing accessibility to families of all income levels
Opportunities	Expand access by offering childcare, bilingual programming, additional non-senior adult programming, and more intergenerational programming
Threats	Waning youth interest/becoming irrelevant in the social media age; lack of wifi internet access at recreation centers
Aquatics Programming	
Strengths	Provides outdoor refuge from climate, a priority across demographic groups
Weaknesses	Costs may prohibit widest use; only available seasonally
Opportunities	Work toward making some programming available year-round; expand availability of materials and signage in Spanish
Threats	Infrastructure can be prohibitively expensive to maintain
Athletics Programming	
Strengths	Wide reach and interest from many different demographics; many available facilities can be used for new kinds of classes and offerings; scholarship availability increases accessibility; based on 2019 data, revenue is substantially greater than expenses
Weaknesses	Scholarship application online is only in English and requires the provision of extensive documentation for income verification
Opportunities	Adding bilingual outreach documents can increase participation by Hispanic/Latinx communities; adding adult soccer programming could help meet community demand for more no-cost or low-cost fitness programs and improve reach to the Hispanic/Latinx community
Threats	If participation exceeds space/staff capacity, interest in program may wane and/or inequalities may arise; too many different kinds of programming may reduce program quality
Programming for Seniors	
Strengths	Widely used by local seniors; consistently partners with other entities to provide programming
Weaknesses	Does not sufficiently foster intergenerational community to meet needs as reported during community engagement
Opportunities	Creative partnerships between existing core programs (e.g. Recreation Centers, Athletics) could strengthen intergenerational ties
Threats	COVID-19 and emerging concerns about health risks for senior communities could pose ongoing challenges, especially for indoor and in-person programming
Adaptive Programming for People with Disabilities	
Strengths	Widely used by people with disabilities and their families; an important example of inclusivity; gives Pasadena a national/international reputation as a leader; key partnership on RIDES program with Senior Center; robust volunteer program
Weaknesses	There is a need for more accessible parks and park amenities outside of the Multipurpose Recreation Center
Opportunities	Promote more adaptive park features in parks citywide and expand outdoor programming in other areas of the city
Threats	Remaining on the cutting edge for adaptive recreation may prove challenging as municipalities with more resources improve and expand their facilities and programming

Figure 3-9. COVID-19 Risks for Various Activities (from the Texas Medical Association)



COVID-19 is likely to be an ongoing challenge for parks and recreation programming. Both facilities and programming may need to be creatively adapted or even redesigned to minimize health risks while providing opportunities to exercise and learn together--especially outdoors with appropriate social distance.

Park System Benchmarking

Purpose

The purpose of this section is to compare the Pasadena park system's inventory data from the beginning of this chapter to data from other park systems in order to "benchmark" Pasadena's park resources against national averages and those of peer cities. The park system standards developed based on this benchmarking analysis and community input are in Chapter 6 (Goals and Standards).

Methods

The comparative data for this analysis comes from two sources: (1) The Trust for Public Land's (TPL's) Center for City Parks Excellence 2019 City Park Facts[97]; and (2) the National Parks and Recreation Association's (NRPA's) 2020 Park Metrics[98]. TPL's City Park Facts compiles detailed information on park acreage, access, amenities, funding, and staffing for the 100 largest cities across the United States. Pasadena is not large enough to be included in City Park Facts. (The smallest cities included have over 227,000 residents.) This analysis compares Pasadena's park resources per capita with seven larger peer cities. Five of the seven peer cities are in Texas (Houston, Fort Worth, Irving, Lubbock, and Plano); the other two are Gilbert, Arizona, and Reno, Nevada. Pasadena is classified as having "Medium-Low" density, and all of the peer cities are classified as either "Low" or "Medium-Low." See Table 3-13 below.

NRPA Park Metrics (2020) compiles data from 1,053 park and recreation agencies; the data was reported between 2017 and 2019. NRPA Park Metrics includes basic information on operating resources and capital facilities. The comparison included here includes both national averages and peer city averages. The peer cities used for comparison with Pasadena have budgets between $5M and $20M, 50 to 200 full-time employees, city populations of 50,000 to 250,000, and are located in Texas or in one of the states that borders Texas (New Mexico, Oklahoma, Arkansas, and Louisiana).

In the comparison tables below **green** indicates that Pasadena is above average; **orange** indicates it is approximately average; and **red** indicates that Pasadena is below average.

Table 3-13. City Park Facts Peer Cities

City	City Population	Land Area (acres)	Density	Density Class
Fort Worth, TX	882,972	217,484	4.1	Low
Gilbert, AZ	261,287	43,496	6	Medium-Low
Houston, TX	2,358,708	383,737	6.4	Medium-Low
Irving, TX	243,678	42,891	6.6	Medium-Low
Lubbock, TX	260,624	78,343	3.4	Low
Plano, TX	295,013	45,812	6.4	Medium-Low
Reno, NV	255,055	65,926	4	Low
Pasadena, TX	**152,281**	**28,288**	**5.4**	**Medium-Low**

Parkland and Park Access

Table 3-14 shows the percentage parkland in each peer city, the acres of parkland per 1,000 residents, parks per 10,000 residents, and the percentage of residents who live within a 10-minute walk of a park. (See Chapter 6 for more details on the 10-minute walk standard.)

Please note that while Pasadena's park acreage and number of parks in Table 3-14 include HOA and Harris County parks, subsequent tables showing park amenities only include parks owned and managed by the Pasadena Parks and Recreation Department. If Armand Bayou Nature Center (Harris County; 2,174 acres), Kipper Mease Sports Complex (Harris County; 283 acres), the Pasadena Golf Course (PARD, but not within the city boundary; 150 acres), and HOA parks (25 acres) are excluded, that leaves only 469 acres of accessible parkland.

Table 3-14. Parkland and Park Access

City	Park Acres	Parkland Percent	Parkland per 1K (acres)	Number of Parks	Parks per 10K	10-Minute Walk
Fort Worth, TX*	8,435	3.9%	9.6	282	3.2	60%
Gilbert, AZ	1,212	2.8%	4.6	37	1.4	30%
Houston, TX*	38,412	5.2%	8.2	597	2.5	58%
Irving, TX	1,920	5.2%	7.9	98	4	62%
Lubbock, TX	2,228	2.9%	8.5	81	3.1	55%
Plano, TX	4,375	9.5%	14.8	85	2.9	75%
Reno, NV	3,446	5.5%	13.5	97	3.8	75%
TPL Peers Average		5.0%	9.6		3	59%
TPL National Average		8.8%	13.6		3.4	54%
NRPA Peers Average			19.7			
NRPA National Average			12.6			
Pasadena (total)	**3,101**	**11.0%**	**20.4**	**44**	**2.9**	**54%**
Pasadena (accessible)	**469****	**1.7%**	**3.1**	**44**	**2.9**	**54%**

*The acreages included for Fort Worth and for Houston are equivalent to the "accessible parkland" acres for Pasadena. For both Fort Worth and Houston large, remote, largely inaccessible parks have been excluded. The parks excluded are the Fort Worth Nature Center (3,630 acres) for Fort Worth and Cullen Park (10,940 acres) and George Bush Park (8,045 acres) for Houston.

**Accessible parkland for Pasadena excludes ABNC, HOA parks, the golf course, and Kipper Mease Sports Complex.

Additional Notes for Table 3-14: Cells are grayed out where numbers are either not relevant for averages or are not available. The number of park units is based on the Pasadena Parks and Recreation Department Park Matrix (shown at the beginning of this chapter); it does not include parks owned and managed by other entities.

Park Amenities: Drinking Fountains, Restrooms, Playgrounds, and Centers

Table 3-15 shows drinking fountains per 10,000 residents, restrooms per 10,000 residents, and senior and recreation centers per 20,000 residents. Based on this assessment, Pasadena has approximately average numbers of playgrounds and senior/recreation centers per capita, above average numbers of park restrooms, and below average numbers of park drinking fountains.

Please note that during the engagement for this project, residents expressed strong interest in increasing the number of picnic tables and pavilions, but these amenities were not included in the City Park Facts data collection used for this benchmarking analysis. Trails data is included in the City Park Facts data collection, but the City of Pasadena does not yet have good data for existing trails outside of its parks.

Table 3-15. Park Amenities: Drinking Fountains, Restrooms, Playgrounds, and Centers

City	Drinking Fountains per 10K Residents	Restrooms per 10K Residents	Playgrounds per 10K Residents	Senior and Rec Centers per 20K Residents
Fort Worth, TX	1.4	0.2	2.3	0.3
Gilbert, AZ	n.a.	1.0	0.9	0.3
Houston, TX	2.5	0.7	1.3	0.6
Irving, TX	3.0	0.2	3.1	0.8
Lubbock, TX	2.5	1.3	2.2	0.4
Plano, TX	5.3	1.5	2.4	0.3
Reno, NV	n.a	2.2	2.1	0.3
TPL Peer Average	2.9	1.0	2.0	0.4
TPL National Average	2.7	1.8	2.6	0.9
Pasadena, TX	**2.0**	**3.4**	**2.2**	**1.1**

Sport Amenities: Fields, Diamonds, Hoops, Skate Parks, and Tennis Courts

Table 3-16 shows soccer/multi-use fields baseball/softball diamonds, basketball hoops, and tennis courts per 10,000 residents. It also shows skate parks per 100,000 residents. Based on this assessment, the Pasadena park system has an above average number of basketball hoops. The number of softball/baseball diamonds and skate parks is about average. The number of tennis courts is below average and the number of soccer/multi-use fields is far below average per capita.



Memorial Skatepark Source: pasadenatxphoto.net

Table 3-16. Fields, Diamonds, Hoops, Skate Parks, and Tennis Courts

City	Fields per 10K	Diamonds per 10K	Hoops per 10K	Tennis Courts per 10K	Skate Parks per 100K
Fort Worth, TX	2.6	1.2	1.5	0.7	0.5
Gilbert, AZ	1.4	n.a.	0.7	n.a.	0.4
Houston, TX	2.5	0.9	2.1	0.9	0.3
Irving, TX	2.4	1	1.1	0.5	0.4
Lubbock, TX	4.3	2	4.8	2.2	0.8
Plano, TX	7.9	2	3.5	2.7	0.3
Reno, NV	1.3	1.9	3.7	1.8	2
TPL Peer Ave	3.2	1.5	2.5	1.5	0.7
TPL Ntl Average	2.8	1.7	3	1.9	0.8
Pasadena, TX	**0.5**	**1.3**	**3.9**	**1**	**0.7**

Additional Amenities: Splash Pads, Pools, Disc Golf, and Dog Parks

Table 3-17 shows splash pads, swimming pools, and dog parks per 100,000 residents. Based on this assessment, the Pasadena park system has an above average number of pools per capita. The number of splash pads, disc golf courses, and dog parks is about average.



Pasadena Petsafe Dog Park Source: pasadenatxphoto.net

Table 3-17. Splash Pads, Pools, Disc Golf, and Dog Parks

City	Splash Pads per 100K	Pools per 100K	Disc Golf per 100K	Dog Parks per 100K
Fort Worth, TX	0.1	0.3	0.3	0.3
Gilbert, AZ	0.4	1.5	0.4	0.8
Houston, TX	1.1	1.8	0.2	0.7
Irving, TX	0.8	2.5	0.8	1.2
Lubbock, TX	0	1.5	0.8	0.8
Plano, TX	0.3	3.1	0.3	0.3
Reno, NV	2.7	1.6	n.a.	1.2
TPL Peer Average	0.8	1.8	0.5	0.8
TPL Ntl Average	2	2.3	0.6	1.4
Pasadena, TX	**2**	**2.6**	**0.7**	**0.7**

Note: The number of dog parks used in this analysis does not include two dog parks on county-owned properties. Amenity numbers are all based on the Pasadena Parks and Recreation Department's Park Matrix.

Park System Employees and Spending

Table 3-18 shows the number of park employees per 10,000 residents and public spending on parks per resident. This assessment shows that Pasadena has fewer park employees and lower spending per resident than average. This indicates that the Pasadena Parks and Recreation Department is managing its park system with fewer financial and staff resources than comparable park systems. While Pasadena's level of service has been adequate, any cuts to funding for the Parks and Recreation Department would be very detrimental to the maintenance and management of the parks. Conversely, increases in employees and funding could substantially improve the level of service provided by the Parks and Recreation Department.

Table 3-18. Park System Employees and Spending

City	Park Employees (FTE) per 10K Residents	Public Spending per Resident
Fort Worth, TX	5.6	$65
Gilbert, AZ	4.8	$72
Houston, TX	2.7	$53
Irving, TX	16.9	$64
Lubbock, TX	7.8	$32
Plano, TX	19	$201
Reno, NV	4.4	$48
TPL Peer Average	8.8	$76
TPL National Average	8.8	$99
NRPA Peer Average	8.8	$74
NRPA National Average	11.3	$101
Pasadena, TX	**6**	**$71**







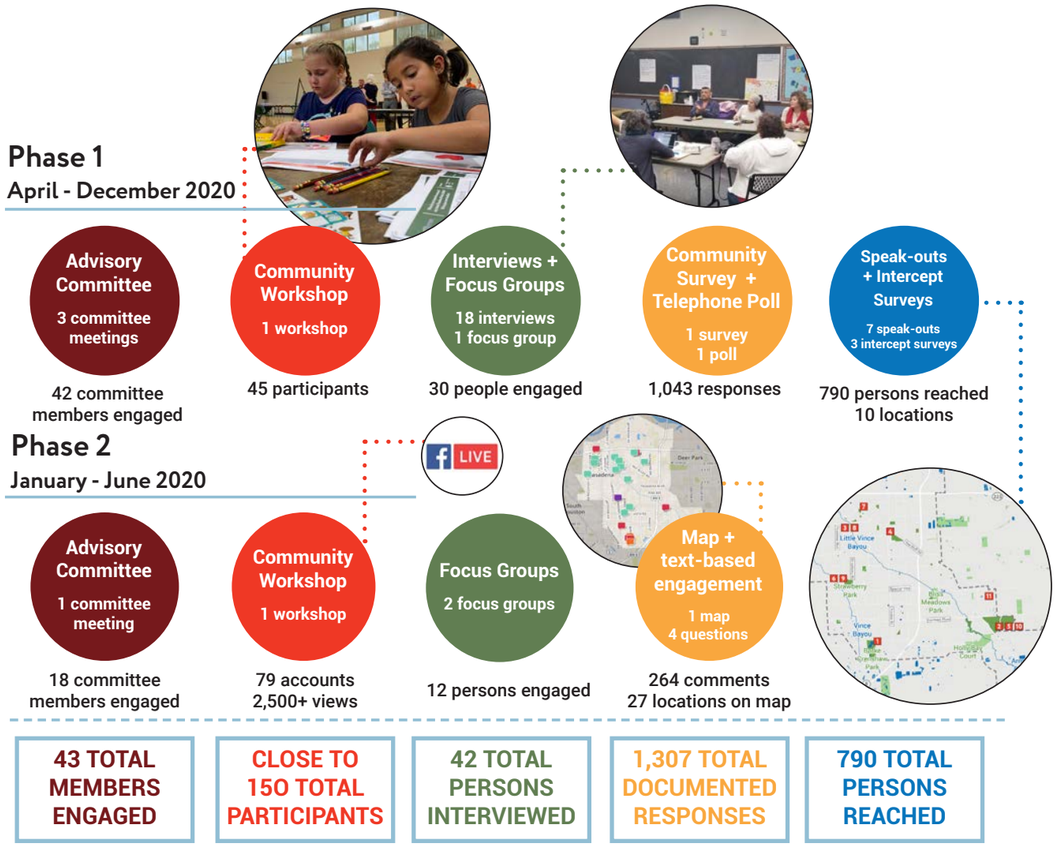




4 Community Priorities

Community Priorities

Figure 4-1. Community Engagement Summary

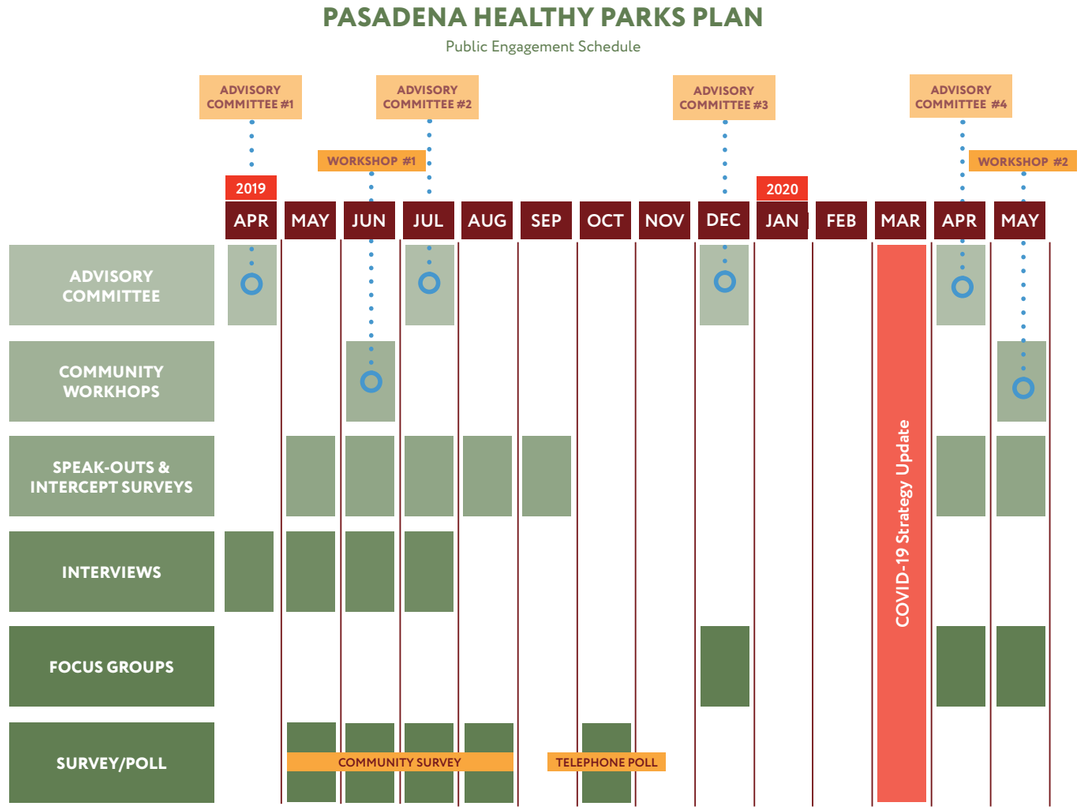


Introduction

The Healthy Parks Plan approach to equity-driven community engagement is described in detail in Chapter 1 (A Healthy Parks Plan). Additional information related to the methods used for the Community Survey and Telephone Poll are included in the Online Appendices. Figure 4-2 shows the schedule of community activities over the course of the planning process.

> *"Parks and trails are one of the strongest parts of how people interact with the city. They could be the place to knit together otherwise divided communities. Pasadena needs places that attract people from both sides of town."*
>
> (Salvador Serrano, local business owner, Serrano Insurance Agency)

Figure 4-2. Community Engagement Schedule



Key Findings

- **Parks are one of the biggest contributors to positive quality of life in Pasadena.** Residents truly value Pasadena's parks and its Parks and Recreation Department staff. Local leaders see the park system as a key opportunity for attracting businesses and keeping young people from moving away.
- **Most Pasadena residents use local parks and are generally satisfied with the park system.** The Telephone Poll found that the majority of residents visit parks, and the Community Survey found that over 70% of participants visit Pasadena parks at least once per month on average, and 37% visit Pasadena parks more than once every week. Nearly 70% of residents are satisfied with both the quantity and quality of parks in Pasadena.
- **Residents use parks most often for exercise and fitness and for spending time with family and friends.** Exercise and fitness and spending time with family and friends were the dominant reasons for visiting parks in both the Community Survey and the Telephone Poll. Exercise and fitness was the top priority in the Telephone Poll, and spending time with friends and family was the top priority in the Community Survey. Participants with the lowest household incomes were significantly less

likely to say that they use parks for exercise and fitness (41.3% versus 58.8%) and significantly more likely to say they use parks to spend time with family and friends (54.1% versus 35.3%).

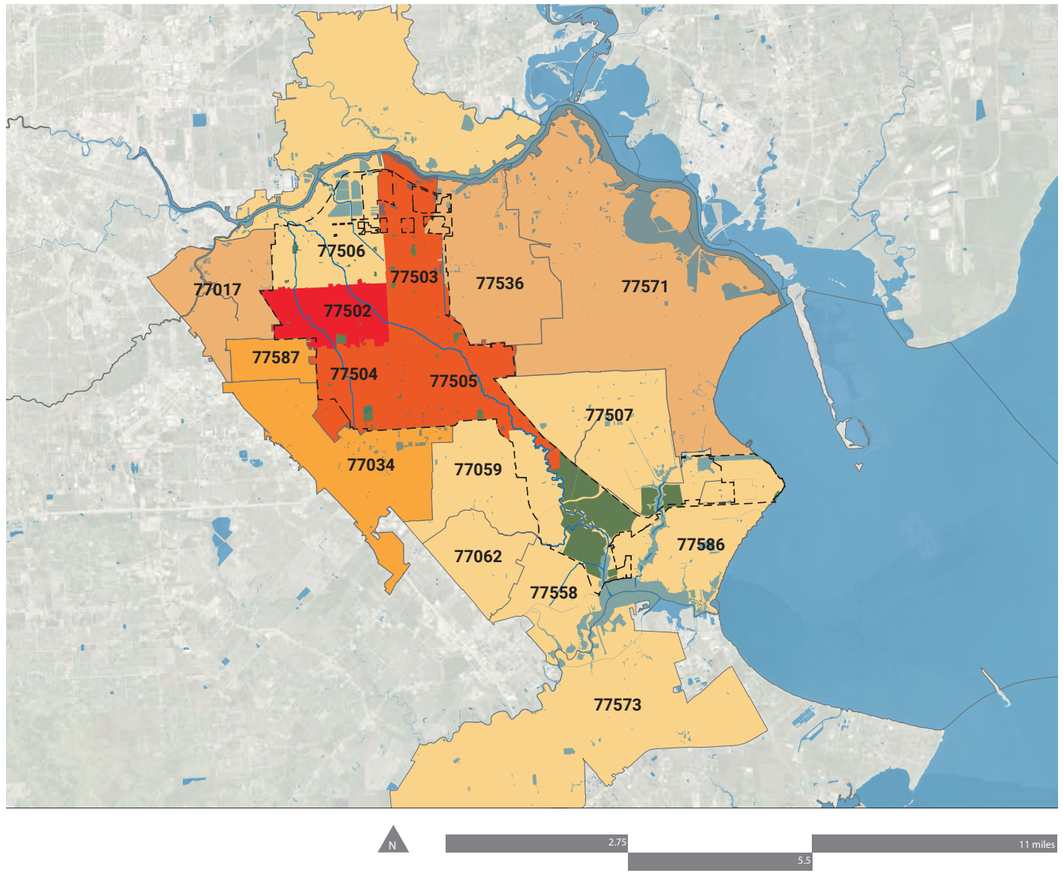
- **Playgrounds are the most frequently used amenity, followed by paved pathways.** Community Survey respondents indicated that the most commonly used park amenities, excluding restrooms and drinking fountains, are playgrounds (53%) and paved pathways (48%). Hispanic/Latinx residents are much more likely to use soccer fields, basketball courts, playgrounds, and picnic areas/BBQs—and much less likely to use the golf course. Restrooms and drinking fountains are residents' highest priority park amenities, followed by playgrounds and pathways.
- **Residents love the trails in Pasadena's parks, and nearly half would like to be able to walk or bike to the park.** When asked their favorite thing about Pasadena parks, the most common answers were trails and access to nature. According to the Community Survey, over three-quarters (81.3%) of participants drive to the park now, but 49% would like to use alternative transportation; 28.9% would like to walk and 16.1% would like to be able to bike.
- **Lack of restrooms and water fountains, uncomfortable weather, maintenance concerns, are all significant barriers to park use.** Restrooms and drinking fountains came up as high priorities across all of the engagement for this project. The need for shade and other features to protect park visitors from the weather, especially extreme heat in the summer, is also a very high priority.
- **Safety concerns are a substantial, and complicated, barrier to park use.** Safety concerns were mentioned frequently, but were not rated as one of the most important barriers to using parks. Participants used the term "safety" to encompass a wide variety of issues from lack of comfort facilities and exposure to extreme weather to accessibility challenges for people with disabilities and fear about crime in and around parks.
- **More shade and more natural features are critical to making parks healthier, more relaxing, and more welcoming.** Increasing shade and natural features in Pasadena's parks emerged as high priorities across all types of engagement. Community Survey participants indicated strongly that they would like to see more nature and natural features in Pasadena's parks. Respondents indicated that access to nature and wildlife is one of the most important benefits provided by parks and also said that "more natural beautification" would do the most to make local parks more welcoming for social gatherings.
- **Pasadena has some unique resources for people with disabilities, but more can be done to improve** accessibility. The need for improved accessibility for people with disabilities emerged as an important issue for participants in all types of engagement. In particular, residents would like to see more adaptive facilities outside of the Verne Cox Multipurpose Recreation Center—for example communication boards in playgrounds to foster connections between verbal and non-verbal children and wheelchair accessible picnic areas.

> *"Every time we take our group [of people with disabilities] to the park, I see moods improve the minute we pull into the parking lot. The group gets active without knowing it through the excitement of walking/rolling on a trail or pointing out unique items, or animals, they don't normally see in their daily routine. In parks, there seems to be a calmness about birds chirping, leaves rustling, wind blowing, sun shining—such good sensory input all in one place! I notice that our group becomes more expressive in their mannerisms, their smiles, and the way they socialize with those around them. Being outside is good for all."*
>
> *(Michelle Blunt, Manager of the Verne Cox Adaptive Recreation Center)*

Figure 4-3. Key Findings



Figure 4-4. Zip Codes of Community Survey Respondents Map[99]



- **Expanding youth programming is the highest programming priority, followed by aquatics programming and special events.** There was some disagreement between the programming priorities identified in the Telephone Poll and the Community Survey. Because the Telephone Poll participants were not self-selected, those results were weighted more heavily in drawing the overall conclusion that expanding youth programming is the highest programming priority, followed by aquatics programming and special events.
- **Many residents are somewhat familiar with Pasadena Parks and Recreation facilities and programming, but there is room for improvement and targeting of outreach.** Word of mouth and social media are the most common ways that residents receive information about parks and programming. The Telephone Poll indicated that Hispanic/Latinx respondents from primarily English-speaking households are much more likely to get information from social media than those in primarily Spanish-speaking households (53% versus 21%). Discrepancies in outreach results point to the need for PARD to provide more of its communications in Spanish as well as English.

Who Participated?

- 43 Advisory Committee members representing over 32 agencies and organizations participated in Advisory Committee meetings
- 1,043 responses to the Community Survey
- 400 reached through Telephone Poll
- 45 community members (from children to seniors) attended an in-person Community Workshop
- 79 separate accounts logged in to participate in a Community Workshop via Facebook Live (many of those accounts represented several family members logged in together); there have been 2,700 and 2,000 views of two videos posted from the workshop
- 790 reached through Speak-Outs and Intercept Surveys at community events
- 222 responses to key questions from Phase 2 engagement via texting and participation in the Facebook Live Community Workshop
- 42 comments on the project's Interactive Map
- 21 local leaders and experts participated in Interviews

Community Survey

The majority of Community Survey participants (57.9%) were Hispanic/Latinx. According to Census data, 67.7% of Pasadena residents are Hispanic/Latinx, so these residents are somewhat underrepresented among respondents[vii]. Overall, participants who identified as Hispanic/Latinx were generally younger and lower income than participants who identified as white. Nearly 23% of participants said that they primarily speak Spanish at home. There was strong participation from young people and senior citizens; 22.7% of participants were under 18, and 20% were 65 or older. Women were overrepresented among participants; over two-thirds of respondents were women. Over 47% of survey respondents said that their annual household income was under $50,000 (very close to Census numbers). Finally, nearly 45% of participants said they have lived in Pasadena for 20 years or more, and another 24.5% have lived in Pasadena for 11 to 19 years. The highest concentration of responses was from residents in the 77502 zip code in northwest Pasadena (Figure 4-4).

Telephone Poll

The Telephone Poll was conducted by a professional polling firm (John Wilson Research). Three-quarters of participants were reached via cell phones and one-quarter were reached on landline telephones. Interviews were conducted in Spanish as well as English (23% of all interviews and 34% of the interviews for Hispanic/Latinx residents were conducted in Spanish). The Telephone Poll responses were weighted to known population values for gender, race, age and income.

Analysis Note: Detailed demographic data was only gathered for participants through the Community Survey and Telephone Poll. Where appropriate, responses to the survey and poll were analyzed using cross-tabulation of demographic subgroups based on race/ethnicity and income. In particular, differences were examined in responses between Hispanic/Latinx and white participants and between the lowest and highest income participants. In some cases analysis also looked at differences by gender, age, and family status. The results of this analysis are included below (and in more detail in the Community Survey and Telephone Poll reports in the Online Appendix) only when there were differences in responses among demographic subgroups that were both statistically significant and analytically meaningful.

vii Community Survey participants were allowed to give more than one response to the question that addressed their race and ethnicity. Of the 442 respondents who identified as Hispanic/Latinx, sixty-seven (15%) also identified as white.

Summary of Engagement Results

Overall engagement results are summarized below. The more detailed results of each type of engagement are also available in the Online Appendix. The results are organized into the following topics: (1) Quality of Life and the Benefits of Parks; (2) Park Use and Satisfaction; (3) Reducing Barriers and Making Parks More Welcoming; (4) Highest Priority Park Amenities; (5) Highest Priorities for Park Programming; and (6) Highest Priorities for Future Park Funding. Under each topic the key findings are highlighted in ***bold/italic*** text.

These community engagement results informed the goals and objectives outlined in Chapter 4, design guidelines in Chapter 8, and recommendations in Chapters 7 and 9. Please see Figure 1-7 in Chapter 1 for visual model of how the equity-driven engagement results informed the overall needs assessment for the Healthy Parks Plan.

1) Quality of Life

Parks are one of the biggest contributors to positive quality of life in Pasadena.

Through interviews, speak-outs, community workshops, and other outreach, residents and local experts made it clear that Pasadena's parks and the Pasadena Parks and Recreation Department are among the biggest contributors to positive quality of life in Pasadena. Interviewees (and many others) identified social divisions, particularly divisions between northern and southern areas of Pasadena, as the biggest threat to local quality of life, followed by lack of public transportation and environmental concerns,

> *"There is a lack of attraction for younger generations to stay in Pasadena. Parks have the potential to influence making Pasadena a more attractive and desirable place to live."*
>
> *(Cristina Womack, CEO, Pasadena Chamber of Commerce)*

particularly concerns about air quality. Figure 4-5 shows how interviewees characterized contributors and threats to Pasadena's quality of life.

2) Park Use and Satisfaction

Most Pasadena residents use local parks.

According to the Telephone Poll, the majority of Pasadena residents visit parks daily, weekly or frequently. However, 41% say that they seldom or never visit parks. Park usage is higher among Hispanic/Latinx residents (especially among women) and in the areas of the city with higher Hispanic/Latinx populations. Usage is also higher among younger residents and parents. Respondents with children at home report that park usage is very high for their children. In fact, parents indicate that over 75% of children visit the parks and recreation areas on a daily, weekly or frequent basis. Among participants in the Community Survey, over 70% visit Pasadena parks at least once per month on average, and 37% visit Pasadena parks more than once every week[viii]. Figure 4-6 shows park usage based on the Telephone Poll.

viii The best data for characterizing park use was obtained through the Telephone Poll. This is because although Community Survey respondents were quite demographically representative of Pasadena as a whole, survey participants were self-selected and are, therefore, more likely to be interested in (and visit) parks.



Verne Cox Center Source: pasadenatxphoto.net

Figure 4-5. Contributors and Threats to Quality of Life in Pasadena (Interview Results)

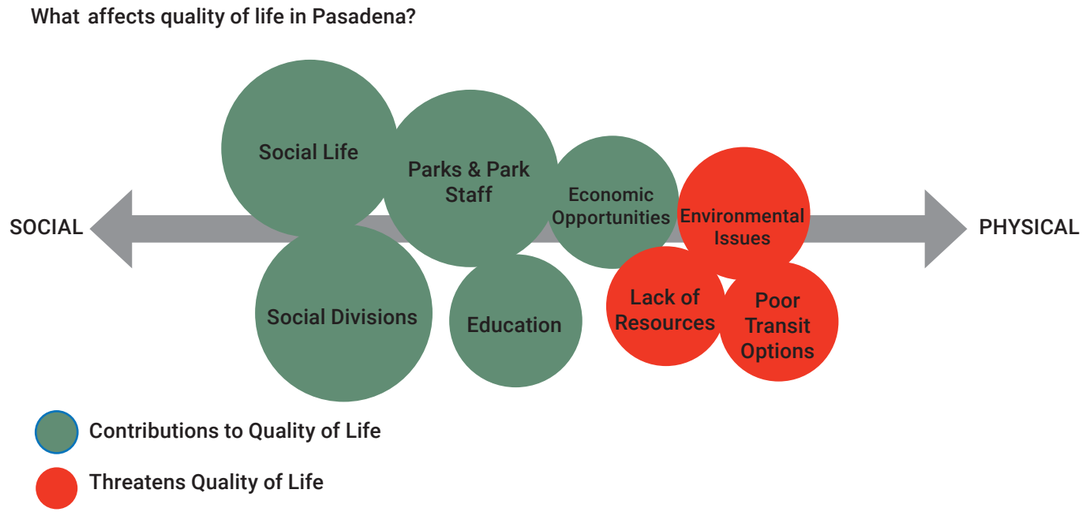


Figure 4-6. Park Usage Based on Telephone Poll

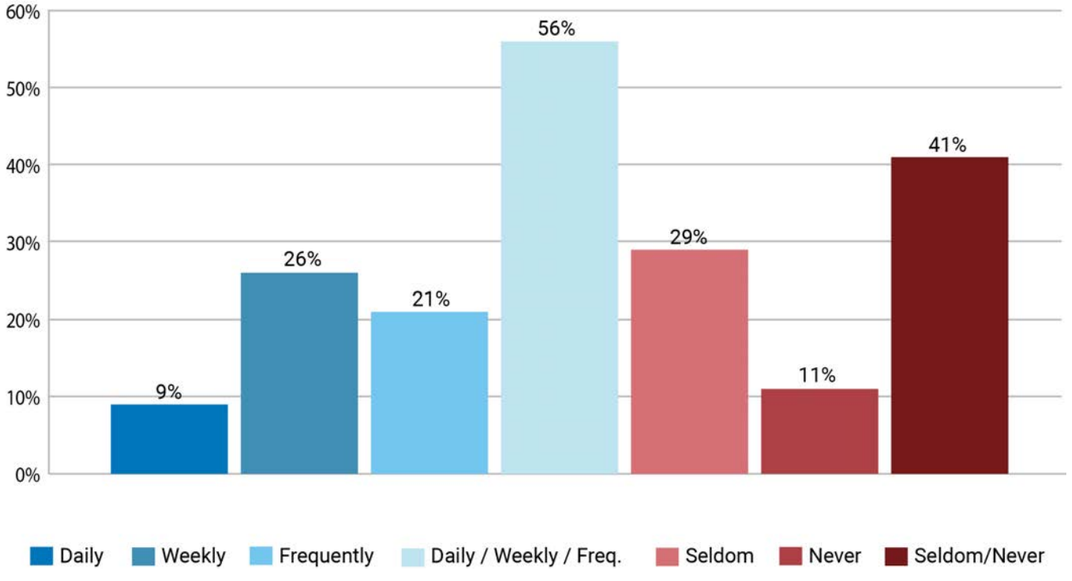
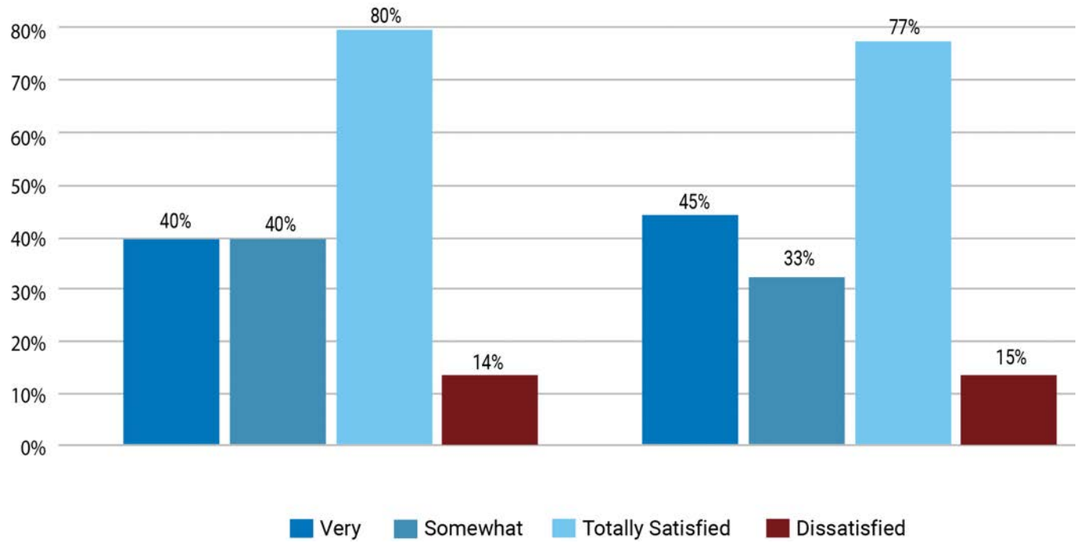


Figure 4-7. Satisfaction with Quality and Quantity of Parks (Telephone Poll)



Residents are generally satisfied with both the quality and quantity of parks in Pasadena.

Telephone Poll results indicate that satisfaction with the quality (80%) and quantity (77%) of parks and recreational opportunities in Pasadena is high. (See Figure 4-7.) In fact, 69% of poll participants are satisfied with both the quality and quantity of the parks and just 21% are dissatisfied with either the quality or quantity of the parks and recreational opportunities available to them. Satisfaction ratings tend to be somewhat higher among Hispanic/Latinx residents. They are also a little higher among younger residents and those with children at home. At least 60% of every demographic group expressed satisfaction with the quality and quantity of the parks and recreational opportunities in the City of Pasadena.

Residents use parks most often for exercise and fitness and for spending time with family and friends.

Participants were asked why they use parks in both the Telephone Poll and the Community Survey. In the Telephone Poll, "exercise and fitness" topped the list (54%) followed by "spending time with family and friends" (40%). A significant number of respondents also gave "recreation" (28%) or "experiencing nature and wildlife" (24%) as reasons why they visit the parks. In the community survey, the most common response (62%) was "spending time with family and friends." This was followed closely by "exercise and fitness" (59%), then by "recreation" (43%) and "experiencing nature and wildlife" (35%). The answers to this question differed significantly between participants who identified as Hispanic/Latinx and those who identified as white. In particular, Hispanic/Latinx participants were more likely to use parks for spending time with family and friends and less likely to use parks for recreation and experiencing nature and wildlife. The participants with the lowest household incomes were significantly less likely to say that they use parks for exercise and fitness (41.3% versus 58.8%) and significantly more likely to say they use parks to spend time with family and friends (54.1% versus 35.3%).

Among park amenities, residents use playgrounds most often, followed by paved pathways. Hispanic/Latinx residents are much more likely to use soccer fields, basketball courts, playgrounds, and picnic areas/BBQs—and much less likely to use the golf course.

> *"Latinx families want covered areas and trees and benches to come together and celebrate."*
>
> *(Veronica Nino, Community Health Worker)*

Among Community Survey respondents, by far the most commonly used park amenities were playgrounds (53%) and paved pathways (48%). These were followed by picnic areas and barbecues (29%), splash pads and water features (28%) and unpaved trails (also 28%); then by swimming pools (23%), dog parks (21%), outdoor exercise equipment (20%), pavilions/covered spaces for gathering (20%), and basketball courts (19%). The least frequently used were tennis courts (7%), volleyball courts (7%), skate parks (6%), and golf and frisbee golf courses (both 3%). Hispanic/Latinx respondents were much more likely to have used soccer fields (18.3% versus 3.9%), basketball courts (22.9% versus 8.7%), playgrounds (52.7% versus 42.7%), and picnic areas/BBQs (29.2% versus 22.6%) than white respondents. Hispanic respondents were less likely to have used the golf course (1.4% versus 4.0%). The highest income participants were much more likely than the lowest income participants to have used the golf course (11.8% versus 1.0%). The lowest income participants were much more likely to have used picnic areas/BBQs (28.4% versus 11.8%). Table 4-1 shows the percentage and number of Community Survey participants who use various park amenities.

Table 4-1. Participants Who Use Park Amenities (Community Survey)

Amenity Choices	Percent	Number
Playgrounds	53.4%	469
Paved pathways	48.3%	424
Picnic areas and BBQs	29.3%	257
Splash pads/water features	28.4%	249
Unpaved trails	28.1%	247
Community swimming pools	23.1%	203
Dog Parks	21.3%	187
Outdoor exercise equipment	20.7%	182
Pavilions/covered spaces for gathering	19.6%	172
Basketball courts	18.6%	163
Fishing	15.3%	134
Soccer fields	14.5%	127
Mountain biking trails	14.0%	123
Community centers/senior center	13.9%	122
Softball/baseball fields	11.1%	97
Tennis courts	6.7%	59
Volleyball courts	6.7%	59
Skateboard Parks	5.7%	50
Other (please specify)	3.9%	34
Golf course	3.2%	28
Frisbee golf course	3.0%	26

3) Reducing Barriers and Making Parks More Welcoming

Lack of restrooms and water fountains, uncomfortable weather, maintenance concerns, and not feeling safe are all substantial barriers to park use.

According to Community Survey participants, the biggest barriers to using parks more often are lack of restrooms (36%), weather (31%), being too busy (29%), parks not being clean or well-maintained (25%), not feeling safe (25%), and lack of water fountains (24%). These top answers were followed by parks being too far from home (18%), "not enough planned activities (programs and events) I enjoy" (18%), "parks do not have the equipment or facilities I want to use" (17%), and overcrowding (14%). Hispanic/Latinx participants were more likely than white participants to indicate that the following prevent them from using parks: "there are not enough of the kinds of planned activities I enjoy" (19.2% versus 14.3%); "I am too busy" (30.3% versus 26.3%), and "parks are not kept clean" (27.4% versus 20.7%). Fewer Hispanic respondents indicated that not feeling safe was a barrier (21.3% versus 24.0%). See Table 4-2 for a full breakdown of survey responses related to barriers to park use. Heat and sun exposure were also identified as significant barriers to park use in the first Community Workshop.

When asked why they don't visit the parks more often, a plurality of participants in the Telephone Poll said it was because they were "too busy." About one in ten said that their age or health kept them from visiting more often. In the Telephone Poll, Hispanic/Latinx residents (58%) were far more likely than white respondents (32%) to say that they don't use the parks because they are too busy. Among respondents from households in which Spanish is the most common language spoken, 70% say they are too busy to visit the parks. While being too busy is a significant barrier to park use, it is not addressed in more detail in this report since it is not something that can be addressed through changes to the park system.

> *"Pasadena's number one challenge is its lack of public transportation, which limits access to medical services and jobs."*
>
> *(Margie Pena, Community Developer, BakerRipley)*

Table 4-2. Barriers to Park Use (Community Survey)

Answer Choices	Percent	Number
Lack of restrooms	36.4%	330
The weather keeps me from spending time in the park	31.0%	281
I am too busy	29.0%	263
Parks are not kept clean and/or not well-maintained	24.7%	224
I do not feel safe in the park	24.2%	219
Lack of water fountains	24.1%	218
Parks are too far from my home	18.3%	166
There are not enough of the kinds of planned activities I enjoy	18.0%	163
Parks do not have the equipment or facilities that I want to use	16.6%	150
Parks are overcrowded	14.8%	134
Lack of parking	9.2%	83
Getting to parks is difficult or unsafe	8.6%	78
Lack of public transportation to get to park	8.6%	78
I do not have a car to get to the park	7.4%	67
Operating hours are not convenient	5.7%	52
Parks are not accessible to people with disabilities	4.3%	39
Lack of open space	3.6%	33

Safety concerns are a significant, and complicated, barrier to park use.

> *"Quisiera mas luz en los parques, están muy oscuros, y también la seguridad, quisiera mas seguridad"/"I would like more light in the parks, they are very dark, and also security, I would like more security"*
>
> *(Community Survey Participant)*

As noted previously, when Community Survey and Telephone Poll respondents were asked directly about barriers to park use, not feeling safe was identified as an issue, but not as one of the top barriers to using parks. However, when Community Survey participants were asked their biggest concerns about Pasadena parks overall, issues related to safety dominated. In the word cloud shown in Figure 4-8, "safe" and "safety" were the words that occurred the most frequently by far—appearing a total of 218 times, orders of magnitude more frequently than any other word. The next most common words were "restrooms" (30), "water" (29), "clean" (26), and "lighting" (22). The word cloud below displays responses based on the frequency with which each word appeared[ix].

In these responses, "safety" encompassed a wide variety of concerns related to real and perceived threats including access issues for people with disabilities, lack of safe routes to parks, uneven/unpaved trails that pose tripping hazards, lack of shade, need for more and better-maintained water fountains and restrooms, risks posed by outdated playground equipment, air pollution, danger from traffic, stray and unleashed dogs, need for lighting, need for more security personnel and security cameras, and concerns related to crime. A group of residents who volunteered to participate in the Focus Group addressing safety identified many of these same issues. Focus group participants also highlighted the need for more programming and activation in parks; the need for visibility and barriers in playground areas, especially those for the youngest children; and the need to adjust lighting schedules so that existing lighting is turned on earlier during the winter—particularly after Daylight Savings Time begins. Lighting was by far the most common suggestion for improved park safety during the Phase 2 text-based engagement and Community Workshop.

ix "Safe" was merged with "safety" in the word cloud for more accurate representation. To improve the clarity of the word cloud, the words "park/s," "people," and "enough" were excluded—as were words that appeared only once.

Figure 4-8. Word Cloud for "What Are Your Biggest Concerns About Pasadena Parks?" (Community Survey)

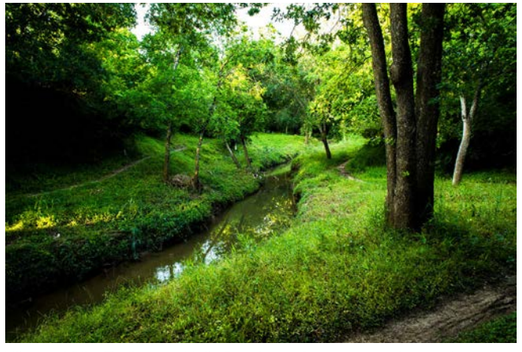


Residents love the trails in Pasadena's parks, and nearly half would like to be able to walk or bike to the park.

> *"Bayous are the city's biggest asset. Hands down, we need to make the city more walkable and bikeable."*
>
> *(Salvador Serrano, local business owner, Serrano Insurance Agency)*

Concerns about pedestrian/cyclist safety and lack of trail connectivity in Pasadena came up in every type of community engagement for the Healthy Parks Plan. Community Survey participants indicated that currently driving is by far the most common way that survey participants travel to the parks they visit. Over 81% indicated that they drive; 14% said they walk; and 3% said they bike. While over 81% of respondents indicated that they drive to the park, only 50% would prefer driving to alternative or active transportation options. Nearly one-third (29%) said they would like to walk; 16% said they would like to bike; and nearly 4% said they would like to take the bus. This means 49% would like to use alternative transportation. The Advisory Committee identified increasing the connectivity of bayous, parks, and trails as one of its highest priorities, as did the focus group that discussed opportunities for integrating nature into Pasadena's parks. The map-based input gathered during Phase 2 community engagement indicated that trails or a bayou greenway along Vince and Little Vince Bayous are high priority for connectivity.

Pasadena's Safe Routes to Schools program and Livable Centers Study (see online appendices for Planning Context) also address the need for safe active transit routes to and between parks and other important destinations. High-priority areas for connectivity improvements are shown in Chapter 7 (Priority Recommendations, Connectivity Map).



Hike and Bike Trails near Holly Bay Court Source: pasadenatxphoto.net

More shade and more natural features are critical to making parks more relaxing and welcoming.

> *"Most parks need shade over the play area . Very dangerous for children to play in the extreme heat and direct sunlight"*
>
> *(Community Survey Participant)*
>
> *"They should add more areas where you can be protected from the sun, like a canopy, trees, water parks, or something. Basically, they could have more shade." "It would be nice if there are more trees and green areas, as well as more shade to avoid extreme heat. They should take care of the people's health as well." "They should improve the green space and have more green areas with trees and shaded areas." "They should provide more shade, so that people can use the parks more. It is too hot."*
>
> *(Telephone Poll Responses)*

Increasing shade and natural features in Pasadena's parks emerged as high priorities for the Advisory Committee and for participants in the Community Survey, Speak-Outs, Interviews, and the first Community Workshop.

Community Survey participants indicated strongly that they would like to see more nature and natural features in Pasadena's parks. Respondents indicated that access to nature and wildlife is one of the most important benefits provided by parks. Participants also said that "more natural beautification" would do the most to make local parks more welcoming for social gatherings. When asked their favorite thing about Pasadena parks, the most common answers were trails for walking and access to nature. Shade (72%) was by far the most common response for what makes parks feel relaxing. This was followed by plants and trees (64%) and water features (55%). After these top choices were quiet (49%), places to socialize (49%), seating (48%), and "environment feels natural or wild (like a forest or meadow)" (48%). Interestingly "environment feels natural or wild" was chosen much more frequently than "environment feels designed or manicured (like a garden, developed park, or plaza)," which was chosen by 35%. In open-ended responses, respondents associated nature with trees and shade, water and wildlife, and with silence, tranquility, and peace. Participants who provided map-based and text-based input during Phase 2 engagement also indicated that trees, water features, and access to nature are a high priority.

> *"I find parks as havens away from all of the noisy, paved, and manicured city life. They allow you to feel like you're away from the hustle and bustle, and provide moments of serenity and clarity. Being able to see moments of greenery and have a patch of cleaner air and vibrancy of color to help me through the day: that's what I love most about parks"*
>
> *(Community Survey Respondent)*
>
> *"I want people to experience wonder in our parks. Texas coastal prairie looked like Little House on the Prairie. Even as late as the 1950s and 1960s, this whole area was prairie and riparian forest. It would be great for parks to reflect that. It would be beautiful to return to our ecological heritage."*
>
> *(Tim Pylate, Executive Director, Armand Bayou Nature Center)*

Several interviewees focused on the opportunity for Pasadena's unique ecological heritage, including its coastal prairie and bayous, to become a centerpiece of cultural pride for Pasadena residents, as well as a major attraction for visitors from beyond Pasadena. (The Armand Bayou Nature Center already demonstrates the potential for this.) The expert participants in the Focus Group on nature in Pasadena's parks emphasized the need to think about the connections between people's health and the health of nature (One Health), the power of educating residents about local ecological history, and the potential for nature to help with flood mitigation and water purification. They also noted that climate adaptation is going to become increasingly important and this will mean critically examining how and where to deploy different kinds of vegetation and native species. Finally, many interviewees, Advisory Committee members, and Focus Group participants argued for the importance of ensuring that connections to and with Armand Bayou Nature Center are deeply embedded in the Healthy Parks Plan.

Pasadena has some unique resources for people with disabilities, but more can be done to improve accessibility.

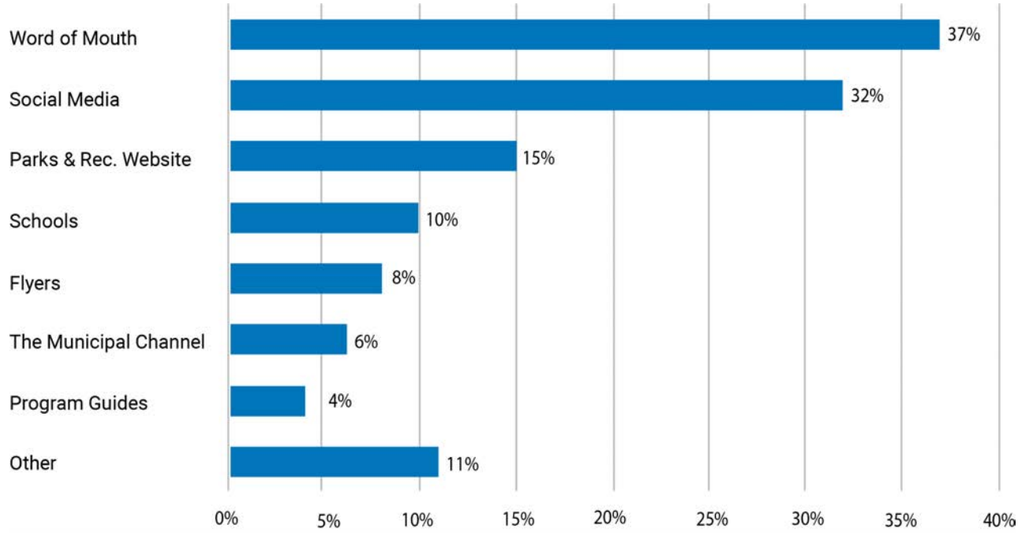
> *"My husband is in a wheelchair; the parks are walking distance and we would love to walk but the sidewalks are so bad it's better to drive."*
>
> *(Community Survey Participant)*

The Programming Overview in Chapter 3 includes detailed information about unique existing programming and facilities for people with disabilities in Pasadena. Participants in a Focus Group for people with disabilities and their families emphasized the need for: (1) Expanded outreach to people with disabilities and their families about existing resources and formally organized park days geared for people with disabilities; (2) Outreach to the larger community to normalize the use of parks by people with disabilities, particularly adults; and (3) More adaptive features in parks including accessible restrooms and picnic areas, adaptive playgrounds for all ages, quiet areas, and covered areas to help with people with temperature regulation issues. Accessibility issues were also identified as a major concern in the Community Survey and in the first Community Workshop.



2016 Pasabilities Expo Source: pasadenatxphoto.net

Figure 4-9. Sources of Information about Pasadena Parks and Programming (Telephone Poll)



Many residents are somewhat familiar with Pasadena Parks and Recreation facilities and programming, but there is room for improvement and targeting of outreach—especially increasing outreach in Spanish. Word of mouth and social media are the most common ways that residents receive information about parks and programming.

> *"The city offers some great programs through Parks and Rec and has great assets like Armand Bayou Nature Center and El Jardin Beach, but in general there is confusion on what is considered to be in Pasadena and what isn't. There are also communication challenges to be able share news and information with the community at large on programs and attractions available."*
>
> *(Cristina Womack, CEO, Pasadena Chamber of Commerce)*
>
> *"You should offer more nature classes or something like that for youth and adults. There's tons of great nature trails that aren't being used to their full potential."*
>
> *(Community Survey Participant)*

Community members not knowing enough about local parks and park programming appears to be a meaningful barrier to park use. Two-thirds of Community Survey participants said they were somewhat or very familiar with Pasadena's park system, but 30% indicated that the Parks and Recreation Department was not effective at reaching them with information about parks and recreational opportunities. According to the Telephone Poll, almost 80% of Pasadena residents say that they are very or somewhat familiar with the parks, while just 20% say that they are not.

In both the Community Survey and the Telephone Poll, the most common sources of information about parks and programming were word of mouth and social media. The Telephone Poll indicated that Hispanic/Latinx respondents from primarily English-speaking households are much more likely to get information from social media than those in primarily Spanish-speaking households (53% versus 21%). Among the interviews that were conducted in Spanish, only 14% cited social media as a source of information about Pasadena parks. According to the Community Survey, Hispanic/Latinx residents were much more likely to get information from schools, and the highest income residents were much more likely than the lowest income residents to get information from program guides (24% versus 5%). All of this underscores the need for the Parks and Recreation Department to provide materials and social media outreach in Spanish.

4) Highest-Priority Park Amenities

Restrooms and drinking fountains are residents' highest priority park amenities, followed by playgrounds and pathways.

The Community Survey asked participants to rate park amenity options on a scale from 1 to 5, where "5" indicates that it is extremely important. Table 4-3 shows the top-rated combined amenities, facilities, and programming types. The highest priority amenities in the Community Survey were restrooms and drinking fountains, followed by playgrounds and pathways, then lighting for fields and courts along with more splash pads and water features, more pavilions for gathering, picnic areas/BBQs, and community swimming pools.

During the Phase 2 text-based engagement and Community Workshop, participants noted that picnic areas, benches, and drinking fountains are important for making parks good places to spend time with family and friends. Because of awareness of COVID-19 concerns during Phase 2, participants also mentioned that hand-washing stations are important.

Table 4-3. Highest-Priority Amenity Improvements (Community Survey)

Amenity Improvements	Average Rating
Cleaner restrooms	4.4
Better-maintained drinking fountains	4.3
Additional restrooms	4.1
Additional drinking fountains	3.9
Expanded/enhanced playgrounds	3.9
More paved pathways	3.8
Increased lighting for fields and courts	3.8
More splash pads and water features	3.7
Additional pavilions/covered spaces for gathering	3.6
Additional picnic areas and BBQs	3.6
More community swimming pools	3.5

Telephone Poll participants were given a list of twenty-nine things that could be done to improve the parks and recreational opportunities available in Pasadena. Just four improvements received a "very important" rating of 80% or more, including improved lighting, improved maintenance, and more drinking fountains and restrooms. Table 4-4 shows the combined community priority level for park amenities based on the Community Survey and Telephone Poll. In the first Community Workshop, soccer fields, nature trails, and a new park for people with disabilities also emerged as priorities.

Table 4-4. Park Amenities and Community Priority Level

Park Amenities	Priority
Restrooms	Highest
Drinking Fountains	Highest
Playgrounds	Highest
Paved pathways	Highest
Picnic areas and BBQs	High
Splash pads/water features	High
Pavilions/covered spaces for gathering	High
Basketball courts	High
Soccer fields	High
Unpaved trails	Medium
Community swimming pools	Medium
Dog Parks	Medium
Outdoor exercise equipment	Medium
Community centers/senior center	Medium
Softball/baseball fields	Medium
Fishing	Low
Mountain biking trails	Low
Tennis courts	Low
Volleyball courts	Low
Skateboard Parks	Low
Golf course	Low
Frisbee golf course	Low

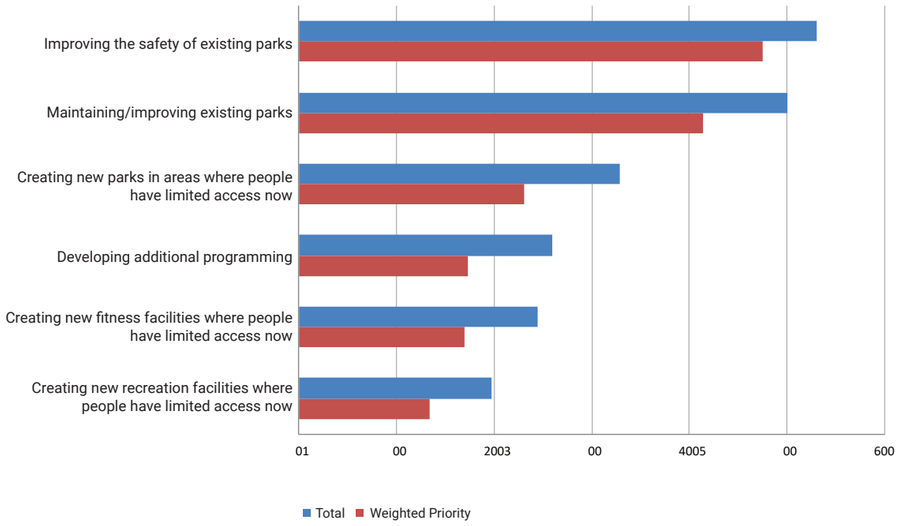
Table 4-5. Programming Priorities (Telephone Poll)

Rank	Programming Improvement	Percent Rated "Very Important"
6	More programming for children	75%
14	More aquatic programs such as swim lessons and water exercise programs	61%
16	More no-cost or low-cost recreational programs	58%
17	More programming for seniors	56%
18	More special events such as concerts in the park, festivals, movies and plays	53%
19	More no-cost or low-cost fitness programs	53%
20	More programming for non-senior citizens	52%
25	More fitness programs such as aerobics and yoga	41%

Table 4-6. Programming Priorities (Community Survey)

Programming Improvement	Average Rating (1-5)
More special events (concerts, festivals, movies, etc.)	3.9
More fitness programming (aerobics, yoga, etc.)	3.8
More aquatic programs (swim lessons, water aerobics, etc.)	3.7
More environmental/outdoor education programming	3.7
More programming for youth	3.5
More programming for adults	3.5

Figure 4-10. Priority Votes for Park Spending Priorities (Community Survey)



5) Highest Priorities for Park Programming

Expanding youth programming is the highest programming priority, followed by aquatics programming and special events.

> *"I wish we offered more organized/ group workout classes. I also wish we had water aerobics. That's my favorite way to work out, but the nearest class is in Deer Park during the summer and La Porte the rest of the year. I'd like to be able to go to a class closer to home year round."*
> *"The water park is expensive and a cheaper pool needs to be built in that area for those who can't afford the water park. They have been robbed of their local pool by being priced out."*
>
> *(Community Survey Participants)*
>
> *"Ojala tengamos mas eventos sobre la música y las artes"/"Hopefully we can have more events on music and the arts"*
>
> *(Community Survey Participant)*

There was some disagreement between the programming priorities identified in the Telephone Poll and the Community Survey. Because the Telephone Poll participants were not self-selected, those results were weighted more heavily in drawing the overall conclusion that expanding youth programming is the highest programming priority, followed by aquatics programming and special events.

The Telephone Poll found that the highest priorities for programming were (1) More programming for children; (2) More aquatic programs; (3) More no-cost or low-cost recreational programs; (4) More programming for seniors; (5) More special events such as concerts in the park, festivals, movies and plays; (6) More no-cost or low-cost fitness programs; and (7) More programming for non-senior adults. Increasing programming for children was ranked as a very important park and recreation improvement by 75 percent of respondents, especially those living in the north and central parts of the city, where more residents have children.

In the Community Survey, participants indicated that more special events, more fitness programming, more aquatic programs, and more environmental/outdoor education programming were the highest priorities. Forty-one percent of the respondents identified more aerobics and yoga as very important, indicating that this could be a successful niche program with a small but dedicated group of participants. Particularly around aquatics, community members were vocal about costs inhibiting their use of programs. Participants in Intercept Surveys and Speak-Outs emphasized the importance of events and family programming. Experts who took part in the Nature Focus Group argued for the importance of using Pasadena's parks for expanded outdoor education. Participants in the Phase 2 text-based engagement and Community Workshop proposed a wide range of smaller special events in parks from movies in the park and animal fairs to music festivals and gardening lessons.

6) Highest Priorities for Future Park Funding

Improving existing parks is the highest priority for park spending, followed by creating new parks and playgrounds.

The Community Survey asked respondents to rank their top priorities for park spending. The top priorities were improving the safety of existing parks, followed by creating new parks in areas where people have limited access now. Another question on the Community Survey asked participants to allocate spending among several options. On average, participants indicated that they would prefer to spend the most money on improvements to community parks, purchasing new land for parks, and playgrounds. Baseball and soccer fields, tennis courts, and the golf course were much lower spending priorities.



2019 Fall Festival at Madison Jobe
Source: pasadenatxphoto.net











5 Mapping Priorities

Mapping Process

Mapping important resources, hazards, demographic information, and health disparities was a key element of the Pasadena Healthy Parks Plan.

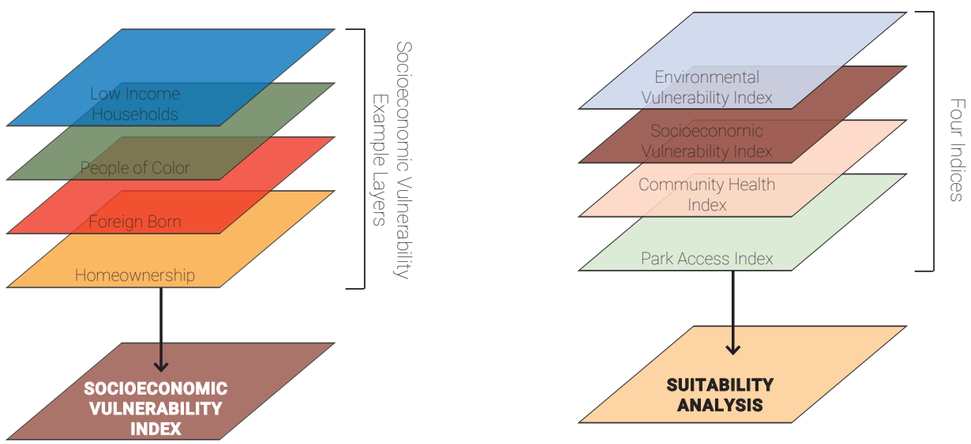
The Pasadena Healthy Parks Plan identifies priority areas for investments that will make its park system as healthy, welcoming, and accessible as possible—ensuring that Pasadena continues to thrive. The mapping team used Geographic Information Systems (GIS) and its spatial analysis tools to combine and prioritize available datasets, informed by community engagement, to identify these priority areas. Priority areas were determined based on four key indexes, which were then combined to create an overall priority map. The four indexes are:

1. **Socioeconomic Vulnerability:** Identifies areas where factors that contribute to socioeconomic vulnerability are high
2. **Community Health:** Identifies areas where community health disparities are high
3. **Environmental Vulnerability:** Identifies areas where environmental risks may be high and areas of high environmental value
4. **Park Need:** Identifies areas where close-to-home access to high-quality parks is low

The spatial analysis for the Healthy Parks Plan included much more than just an assessment of existing parks and recreation facilities. The analysis used a framework based on social and environmental determinants of health. This framework recognizes that there are a variety of factors beyond personal choices that impact health outcomes. These include socioeconomic and cultural factors, the built environment, access to health care, and vulnerability to environmental hazards. Using this framework, the mapping team worked with the Advisory Committee to identify over 50 variables, which were then grouped into the four indexes: Socioeconomic Vulnerability, Community Health, Environmental Vulnerability, and Park Access.

Within each index, datasets were standardized, weighted, and "stacked" together. Each of the indexes was then combined/stacked to create an overall final map that identifies priority areas for park investments. Figure 5-1 illustrates the stacking process. In addition to maps highlighting the indexes, this section also includes some maps highlighting key variables in each index to provide context.

Figure 5-1. Mapping Process



Mapping Results

This chapter explains each of these indexes along with the resulting map. The Socioeconomic Vulnerability map shows where there are higher concentrations of residents who have the greatest need for the benefits provided by parks based on socioeconomic factors. The Community Health map shows where new parks and park amenities could do the most to address health inequities. The Environmental Vulnerability index is shown as two maps. The Environmental Value map shows where sensitive resources should be protected or tree canopy should be enhanced, and the Environmental Risk map shows where active recreation should be avoided (for example, because of potential exposure to air pollution). Finally, the Park Access map shows where residents, especially children and low-income community members, currently have the least close-to-home access to high-quality parks.

The development of these indexes and maps was guided by the Advisory Committee and a data-focused subcommittee of the Advisory Committee. The Advisory Committee was made up of 43 community members and experts representing 32 local, regional, and national agencies and organizations. These organizations included Harris County Public Health, Texas Parks and Wildlife Department, Houston Advanced Research Center, Houston-Galveston Area Council, Harris County Flood Control District, Pasadena Planning Department, American Heart Association, Urban Harvest, The University of Texas MD Anderson Cancer Center/ Pasadena Vibrant Community, and Houston Endowment. (See the preface at the beginning of this report for a full list.)

The mapping process for the Healthy Parks Plan was highly iterative. The datasets, indexes, and maps were informed, ground truthed, and prioritized by the Advisory Committee, a data subcommittee, and by the mapping team based on extensive input from community members. The larger community informed the mapping process through a Telephone Poll, Online Survey, Speak-Outs and Intercept Surveys, Interviews, Focus Groups, and two Community Workshops. For example, priority amenities were identified through the surveys, which were then utilized in the Park Access Map, which is explained in the methodology below.

Socioeconomic Vulnerability Index

Socioeconomic characteristics like income, linguistic isolation, and homeownership rates can influence health outcomes. Income, for example, is an indicator of the range of options a community member might have when it comes to their health care resources and access to high-quality, healthy food. Each of the variables in this index indicates a direct or indirect influence on overall health. In 2018, Pasadena had a median household income of $53,331 and a poverty rate of 17.7%.[100] Harris County overall had a median household income of $60,146 and a poverty rate of 16.5%.[101] Over 51% of Pasadena residents were cost burdened, meaning they spent more than 30% of their income on housing.[102] Figure 5-3 shows low-income residents in Pasadena by census tract.

The datasets in this index are measured at the census tract level. The Advisory Committee elected to restrict analysis to each tract's residential areas in order to provide a more nuanced view of socioeconomic vulnerability.

Our mapping results shown in Figure 5-2 indicate that residential areas in northwest Pasadena have high socioeconomic vulnerability. Studies have shown that close-to-home access to parks and green space improves physical and mental health outcomes for everyone, but especially for socioeconomically vulnerable community members. Access to parks gives residents more options for physical activity, improves environmental conditions, reduces stress, and supports stronger social connections. All of these benefits are particularly critical for socioeconomically vulnerable residents.

Table 5-1. Socioeconomic Vulnerability Data[103]

Socioeconomic Vulnerability Demographic Data		
Layer Name	**Description**	**Weight[i]**
Low income households	Identifies vulnerable populations based on the percent low income households in a census tract.	20.3%
Less than high school education	Identifies vulnerable populations based on the percent of people age 25 and older in a census tract that do not have a high school diploma.	11.7%
Disconnected Youth	Identifies vulnerable populations based on the percent of youth (16-19) who do not have a high school diploma, and are unemployed and not in the labor force in a census tract.	10.2%
Single Parent Households	Identifies vulnerable populations based on percent of single parent families (with own children under the age of 18) in a census tract.	10.2%
Linguistic Isolation	Identifies vulnerable populations based on the percent of people in a block group living in linguistically isolated households. A linguistically isolated household is a household in which all members age 18 years and over speak a language other than English and also speak English less than "very well".	9.4%
People of color	Identifies vulnerable populations based on the percent of total population in a tract that are not white, plus are hispanic or Latinx of any race.	7.0%
Population under age 19	Identifies vulnerable populations based on percent of people in a census tract under the age of 19.	6.3%
Populations with disabilities	Identifies vulnerable populations based on the percent of total civilian non-institutionalized population in a tract that has a disability.	6.3%
Households without cars	Identifies vulnerable populations based on the percent of occupied housing units with no car available.	6.3%
Population over age 64	Identifies vulnerable populations based on percent of people in a census tract over the age of 65.	3.9%
Homeownership	Identifies vulnerable populations based on the percent of renter households in a census tract.	3.1%
Population under age 5	Identifies vulnerable populations based on percent of people in a census tract under the age of 5.	3.1%
Foreign Born	Identifies vulnerable populations based on the percent of populations who are foreign born in a census tract.	2.3%

i Each weighting is based on how many people out of a 28 person advisory committee found this variable among their top 5 priorities.

Figure 5-2. Socioeconomic Vulnerability Map[104]

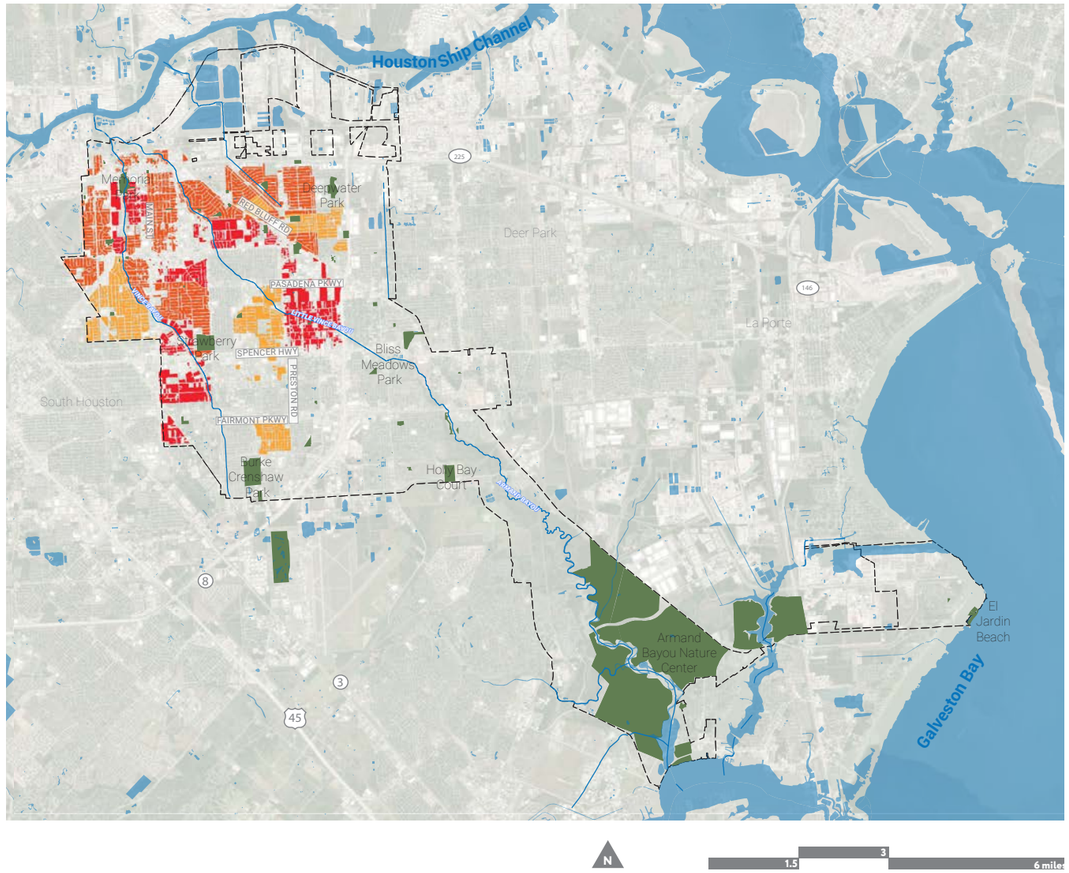
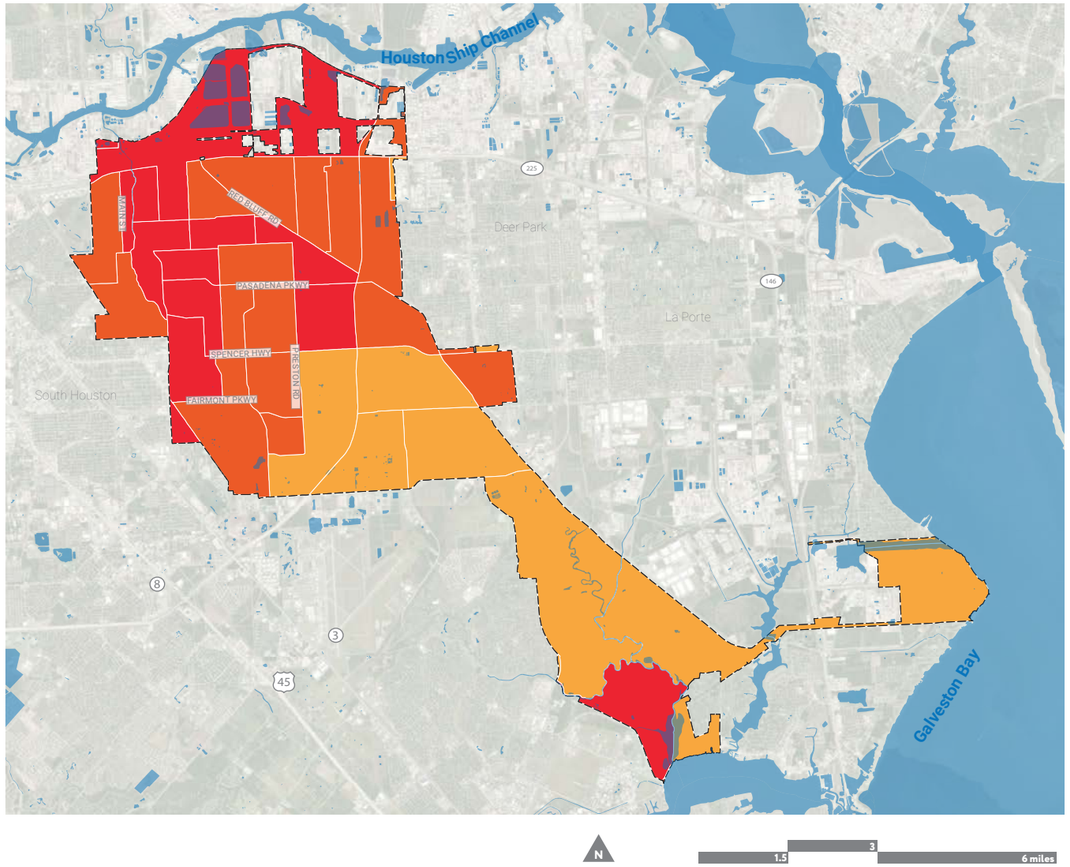


Figure 5-3. Percentage of Low-Income Residents[105]



LEGEND

- 42.8 - 61.9%
- 23.7 - 42.8%
- 4.70 - 23.7%
- Water
- City Boundary

Community Health Index

Poor health outcomes are often the result of many different social determinants of health. Factors that negatively impact health outcomes include economic vulnerability, social isolation, barriers to accessing health care resources and healthy food, exposure to environmental hazards, and lack of access to parks and green space. Residents living close to parks and green space have been shown to have lower rates of major diseases including heart disease, diabetes, and asthma.[106] These factors are reflected in part in the Socioeconomic Vulnerability, Environmental, and Park Access Indexes but are worth mentioning here regarding their clear connection to health outcomes highlighted in this section. In Pasadena, 32.4% of adults are uninsured, 14% have asthma, and 66% are overweight. The overall percentage of adults with a chronic disease is 23.2% in Pasadena and 14.4% in Harris County.[107] Figure 5-5 shows an example of Pasadena's Heart Disease by Census Tract.

The Health Insurance Portability and Accountability Act (HIPAA) prevents health data from being shared at the residential scale to preserve privacy. Therefore, the health data used for this analysis is at the census tract level. Like the Socioeconomic Vulnerability map, the analysis was restricted to residential areas of Pasadena.

Our Community Health mapping results in Figure 5-4 show that the highest vulnerability areas are in the northern portion of Pasadena with some moderate vulnerability areas to the south of Armand Bayou Nature Center.

Table 5-2. Community Health Data[108]

Community Health Index Health Data		
Layer Name	**Description**	**Weight[i]**
Obesity	Annual prevalence of adults who have a body mass index (BMI) ≥30.0 kg/m² calculated from self-reported weight and height.	14.3%
Mental Health	Annual prevalence of adults who report 14 or more days during the past 30 days during which their mental health was not good.	13.6%
Food Access	Identifies vulnerable areas based on areas that fall beyond 1 mile away from a supermarket.	10.7%
Asthma	Annual prevalence of asthma among adults.	10.0%
Diabetes	Annual prevalence of adults with diabetes.	10.0%
Running and Cycling Data	Identify drops in pedestrian and bicycle trips per day as temperatures increase, indicating a behavior change correlated with heat.	10.0%
Health Insurance	Adults who reported not having health insurance.	6.4%
Cancer (Except Skin)	Biennial prevalence of non-skin cancer.	5.0%
Coronary Heart Disease	Annual prevalence among adults with angina or coronary heart disease.	3.6%
High Blood Pressure	Biennial prevalence of high blood pressure.	2.9%
Heat Exposure	Identifies areas based on the number of days that the heat index was higher than 108 by census tract.	2.9%
High Cholesterol	Biennial prevalence of people with high cholesterol of all people who reported having their cholesterol checked in the past five years.	2.1%
Sleep <7 Hours	Annual prevalence of adults who report usually getting insufficient sleep (<7 hours for those aged ≥18 years, on average, during a 24-hour period).	2.1%
Vacant Lot Density	Identifies vulnerable populations based on proximity to a high density of vacant land, prioritized based on land uses.	2.1%
Chronic Kidney Disease	Annual prevalence of chronic kidney disease among adults.	0.7%
COPD	Annual prevalence among adults of those with chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis.	0.7%
Stroke	Annual prevalence of adults who have had a stroke.	0.7%
Binge Drinking	Annual Prevalence of adults who report having five or more drinks (men) or four or more drinks (women) on an occasion in the past 30 days.	0.7%
Current Smoking	Annual prevalence of adults who report having smoked ≥100 cigarettes in their lifetime and currently smoke every day or some days.	0.7%
Air Quality	Identifies areas based on census tracts with high ozone and pm25.	0.7%

i Each weighting is based on how many people out of a 28 person advisory committee found this variable among their top 5 priorities.

Figure 5-4. Community Health Map[109]

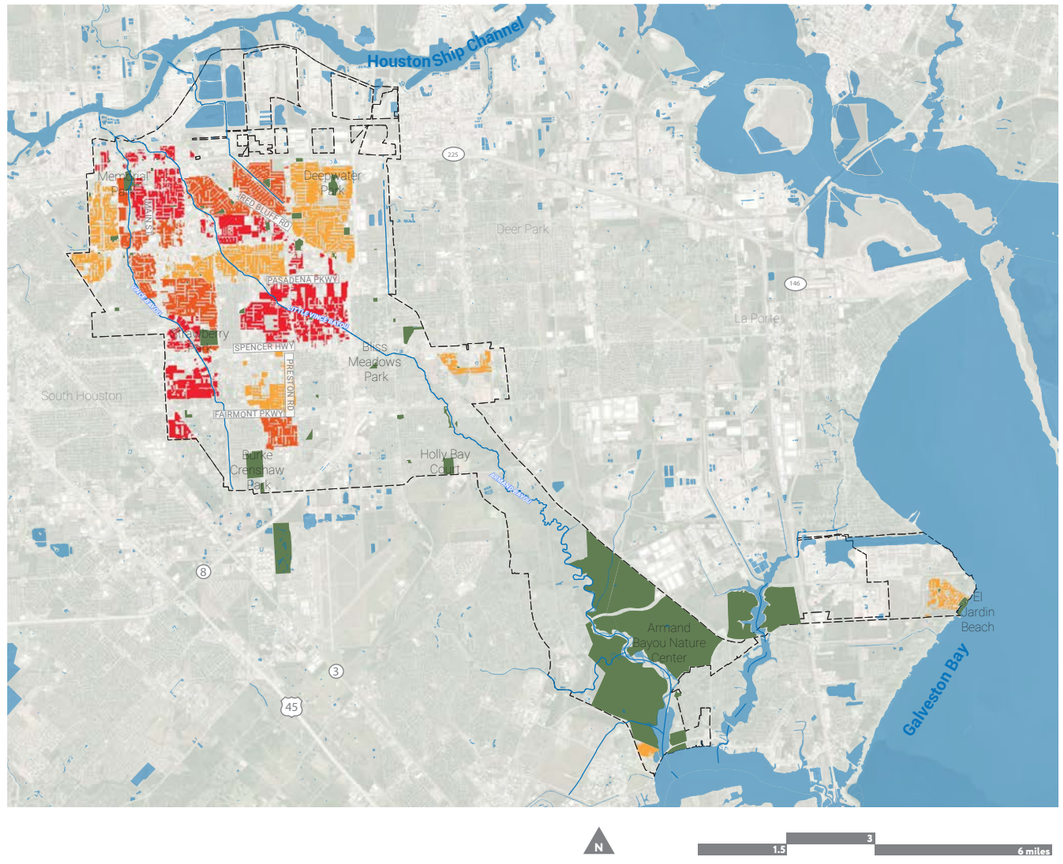
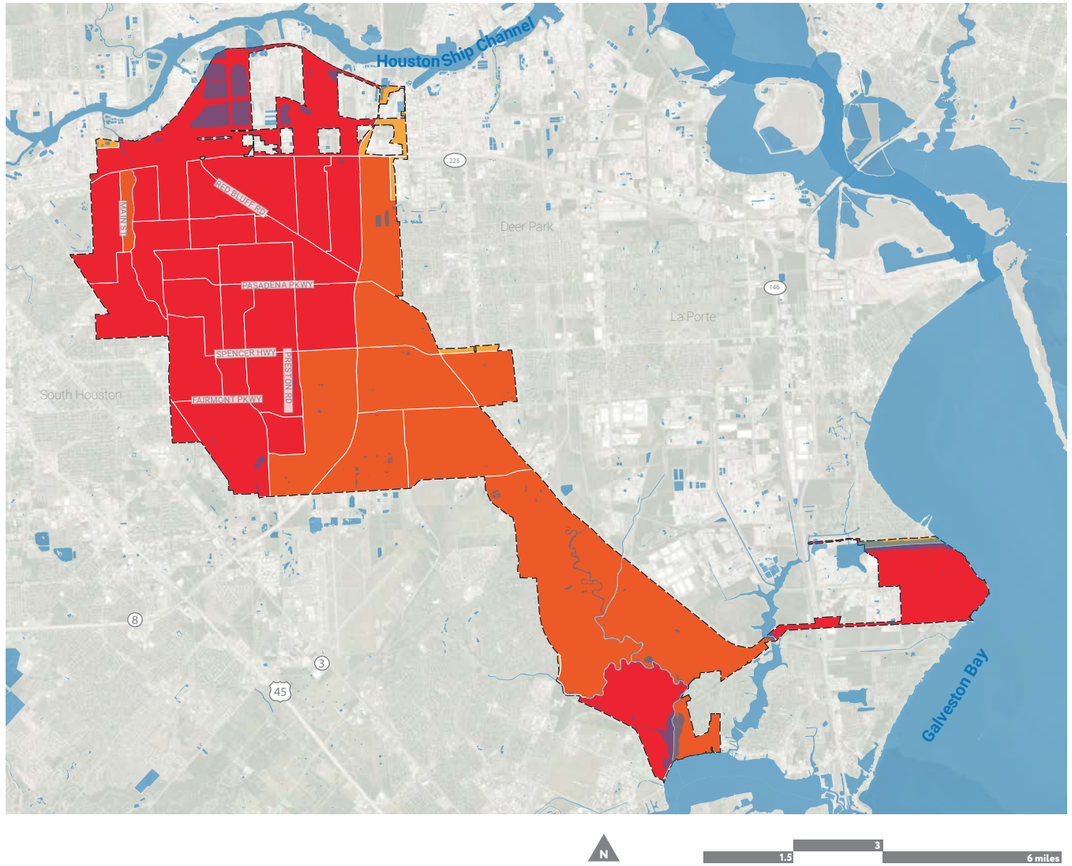




Figure 5-5. Percent of Residents with Heart Disease[110]



LEGEND

- 6.8 - 8.4%
- 4.5 - 6.8%
- 3.7 - 4.5%
- Water
- Census Tracts

Environmental Indexes

Environmental conditions impact not only the ability of community members to spend time in parks, but also the quality of that experience. Poor air quality, flooding, and excessive heat create conditions that make it difficult or even dangerous to be outside. Tree canopy cover provides relief from heat as well as creating wildlife habitat and reducing greenhouse gases. In addition, environmentally sensitive areas such as wetlands and habitat corridors and refuges are also vital parts of a healthy ecosystem for both humans and wildlife. Healthy ecosystems and protected natural areas provide opportunities for humans to connect with nature in ways that are not possible in more disturbed contexts. Studies show that opportunities to connect to nature reduce stress and improve mental and physical health.[111] Figure 5-7 shows Pasadena's Urban Heat Island map.

The Environmental indexes are a combination of two elements: Environmental Risk and Environmental Value.

Environmental Risk

Park investments in environmental risk areas should be taken cautiously and proactively, because an improvement can reduce the park's overall risk, but it can also disturb natural features like habitat, or it can be located too closely to a hazardous site. A park next to a creek might be beautiful, but if it is designed improperly it can substantially disrupt the local ecology.

The following is an example of how environmental risk was analyzed:

- A 200-foot buffer around truck routes and highways was created because sites that fall within the buffer put people at a higher risk of exposure to pollutants. In these areas, investments should prioritize vegetative buffers to mitigate pollution, and passive recreation, rather than active recreation opportunities where participants are at higher risk of being impacted by poor air quality.[112]

The Environmental Risk map reflects high risk along interstates and riparian areas, as well as industrial areas near El Jardin Beach. Bliss Meadows Park, Strawberry Park, and Holly Bay Court are in high risk areas. Investments here should prioritize improvements that can mitigate exposure to the relevant types of environmental risks—for the site and for users.

Environmental Value

Ideally, park investments in areas with high environmental value will create a symbiotic relationship between the park and its valuable environmental features. In some cases, that may mean not developing some parkland because its environmental resources are too sensitive. In other cases, sites may be designed to integrate and protect sensitive areas like riparian zones or to enhance tree canopy.

The following is an example of how environmental value was analyzed:

- A 200-foot buffer was created around wetlands, bayous, and streams in order to prioritize riparian areas as ideal locations for preservation and nature-based recreation.

The Environmental Value map reflects high value areas along streams and bayous, as well as low-tree coverage areas near El Jardin Beach. Deepwater Park and Memorial Park are in high value areas.

Table 5-3. Environmental Vulnerability Data[113]

Environmental Vulnerability Indexes Ecology and Hydrology Data		
Environmental Risk		
Layer Name	**Description**	**Weight[i]**
Flood Zone	Identifies areas that are in floodways, the 100-year floodplain, and the estimated 100-year floodplain (current 500-year floodplain). Estimates are based on FEMA flood zone classifications.	20.0%
Truck Routes and Highways	Identifies areas that are within a 200 foot buffer around truck routes and highways	12.9%
Poor Water Quality	Identifies areas that have been found to have reduced water quality.	11.4%
Superfund Sites	Identifies areas that are within a 500 foot buffer of a superfund site	7.1%
Soil Contamination	Sites with soil and groundwater contamination from industrial and municipal hazardous and industrial non-hazardous wastes.	7.1%
Heat Islands	Identifies sites that are higher in temperature than the average temperature of the study area.	5.7%
Erosion Potential	Identifies areas of high erosion potential based on current degree of erosion	2.9%
Sea Level	Sea level projection data that identifies which places in Pasadena will become inundated with water.	0.7%
Industrial Facilities	Identifies areas that are within a 500 foot buffer of industrial facilities	0.7%
Environmental Value		
Tree Canopy Cover	Identifies sites that have a high density of tree canopy .	9.3%
Wetlands	Identifies areas that are within a 200 foot buffer of wetlands.	5.7%
Streams and Bayous	Identifies areas that are within a 200 foot buffer of streams and bayous .	5.7%
Species Richness	Identifies areas of Pasadena with high biodiversity.	4.3%
Light Pollution	Identifies sources of light pollution and prioritizes low light pollution areas.	3.6%
Habitat Map	Identifies potential habitat patches and corridors including right-of-ways, vacant land, park trails, and vegetative data.	2.9%

i Each weighting is based on how many people out of a 28 person advisory committee found this variable among their top 5 priorities.

Figure 5-6. Environmental Risk Map[114]

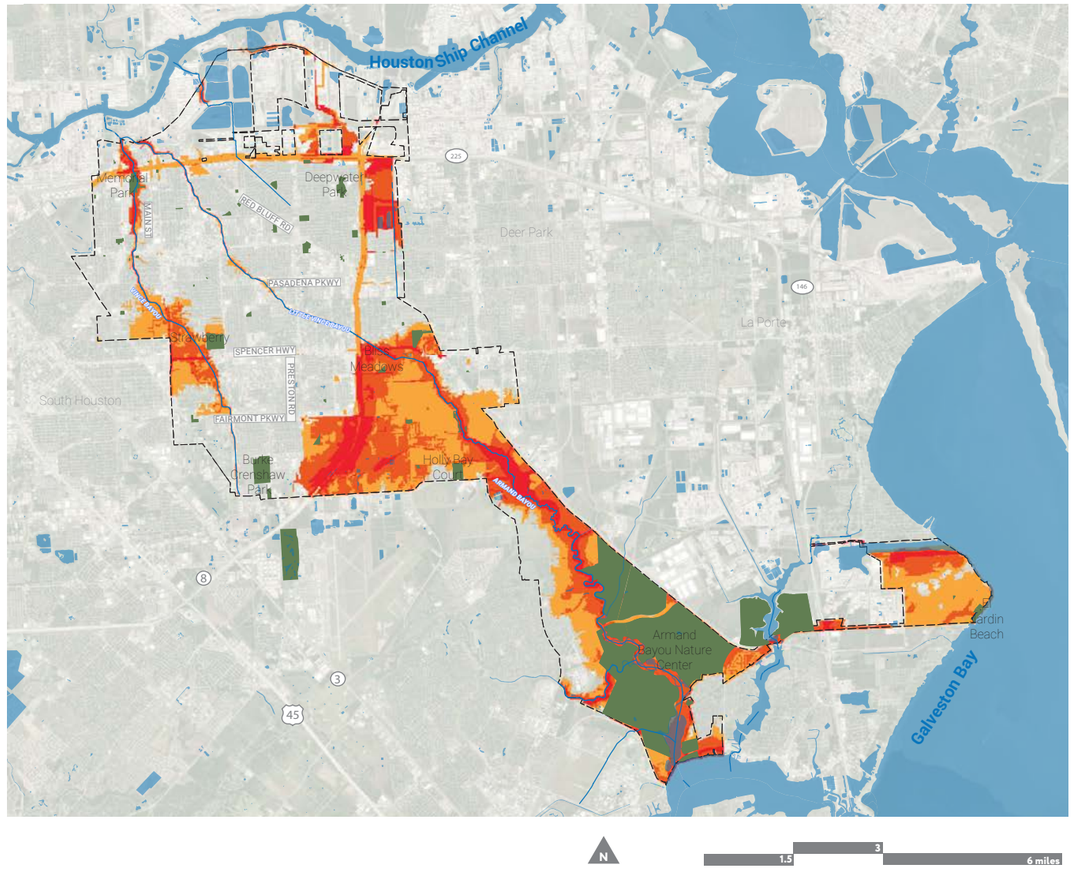
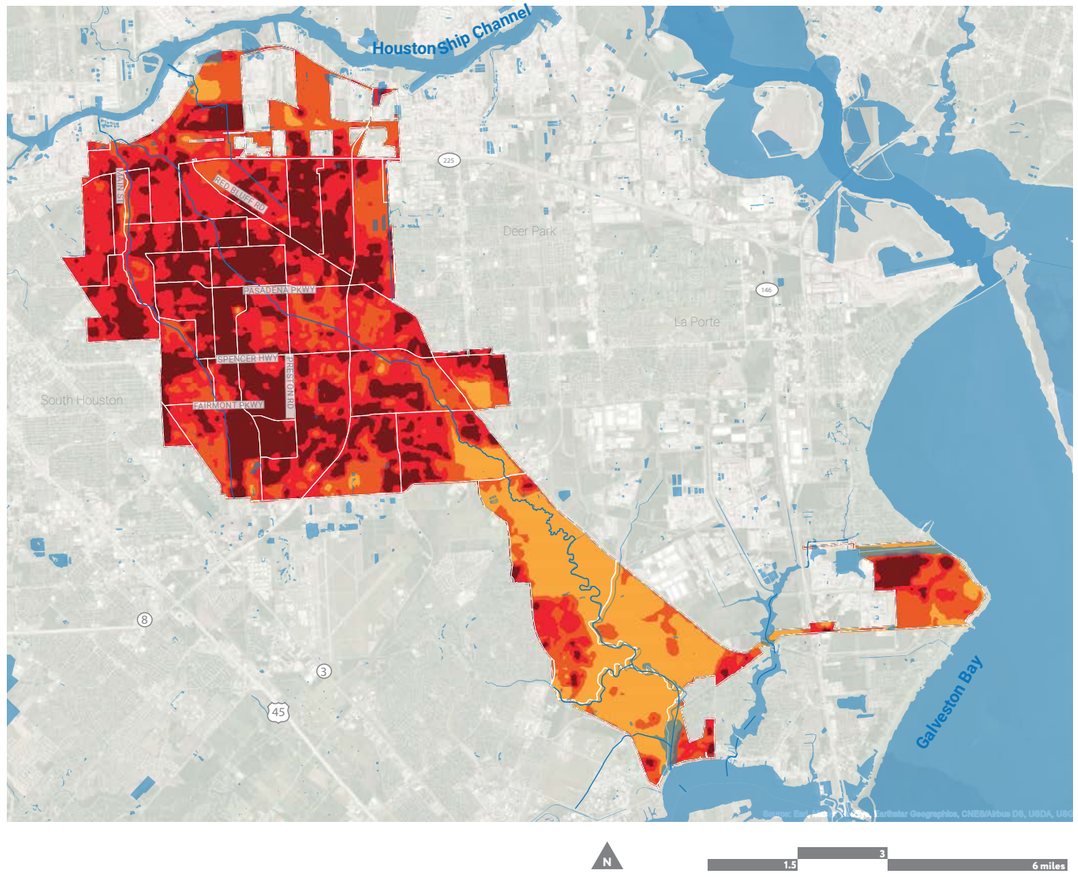




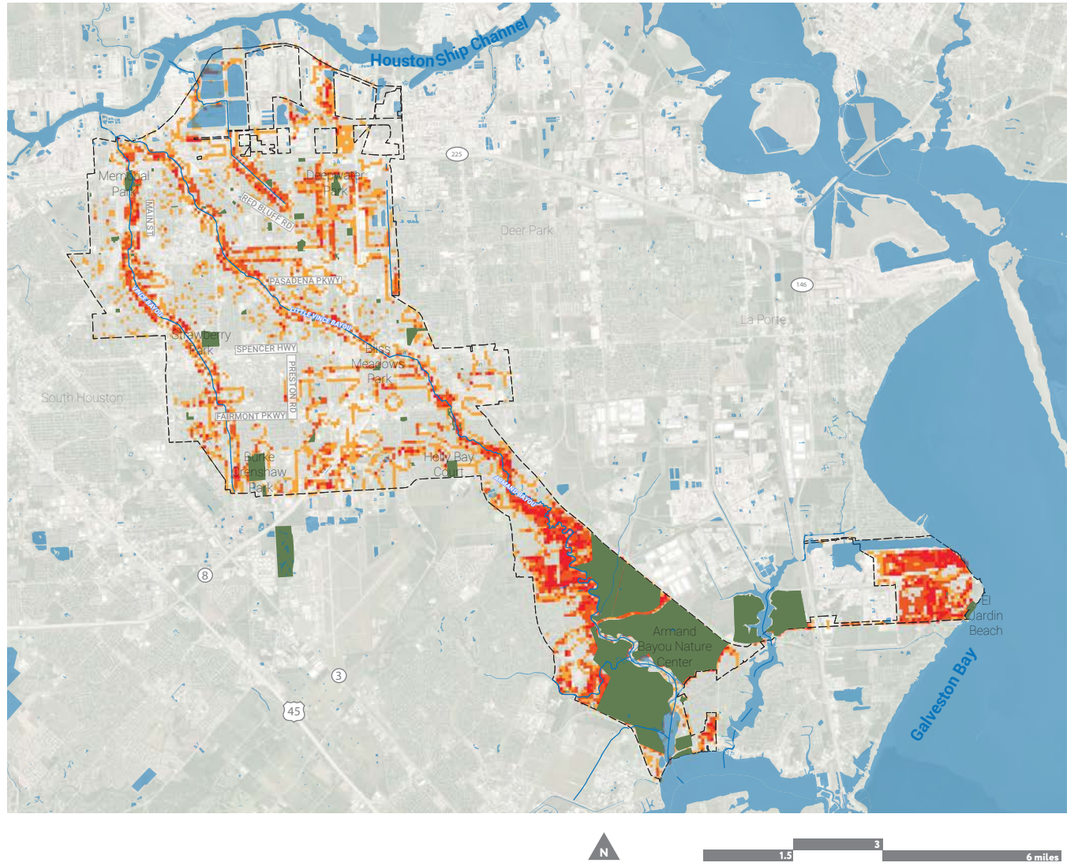
Figure 5-7. Urban Heat Island Map[115]



LEGEND

- 81-93 Degrees (F)
- 77-81 Degrees (F)
- 74-77 Degrees (F)
- 68-74 Degrees (F)
- Water
- City Boundary

Figure 5-8. Environmental Value Map[116]



LEGEND

Value

- Very High
- High
- Moderate
- Water
- Park
- City Boundary

Park Access Index

As described previously, access to parks directly impacts health. The availability of high-quality parks and safe accessible routes to these parks determine whether community members can experience the physical and mental health benefits of parks.

Sidewalks and local roads are important for providing pedestrian access to parks, especially for community members without cars. Currently, fewer than 54% of Pasadena residents live within a 10-minute walk of a park.[117] Even in areas within a 10-minute walk, safe pedestrian accessibility may still be an issue. Additionally, Pasadena has only very limited public transportation provided by Harris County.

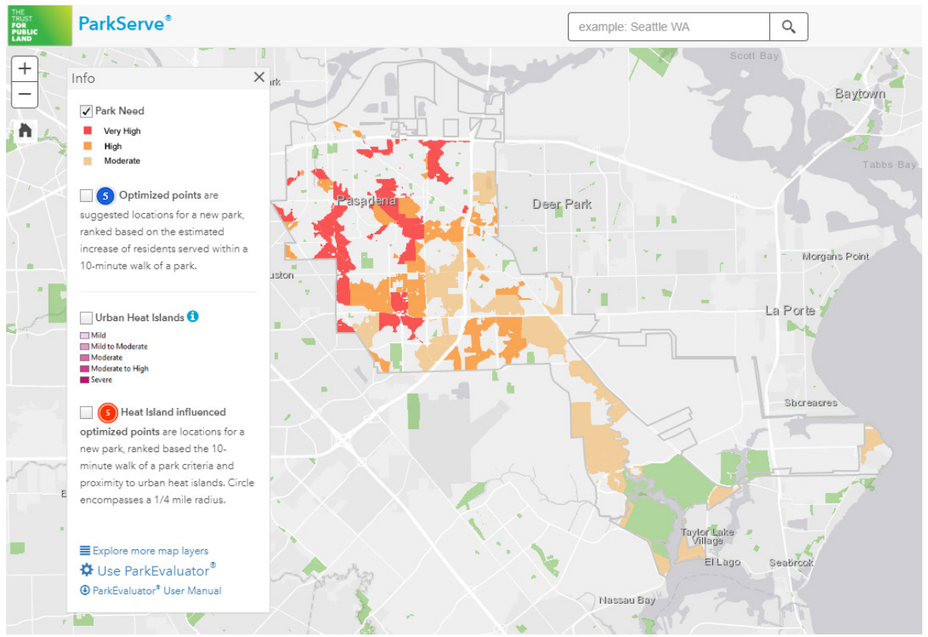
The Park Access Index is a combination of variables that are important for examining park access in Pasadena. This analysis uses The Trust for Public Land's (TPL) ParkServe (https://www.tpl.org/parkserve) methodology as a starting point. ParkServe is an online tool that assesses the percentage of the population that lives within a 10-minute walk of a park in over 14,000 cities and towns throughout the United States.

ParkServe Approach. For each park, ParkServe generates a 10-minute walk service area or "walkshed" using a walkable road network dataset. A person who lives in one of these 10-minute walksheds is considered to have good close-to-home park access.[118] All populated areas that fall outside of a 10-minute walkshed are assigned a level of park need, based on a weighted calculation of three demographic variables: population density, density of children age 19 and younger, and density of households with income less than 75% of the regional median household income.

Healthy Parks Plan Approach. The Park Access map builds on TPL's ParkServe methodology to provide a more nuanced assessment of barriers to park access—and the types of parks and amenities that residents can easily access. That is, this analysis looks not just at the 10-minute walkshed, but how safe that walk is, and what kinds of parks residents are able to access. This analysis starts with half-mile walksheds for each park[x]. However, unlike in the ParkServe approach, this analysis does not completely exclude the areas that fall within that walkshed because there are other variables in Pasadena that are important to analyze even within these areas. For example, because Pasadena's sidewalk network is relatively limited, this analysis identifies areas where gaps in sidewalk infrastructure would restrict access, especially for residents such as parents pushing strollers or people who use wheelchairs.

x Owing to a lack of comprehensive data, rather than developing a 10-minute walkshed, we developed a half-mile walkshed, which is generally the average distance it takes a person to walk 10 minutes (see Naismith's rule).

Figure 5-9. ParkServe Map



Also like ParkServe, this analysis incorporates population density, percentage of children age 19 and younger, and percentage of low-income households. Socioeconomic variables like income and age reflect potential limitations on access. For example, it is more likely that people under 19 or people from low-income households may not have access to a personal vehicle and would need to rely on biking or walking to get to parks. Young residents and low-income residents are also likely to benefit most from many of the resources provided by parks.

Park type also plays a role in the Park Access map. Across Pasadena, there are parks of different sizes and with different functions. Table 5-4 lists the different park typologies and their respective service areas. This park typology is described in more detail in Chapter 3.

Service areas, which are dependent on park typology, increase in distance because more residents are served as park acreage increases and park amenities increase. Each park service area was not created by using its center point or boundary, but rather, they were built based on "access points"— the actual locations where residents are likely to enter a park. For the purpose of this analysis, access points were created at the intersection of the road network and the park's 60 foot buffer. The results from this methodology produce numerous service areas, and these service areas will overlap with each other. For example, some residents may live within one service area, and others may live within multiple. The more service areas that overlap, the higher level of park access that a resident has to parks (see Figure 5-10). Areas that fall outside multiple service areas, or outside of any at all, are prioritized as having the greatest park need.

While the bulk of this analysis considered physical access to parks, there are additional factors that influence accessibility to parks. Private parks managed by homeowners associations (HOAs) and schoolyard parks that are accessible to the public outside of school hours, for example, were given a lower access weighting because they have access limitations compared with traditional public parks. In addition, population density, sidewalk availability, and road classifications were analyzed as they provide a more nuanced analysis of park access.

The following criteria breaks down the variables analyzed and how they were prioritized within the Park Access Map:

1. **Walking:** A half-mile walkshed was generated for all parks in the analysis regardless of park typology.
2. **Walking and Driving:** A half-mile walkshed was generated for pocket and neighborhood parks. Community, regional, and regional plus parks were analyzed using service areas that reflected the associated driving distances to each.
3. **Park Amenities:** Through a telephone poll and online survey, residents of Pasadena prioritized restrooms, drinking fountains, playgrounds, pathways, and pavilions as highly desired amenities, which received a half-mile walkshed in the analysis. These amenities received walksheds because they are highly prioritized amenities.
4. **Population Density:** Population density can indicate whether a park is overcrowded, as well as the quality of amenities. High preference for park investment is given to areas where population density is higher.
5. **Active Transit Accessibility:** Road classifications and sidewalk availability greatly impact park access because they create safe or hazardous travel conditions. Areas with local roads (small right of way and slower speed limits) and where sidewalks are present were given higher priority for park investment, so that investment is not directed near highways or low sidewalk connectivity.
6. **Socioeconomic Variables:** Preference was given to park investments in areas with a higher percentage of low-income residents and residents under age 19.

Table 5-4. Park Typology

Park Type	Acreage	Service Area
Pocket	<1	0.25 miles
Neighborhood	1-15	0.5 miles
Community	15-30	2 miles
Regional	30-200	5 miles
Regional +	200+	10 miles
Linear Parks		

Figure 5-10. Service Area Overlap Methodology

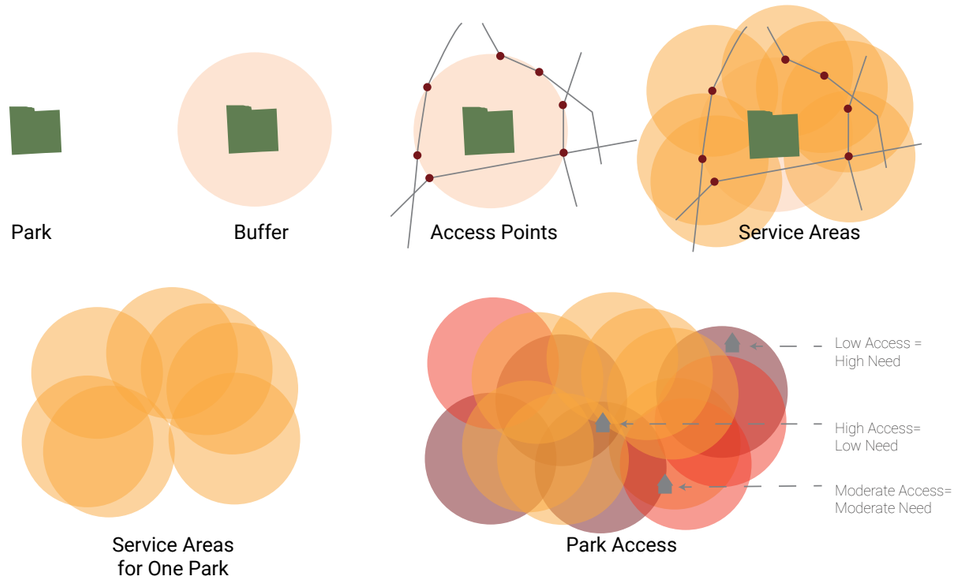
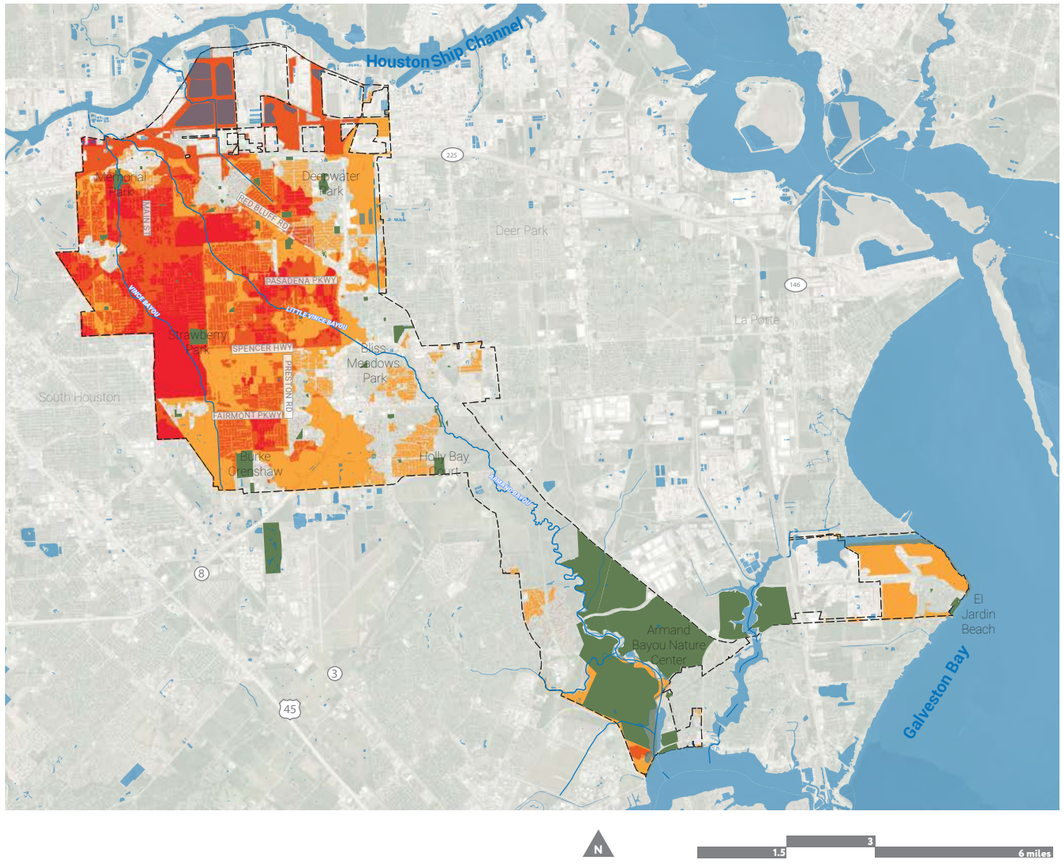


Table 5-5. Park Access Data[119]

Park Access Index		
Layer Name	**Description**	**Weight**
Walking: All Public Parks	Half-mile walkshed generated regardless of park type.	20%
Park Service Areas	Half mile walkshed generated for pocket and neighborhood parks. Driving for community, regional, and regional+.	15%
Sidewalk Availability	Used as part of network to determine gaps in access	12.5%
Population Density	Population data that is clipped to residential parcels to determine density and then normalized across data	10%
Road Classifications	Identifies the different road classifications, with arterial, collector, and local roads ranked from worst to best.	10%
Walking: School Parks	Half-mile walkshed for all school parks located in Pasadena	7.5%
Low income households	Identifies vulnerable populations based on the percent low income households in a census tract.	7.5%
Population under age 19	Identifies vulnerable populations based on percent of people in a census tract under the age of 19.	7.5%
Walking: HOA Parks	Half-mile walkshed for all ll homeowner's association parks located in Pasadena	5%
Amenities	Amenities have been included based on the top 4 amenities (restrooms, pathways, playgrounds, and pavilions) indicated on the online survey and telephone poll.	5%

Figure 5-11. Park Access Map[120]



Overall Map Priorities

The overall priorities map shows areas across the four indexes with the highest need for park investments. Investments in these areas would create the greatest potential for multiple, stacked benefits across health, equity, and environmental goals.

The four indexes were not prioritized equally. The Advisory Committee assigned the following weightings for each index based on their knowledge of the City of Pasadena and what they believed to be most impactful within this specific context:

- Environmental Vulnerability received 22%
- Socioeconomic Vulnerability received 27%
- Community Health received 26%
- Park Access received 24%

The areas of highest need are in the northwestern area of Pasadena. There are some areas of moderate need surrounding El Jardin Beach and the southern portion of Armand Bayou.

Parks owned by the City of Pasadena were assigned values based on where they fell within the moderate to high need areas of the overall priorities map. The entirety of the City of Pasadena, excluding heavy industrial areas, has been assigned values grouped into the following five categories: very high need, high need, moderate need, low need, and very low need. The map above highlights the areas in the three highest priority categories. Below are the number of parks that are within areas of moderate or higher need. For the full park list and their scores, please see Table 5-6.

- 3 parks within very high need areas
- 7 parks within high need areas
- 13 parks within moderate need areas
- 24 parks within areas below moderate need

The Overall Priorities map informed a selection of the top ten priority parks These parks were assessed in-depth to collect data on the quality of the parks and their amenities. More information about those assessments and more detailed recommendations for improvements can be found in Chapter 7 and 9. The Overall Priorities map also informed the Priority Sites for New Parks map in Chapter 7.

Figure 5-12. Overall Priorities Map[121]

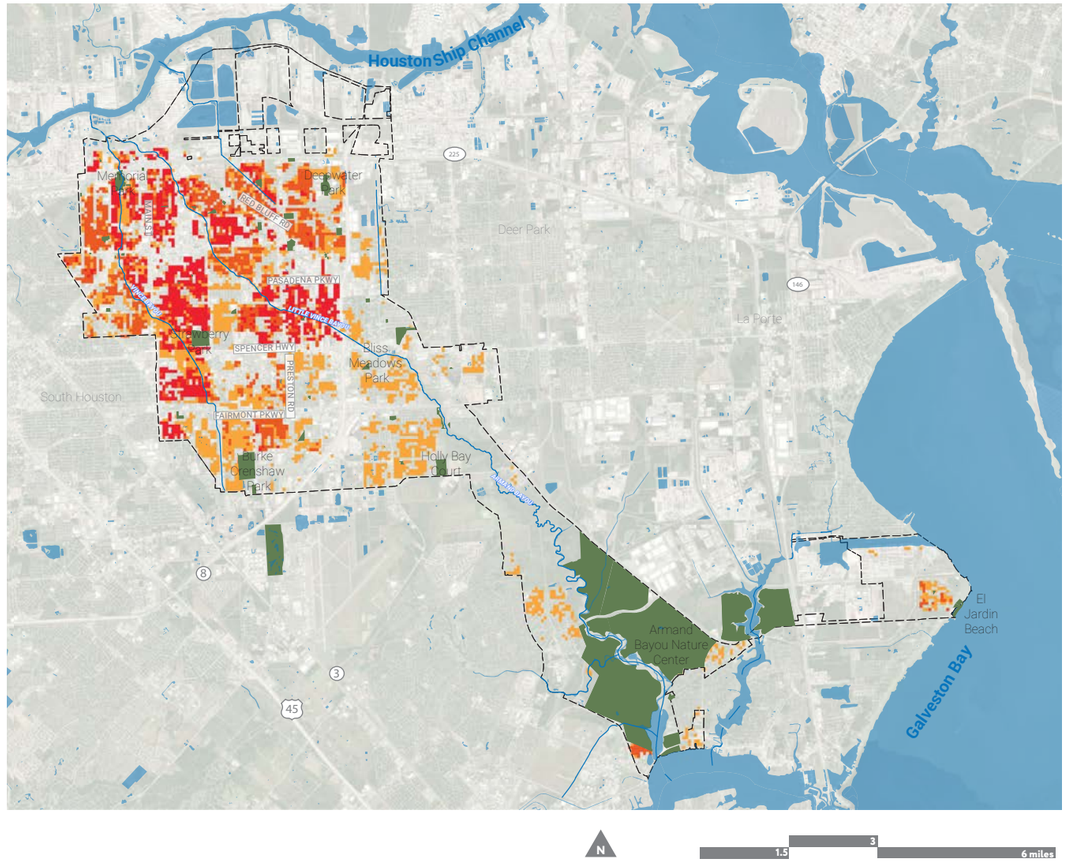




Table 5-6. Park Prioritization

	Park	Priority Level	Priority Value	Acreage	Park Type
1	Parklane Play Lot	Very High	4.2	1.2	Neighborhood
2	Strawberry Park	Very High	4.0	47.9	Regional
3	Memorial Park	Very High	3.8	29.6	Community
4	Sherwood Park	High	3.3	0.7	Pocket
5	Tatar Park	High	3.2	0.5	Pocket
6	Oaks Park	High	3.2	0.6	Pocket
7	Light Company Park	High	3.2	0.1	Pocket
8	Golden Acres Park	High	3.1	1.8	Neighborhood
9	Satsuma Park	High	3.1	5.9	Neighborhood
10	Revlon Park	High	3.0	4.0	Neighborhood
11	Gardens Park	Moderate	2.8	1.4	Neighborhood
12	Crane Park	Moderate	2.7	0.5	Pocket
13	Bliss Meadows Park	Moderate	2.4	5.1	Neighborhood
14	Sunset Park	Moderate	2.3	6.3	Neighborhood
15	Highlands Park	Moderate	2.3	1.5	Neighborhood
16	East Southmore Park	Moderate	2.3	13.4	Neighborhood
17	Community Park	Moderate	2.2	1.8	Neighborhood
18	Ghana Park	Moderate	2.2	0.1	Pocket
19	El Jardin Beach	Moderate	2.1	4.3	Neighborhood-HOA
20	El Jardin Park	Moderate	2.1	4.3	Neighborhood-HOA
21	Ashley Weiss	Moderate	2.1	1.2	Neighborhood-HOA
22	Red Bluff Park	Moderate	2.0	6.9	Neighborhood
23	Rusk Park	Low	2.0	1.5	Neighborhood
24	Yellowstone Park	Low	1.9	6.8	Neighborhood
25	Barronride Park	Low	1.9	5.4	Neighborhood-HOA
26	Deepwater Park	Low	1.7	25.3	Community
27	Village Grove North	Low	1.7	4.7	Neighorhood-HOA
28	Baywood Oaks	Low	1.4	2.0	Neighborhood-HOA
29	Holly Bay Park	Low	1.4	30.1	Regional
30	Bramley Park	Low	1.3	1.5	Neighborhood
31	Sunrise Meadows Park	Low	1.2	2.5	Neighborhood
32	Vermilion Park	Low	1.2	1.1	Neighborhood
33	Friendship Gardens	Low	1.1	0.4	Pocket

Table 5-6. (continued) Park Prioritization

	Park	Priority Level	Priority Value	Acreage	Park Type
34	Ben Brier	Low	1.1	7.5	Neighborhood
35	Parkview Park	Very Low	0.9	3.6	Neighborhood
36	Village Grove East	Very Low	0.9	1.6	Neighborhood-HOA
37	Olson Park	Very Low	0.7	0.8	Pocket
38	Bowling Green Park	Very Low	0.7	0.5	Pocket
39	Big Island Slough	Very Low	0.7	3.0	Neighborhood
40	Burke Crenshaw Park	Very Low	0.4	77.5	Regional
41	Multipurpose Center and Park	Very Low	0.4	6.6	Neighborhood
42	Pine Park	Very Low	0.2	2.8	Neighborhood
43	Fairmont Park	Very Low	0.2	6.0	Neighborhood
44	Cascade Park	Very Low	0.2	0.5	Pocket
45	Parkgate Park	Very Low	0.2	1.3	Neighborhood
46	Queens Park	Very Low	0.2	2.8	Neighborhood











6 Goals and Standards

Introduction

The overarching goals and system-wide standards for the Healthy Parks Plan were identified based on the guidance of the core team and the Advisory Committee, community engagement and mapping results, and the overall needs assessment undertaken for the project, including a benchmarking analysis that compared Pasadena's park systems with the park systems of peer cities. See Chapter 1 for an overview of the needs assessment approach for the Healthy Parks Plan. As noted in the preface to this report, the Healthy Parks Plan outlines priorities for the next five years, but the tools and recommendations that are part of the Plan can also be used much farther into the future. Key elements of this plan should be revisited and updated every five years. The Healthy Parks Plan is designed to help the City of Pasadena and its partners to make decisions at a wide range of scales from a single park or parcel to a neighborhood to the entire citywide park system.

Note: The key short-term steps not listed below are: (1) Work with the City Council on official adoption of the Healthy Parks Plan; and (2) Submit the Healthy Parks Plan to the Texas Parks and Wildlife Department for review and approval.

Goals and Implementation

The overarching goals for the Healthy Parks Plan are:

1. **ACCESSIBLE**. Expand close-to-home access to high-quality parks with a focus on addressing equity, so that all residents have access to the benefits of parks.
2. **WELCOMING**. Ensure that Pasadena's parks are safe, welcoming, and well-maintained, so that all residents want to spend time enjoying them.
3. **HEALTHY**. Ensure that parks, trails, facilities, and programming are all improved in ways that help increase community health, particularly for residents facing the greatest levels of health inequity.
4. **ENVIRONMENTALLY RESILIENT**. Use park design and park improvements to promote environmental resilience, connect people to nature, and reduce the vulnerability of Pasadena residents to the risks of air pollution, extreme heat, and flooding.
5. **CONNECTED**. Expand connectivity of parks and trails in Pasadena so that all residents can safely use active transportation to reach parks and other community resources.
6. **RESPONSIVE AND VALUED**. Ensure that the Parks and Recreation Department understands the evolving park and recreation priorities of Pasadena residents and that Pasadena residents value the many benefits provided by Pasadena's parks and recreation programs.
7. **FISCALLY SOUND**. Ensure that there are adequate financial and volunteer resources to support an exceptional park system in Pasadena.

Abbreviations

Armand Bayou Nature Center (ABNC)	Parks and Recreation Department (PARD)
City of Pasadena Planning Department (Planning)	Pasadena Chamber of Commerce (Chamber)
Galveston Bay Foundation (GBF)	Pasadena Economic Development Corporation (EDC)
Harris County Precinct 2 (HCP2)	Pasadena Healthy Parks Plan (PHPP)
Harris County Public Health (HCPH)	Pasadena Independent School District (PISD)
Healthy Living Matters (HLM)	Pasadena Neighborhood and Industry Network (NIN)
Homeowners Associations (HOAs)	Pasadena Police Department (PPD)
Houston Chief Resilience Officer (Houston CRO)	Pasadena Vibrant Community (PVC)
Houston-Galveston Area Council (H-GAC)	SPARK School Park Program
Houston Parks Board (HPB)	System for Observing Play and Recreation in Communities (SOPARC)
Katy Prairie Conservancy (KPC)	Texas Parks and Wildlife Department (TPWD)
Native Prairie Association of Texas (NPAT)	The Nature Conservancy (TNC)

Table 6-1. Goals, Objectives, and Implementation Steps for the Healthy Parks Plan

Objectives shown in **blue bold text** are particularly high priorities for the Advisory Committee and the core team. Objectives in **black bold text** are second tier high priorities. The number one priority for the Advisory Committee and core team is Objective 1d (Improve existing parks by renovating and adding amenities where they are needed most). Progress for every objective should be evaluated annually.

	Goal/Objective	Who	What	When
Goal 1	**ACCESSIBLE. Expand close-to-home access to high-quality parks with a focus on addressing equity.**			
Objective 1a	Use Healthy Parks Plan mapping analysis to identify gaps in park access with a focus on equity	PARD Partners	Low cost Low staff time	Ongoing; Initial analysis incorporated into PHPP
Objective 1b	Adopt the locally appropriate, research-based performance standards for parks, park acreage, and park amenities shown in Table 6-2	PARD City Council	No cost Low staff time	2020 for adoption
Objective 1c	**Develop new multi-benefit parks where they are needed most by utilizing city-owned land, partnering with other land owners (such as HCFCD), and acquiring land as necessary** -Coordinate with Emergency Management and Public Works -See Chapter 7 for more detailed recommendations	PARD Public Works HCFCD Non-Profits ABNC HCP2 Private Sector	High cost Moderate staff time	Highest priorities by 2025
Objective 1d	**Improve existing parks by renovating and adding amenities where they are needed most; start with improvements to high-priority parks** -Coordinate with Emergency Management and Public Works -See Chapter 3 for list of high-priority parks -See Table 6-2 for system-wide standards -See Chapter 7 for more detailed recommendations	PARD Public Works SPARK HOAs ABNC Health partners[i]	Moderate cost Moderate staff time	Highest priorities by 2025

i PARD's current health partners include ABC Dental, Pasadena Health Center, The University of Texas MD Anderson Cancer Center, Cigna, WellCare/ Texan Plus, Walgreens, CHI ST. Luke's Health, United Health Care, Bayshore Medical Center, and Amerigroup.

Table 6-1. (continued) Goals, Objectives, and Implementation Steps for the Healthy Parks Plan

Objective 1e	Use SOPARC (System for Observing Play and Recreation in Communities) -methodology to analyze park use before and after key improvements -Ensure that at least two PARD staff are trained to use SOPARC or hire contractors	PARD	Low cost Low staff time	Ongoing, as needed
Objective 1f	Strategically add to the park system with a focus on natural lands and nature-based recreation -See Chapter 7 for more detailed recommendations	PARD HCFCD ABNC HCP2	High cost Moderate staff time	Make progress by 2025
Objective 1g	Respond to evolving sports field demands by renovating and reallocating space to increase the number of available soccer fields -See Table 6-2 for system-wide standards -See Chapter 7 for more detailed recommendations	PARD League partners Health partners	Moderate cost Moderate staff time	Make progress by 2025
Objective 1h	**Extend recreation programming into southern area of Pasadena that does not have close-to-home access to existing recreation centers** -Conduct feasibility study for a new multigenerational recreation/community center in central Pasadena; center would include indoor/covered swimming pool to allow for year-round aquatics programming -Work with outside contractors to identify more opportunities for programming in parks in southern Pasadena	PARD Consultants Contractors Health partners	Moderate cost Moderate staff time	By 2023
Objective 1i	**Work with the Mayor and City Council to adopt a goal that everyone in Pasadena should live within a 10-minute walk of a high-quality park by 2050**	PARD Mayor City Council	No cost Low staff time	By the end of 2021
Goal 2	**WELCOMING. Ensure that Pasadena's parks are safe, welcoming, and well-maintained, so that all residents want to spend time enjoying them.**			
	SAFE			
Objective 2a	**Promote events, programming, and other positive activities in parks that are perceived as unsafe** -Use annual survey to assess perceptions of park safety -Work with Parks and Recreation Advisory Board to better understand evolving perceptions of park safety (see Goal 6, RESPONSIVE below) -Monitor reports of vandalism as a way of identifying potential areas of concern -Work with neighborhood groups to promote positive activities in parks identified as having perceived safety issues	PARD Volunteer Pasadena TPWD PPD	Low cost Moderate staff time	Make progress by 2025
Objective 2b	**Implement equity-focused environmental design principles that help prevent crime and promote positive behavior in parks where there are safety concerns (real and perceived)** -Work with Parks and Recreation Advisory Board to identify and set priorities for improvements in these areas -Where feasible improve sight lines, add map stations, and install emergency call stations -Increase security lighting in key areas where park and facility use is allowed after dark	PARD HCPH PPD	Low to moderate cost Low staff time	Make progress by 2025
Objective 2c	Address maintenance issues that contribute to public safety concerns -Track (and work to improve) response time	PARD	Low to moderate cost Moderate staff time	Ongoing, make progress by 2025
	WELCOMING			
Objective 2d	**Ensure that parks have adequate comfort amenities to feel welcoming** (see Goal 1, ACCESS above) -Expand access to shade through trees, canopies, pavilions, and other features -See Chapter 7 for more detailed recommendations	PARD Trees for Houston	High cost Moderate staff time	Make progress by 2025

Table 6-1. (continued) Goals, Objectives, and Implementation Steps for the Healthy Parks Plan

Objective 2e	**Incorporate more natural features into parks, so that they feel more welcoming and relaxing** (see Goal 3, HEALTHY below)	PARD	Low to moderate cost Low staff time	Make progress by 2025
Objective 2f	Implement an official policy that PARD will not turn away potential participants in programming based on economic or physical barriers -Reduce cost barriers for programming through (1) Better advertising for the scholarship program, including application materials in Spanish; (2) Increasing scholarship cap for youth participants from $100 to $200 per year; (3) Working with community groups, including BakerRipley to reach out to potential participants who might need scholarship support -Extend and expand offerings of low- and no-cost adult fitness programming. Look into options for offering childcare.	PARD	Moderate cost Moderate staff time	2021, ongoing
Objective 2g	**Work with community members with disabilities and their families to identify and address the biggest barriers to people with disabilities using parks** -Ensure compliance with ADA requirements, particularly for critical comfort features such as restrooms and water fountains -Expand access to playgrounds and other outdoor equipment for adults with disabilities -Set aside several days per year when the use of particular parks is restricted to people with disabilities and their families -Hold an annual meeting at the Verne Cox Adaptive Recreation Center for people with disabilities and their families to get input on new and ongoing barriers to access -Conduct focused outreach to people with disabilities and their families for annual park survey -Look for opportunities to provide programming for people with disabilities outside of the Verne Cox Multipurpose Recreation Center -Work with the Historical Society to highlight the innovative history of adaptive recreation in Pasadena; consider developing materials or events based on this unique history to help fundraise for additional adaptive amenities throughout the city	PARD Health partners	Low to high cost (de-pending on intervention) Low staff time	Make progress by 2025
Objective 2h	**Add cultural and artistic elements to parks, add visual unity through signage and wayfinding** -Work with design firm to develop a citywide plan -Formalize and maintain a park signage system that unifies city park signs and makes them as welcoming and as easy to interpret as possible -Collaborate with local artists to celebrate the city's natural and cultural diversity with placemaking that incorporates storytelling and reflects local history, culture, art -Ensure that all major signage is in Spanish as well as English	PARD Planning Dept EDC Design firm	Moderate cost Low staff time	Develop plan in 2021, ongoing
Objective 2i	Develop and publicize a justice, equity, diversity, and inclusion (JEDI) statement that focuses on a commitment to expand access for historically underserved and underrepresented community members	PARD	Low cost Low staff time	2021
	WELL-MAINTAINED			
Objective 2j	**Use the Park Assessment Tool to reassess all parks every three years** (See Chapter 8 and Online Appendix A.)	PARD	Low cost Moderate staff time	Every three years
Objective 2k	Develop and implement a maintenance plan for buildings and park amenities to maximize the value and useful life of facilities -Establish a criteria-based ranking system to replace or renovate existing playgrounds and other key facilities on a 20-year cycle	PARD	Low cost Moderate staff time	Develop plan in 2021, revisit annually

Table 6-1. (continued) Goals, Objectives, and Implementation Steps for the Healthy Parks Plan

Objective 2l	**Ensure that PARD is known for its well-maintained park system; use annual survey (described in Goal 6, RESPONSIVE below) to assess public perceptions of maintenance** -Work toward a goal of having 85% of survey respondents indicate that parks are well-maintained	PARD	Low cost Low staff time	Reach goal by 2025
Goal 3	**HEALTHY. Ensure that parks, trails, facilities, and programming are all improved in ways that help increase community health, particularly for residents facing the greatest levels of health inequity.**			
Objective 3a	**Adopt and implement the Healthy Parks Design Guidelines (see Chapter 8)**	PARD Health partners	Low to moderate cost Low staff time	By 2021 (City to adopt as part of PHPP), implementation ongoing
Objective 3b	Work with HLM and PVC to lead coalitions that help identify and address Pasadena's critical health issues and work towards partnerships to improve conditions through expanding park facilities and programming	PARD HLM Health partners	Low to moderate cost Low staff time	Make progress by 2025
Objective 3c	Expand partnerships with local and regional hospitals, community health centers, public health agencies, and health funders -Work with health partners on programming and events -Work toward goal of having health partners provide or fund 10 programs serving 2,000 residents per year by 2025 and 15 programs/events and serving 3,000 citizens by 2030	PARD Health partners	Low cost Low staff time	Reach goal by 2025
Objective 3d	**Expand partnership with PISD with a focus on leveraging parks and park programming to improve student and family health** -Ensure PISD representation on Parks and Recreation Advisory Board -Expand Safe Routes to Schools to Safe Routes to Parks connectivity -Work with PISD to encourage high school students, families, and staff to fill out annual parks survey	PARD PISD SPARK Health partners	Low cost Low staff time	Make progress by 2025
Objective 3e	Use annual survey (described in Goal 6, RESPONSIVE below) to assess public perceptions of how well Pasadena's park system promotes community health -Work toward goal of having 95% of public indicate that the park system does a good job of promoting health	PARD	Low cost Low staff time	Reach goal by 2025
Objective 3f	**Prioritize adding park features, especially trees, canopies, and pavilions that help protect park users from extreme heat**	PARD	Moderate cost Moderate staff time	Make progress by 2025
Objective 3g	Use data- and community-driven assessments in design and siting of parks in areas with potentially compromised air quality. In addition to eliciting community feedback, consider Environmental Risk mapping data (see Chapter 5) and risk indicators such as the EPA's Risk-Screening Environmental Indicator and National Air Toxics Assessment. In locations where adverse air quality is identified as a significant concern, work with partners to install community air monitoring networks along and employ mitigation strategies to reduce exposure to air pollution.	PARD Air Alliance Houston Health partners HCPH	Low to moderate cost Low staff time	Make progress by 2025
Goal 4	**ENVIRONMENTALLY RESILIENT. Use park design and park improvements to promote environmental resilience, connect people to nature, and reduce the vulnerability of Pasadena residents to the risks of air pollution, extreme heat, and flooding.**			
Objective 4a	Adopt the Healthy Parks Design Guidelines, particularly those connected to Gather, Cool Off, Breathe, and Nature (Goal 3, HEALTHY Objective 3a above)	PARD	Low cost Low staff time	Adopt in 2020
Objective 4b	**Adopt and implement standards for low-impact development (LID) for park facilities, including energy and water efficiency** -Utilize green infrastructure for drainage improvements, flood mitigation, and water quality improvements in all existing parks, including bioswales, riparian restoration and management, rain gardens, and permeable pavement	PARD HCFCD HCP2	Moderate cost Moderate staff time	Adopt in 2021

Table 6-1. (continued) Goals, Objectives, and Implementation Steps for the Healthy Parks Plan

Objective 4c	**Protect and restore local ecosystems, including prairie, coastal, and remnant forest habitats** -Prohibit intensive use in especially ecologically sensitive areas -See Chapter 7 for more detailed recommendations	PARD TNC KPC NPAT HPB HCP2	High cost Moderate staff time	Make progress by 2025
Objective 4d	Improve overall environmental benefits of landscapes throughout Pasadena by leveraging parks and trail corridors toward ecological goals -Expand landscaping with native plants by 80% and increase plant biodiversity across all parks and open spaces City-wide -Establish baseline for native plant landscaping down to the species level with guidance on creating biodiverse, functional community lists for co-planting.	PARD TNC KPC NPAT HPB	Moderate cost Moderate staff time	Establish baseline by 2021; make significant progress by 2025
Objective 4e	**Work with partners to expand Pasadena's urban forest** -Work with the Planning Department to develop a strong tree protection ordinance -See Chapter 7 for more detailed recommendations	PARD Planning Trees for Houston	Moderate cost Moderate staff time	Reach goal by 2025
Objective 4f	**Work with Harris County Flood Control District to identify and protect areas that can provide multiple benefits through both flood control and recreation access**	PARD HCFCD GBF HCP2 HPB	Low cost Low staff time	Make progress by 2025
Objective 4g	Partner with Armand Bayou Nature Center to expand environmental/outdoor education opportunities for Pasadena residents—both at Armand Bayou Nature Center and in PARD parks	PARD ABNC	Low cost Low staff time	Make progress by 2025
Objective 4h	Create (and fund) new staff positions within PARD to help expand, restore, and manage trees, native plants, and natural areas within the parks system -New staff positions would include (at a minimum) Forester, Natural Resources Manager, and Park Naturalist	PARD	High cost Moderate staff time	Create and fill at least one new position per year in 2021, 2022, and 2023
Goal 5	**CONNECTED. Expand connectivity of parks and trails in Pasadena so that all residents can safely use active transportation to reach parks and other community resources.**			
Objective 5a	**Create an updated trail connectivity plan for the city of Pasadena using the PHPP connectivity analysis as a starting point** -Identify priorities for using bayous and utility easements to create a network of greenways -Partner with HPB and local utilities -Work with surrounding jurisdictions and HCP2 to prioritize connections to areas outside of Pasadena -Integrate HCP2 hike and bike plan (to be completed in late 2020)	PARD Planning HPB HCFCD HCP2 EDC CenterPoint	Moderate cost Moderate staff time	Create plan by 2021
Objective 5b	**Develop an interconnected network of safe walking and biking trails connecting park trails, community trails, and regional trails** -Expand network of trails, sidewalks, and bike lanes to connect residential areas with schools, parks, and job centers -See Chapter 7 for more detailed recommendations	PARD Public Works EDC Planning HCP2 HPB	High cost Moderate staff time	Reach goal by 2025

Table 6-1. (continued) Goals, Objectives, and Implementation Steps for the Healthy Parks Plan

Objective 5c	Create wayfinding and signage that is welcoming, informative, and visually unified with park signage described in Goal 2 (WELCOMING) -Work with contractor/s to create and promote a map and a phone app showing trails, trailheads, and access points	PARD Design firm Contractor/s	Moderate cost Low staff time	By 2023
Objective 5d	Advocate for public transit with bus stops at all major parks, so that more residents can access parks, particularly regional parks, without driving	PARD	Low cost Low staff time	Ongoing
Objective 5e	Work with HOAs to ensure open access to trails within subdivisions -Obtain agreements from HOAs to provide public access to trails within subdivisions—particularly any trails that provide key linkages or increase connectivity of the city's overall trail system	PARD	Low cost Low staff time	By 2023
Objective 5f	Encourage Pasadena Public Works and Planning Departments to improve key sidewalks and crosswalks that would improve access to parks -See Chapter 7 for map showing priority areas	PARD Public Works Planning Dept	Moderate cost Low staff time	Make progress by 2025
Objective 5g	Explore options for creating car-free zones near some parks—particularly those in areas with air quality concerns (see Chapter 7, Design Guidelines, for more details) -Begin 1-2 pilot projects in 2021	PARD Public Works Planning Dept	Low cost Low staff time	Begin pilot projects in 2021; make progress by 2025
Objective 5h	If a public transit system is created for Pasadena, PARD should work with transit planners to ensure that parks, particularly community and regional parks, are served by public transit	PARD Planning Dept METRO	Low cost Low staff time	Ongoing
Goal 6	**RESPONSIVE AND VALUED. Ensure that the Parks and Recreation Department understands the evolving priorities of Pasadena residents and that Pasadena residents value the many benefits provided by Pasadena parks and its recreation programs.**			
	RESPONSIVE			
Objective 6a	**Translate all major PARD communications and materials into Spanish** -Provide all programming, outreach, and scholarship information in Spanish as well as English -Hire staff who can provide in-house translation services along with other job responsibilities	PARD	Low cost Moderate staff time	Begin translating all key materials by 2021, ongoing
Objective 6b	**Create a Parks and Recreation Advisory Board that meets quarterly to help inform and support implementation of PARD goals.** The Advisory Board should include: -Health partners -PISD representatives, including 1-2 youth members -HCFCD and HCP2 representatives	PARD	Low cost Low staff time	Create board by end of 2020, ongoing
Objective 6c	**Continue equity-driven community engagement with a focus on reducing barriers to participation in park planning.** (See details in Chapter 1.) -Administer an online survey of residents each year to assess satisfaction and ongoing barriers to park use -As needed, supplement online survey with intercept surveys or speak-outs in key locations to reach underrepresented community members -Assess annually whether and how much park satisfaction is increasing and barriers are being reduced	PARD Advisory Board	Low cost Moderate staff time	First survey by end of 2020, ongoing annually
Objective 6d	**For new parks and substantial park improvement projects, use equity-driven engagement to work with community members on design** -See equity-driven engagement principles in Chapter 1	PARD	Low cost Moderate staff time	Ongoing, as needed
Objective 6e	**Collaborate with parks departments in neighboring cities to set citywide and regional service goals** -Create a friendly annual competition to encourage collaboration and accountability in meeting goals and sharing best practices	PARD Parks departments for neighboring cities	Low cost Low staff time	Organize by 2021, ongoing

Table 6-1. (continued) Goals, Objectives, and Implementation Steps for the Healthy Parks Plan

Objective 6f	**Monitor participation in and demand for programs and adjust offerings to meet the needs of the community with a focus on equity and health.** -Use data to assess program trends (enrollment data and annual survey) -Align program offerings with community needs and priorities; evaluate program lifecycle annually (see Chapter 8, Additional Tools, Program Lifecycle Analysis Tool) -Evaluate program fees to ensure that they do not create a substantial barrier to participation (ensure that all residents can access programming, see Objective 2f in Goal 2, WELCOMING)	PARD	Low cost Moderate staff time	Begin in 2020, ongoing
Objective 6g	**Increase activation of the park system by working with partners to host diverse, smaller events, particularly in underutilized parks** -Explore opportunities for smaller special events for neighborhoods and different cultural groups	PARD TPWD Local businesses	Low cost Low staff time	Progress by 2025
Objective 6h	Expand youth sports programming, especially soccer -Identify opportunities to recruit additional volunteer coaches or work with health partners to identify new funding streams to pay additional coaches -Create training program for new coaches; consider starting youth referee program to establish a pipeline for future coaches -Focus outreach and social media resources, particularly in Spanish, on recruiting coaches and participants	PARD Volunteer Pasadena League partners Health partners	Low cost Moderate staff time	Progress by 2025
Objective 6i	Respond to community programming demands through: -Looking into expanding availability of aquatics programming by working with HOAs to provide additional sites, particularly in southern Pasadena -Building stronger ties between Madison Jobe Senior Center and other community/recreation centers; establish a pilot project for multi-generational programming -Considering implementing an adult soccer league with a variety of available time slots. To encourage Hispanic/Latinx participation, use bilingual traditional marketing and social media advertising.	PARD Health partners League partners	Low cost Moderate staff time	Progress by 2025
Objective 6j	Enhance household participation in parks and recreation programming (including events) to at least 15% of all Pasadena residents by 2025 -Establish 2020 baseline -Work with alternative providers to increase level of service in areas without easy access to PARD community/recreation centers; this includes much of the southern portion of the city	PARD Health partners YMCA ABNC Contractors	Low cost Low staff time	Establish baseline in 2020; make progress by 2025
	VALUED			
Objective 6k	Ensure that parks and trails are considered essential infrastructure by emphasizing that a strong park system enhances community health, economic vibrancy, and overall quality of life; raise awareness of the benefits of Pasadena's park system and the connections between park access, equity, environmental vulnerability, and community health -Assess level of awareness and support for parks and trails in annual parks and recreation survey; goal to increase awareness by 5% each year -Work with Parks and Recreation Advisory Board to advocate for the importance of parks and trails	PARD EDC HCPH HPB	Low cost Moderate staff time	Meet progress goals annually
Objective 6l	Develop a marketing plan for PARD in collaboration with the City of Pasadena's communications team and the EDC -Update marketing plan at least every five years	PARD EDC Contractor/s	Low cost Low staff time	Develop plan by 2021

Table 6-1. (continued) Goals, Objectives, and Implementation Steps for the Healthy Parks Plan

Objective 6m	Expand PARD's social media outreach -Establish baseline -Leverage the City of Pasadena's social media following to increase followers -Quadruple the number of people being reached through social media by 2025 and reach ten times as many people by 2030 -Expand social media outreach in Spanish	PARD City of Pasadena communications staff	Low cost Moderate staff time	Meet goals by 2025 and 2030
Objective 6n	Work with Chamber of Commerce on visitor itineraries highlighting parks -Update itineraries every three years	PARD Chamber of Commerce	Low cost Low staff time	Develop initial itineraries in 2021
Goal 7	**FISCALLY SOUND. Ensure that there are adequate financial and volunteer resources to support an exceptional park system in Pasadena**			
Objective 7a	Establish sustainability guidelines to direct landscape practices, efficient management of facilities, and resource use in the park system -Work to minimize maintenance and operational costs through thoughtful design, low-impact development (LID), and use of native plants (see Goal 4, ENVIRONMENTALLY RESILIENT) -Bring greater efficiency and value to park development and maintenance -Reinvest in existing parks to extend use, adapt facilities for multifunctional use, manage resources as efficiently as possible	PARD HPB TNC	Low cost Low staff time	Develop guidelines by 2021
Objective 7b	**Develop a financially sustainable park and recreation system by maximizing all available revenue sources** -Develop/update policies for pricing, partnerships, volunteers, marketing, and sponsorships -Encourage collaboration between public agencies, utilities, local businesses, industry, and nonprofit organizations to maximize the use of available land, facilities, and financial resources -Work to ensure that park resources managed by HOAs and schools are as accessible to the public as possible -Establish a program for funding memorial trees, benches, or pavers -Establish process for requiring paid permits for events and classes held in local parks (survey current event organizers and class providers to determine a reasonable cost structure)	PARD City of Pasadena EDC	Low cost/ high ROI[ii] Low staff time	Develop guidelines by 2021
Objective 7c	Continue to research and apply for federal, regional, state, and local grants -Collaborate with EDC, HCFCD, HCP2, PISD, and HLM to identify opportunities for joint grant applications	PARD EDC HCFCD HCP2 PISD HLM	Low cost/ high ROI Moderate staff time	Ongoing, make progress by 2025
Objective 7d	**Apply for grants through the TPWD to fund high-priority projects** (See Chapter 7) -Applicable grant programs include Community Outdoor Outreach Program (programming for underserved populations), Local Park Grants, and Recreational Trails Grants	PARD TPWD	Low cost/ high ROI Moderate staff time	Ongoing, apply annually
Objective 7e	Apply for an Outdoor Recreation Legacy Partnership Program grant through the federal Land and Water Conservation Fund	PARD	Low cost Low staff time	Ongoing, apply annually
Objective 7f	**Work with Mayor, City Council, and Planning Department to create a parkland dedication ordinance** that requires developers to dedicate land for parks or pay an in lieu fee that is set aside to fund parks and open space (See Finance Feasibility Study, Online Appendix D)	PARD Mayor City Council Planning Dept	Low cost/ high ROI Low staff time	By 2021

ii ROI = Return on investment

Table 6-1. (continued) Goals, Objectives, and Implementation Steps for the Healthy Parks Plan

Objective 7g	**Work with Mayor, City Council, and Controller on a potential general obligation bond to support parks** -Decide on election cycle for voting on bond -Contract firm to conduct polling on bond language and determine amount and proposed uses of bond request (identify funder to pay for polling) -Work with Parks and Recreation Advisory Board and other parks groups to educate voters (See Finance Feasibility Study for more details. Summary in Chapter 8, and full report in Online Appendix D.)	PARD Mayor City Council Controller	Low cost/ high ROI Moderate staff time	By 2023
Objective 7h	**Build on partnership with SPARK School Parks Program to work toward all Pasadena schools having high-quality playgrounds, fields, and other park resources that are available to community members outside of school hours** -Use PHPP mapping to identify the schoolyards in the highest need areas -Work with PISD to identify the playgrounds with the most need for improvements/renovation -Look into funding through the Park Desert initiative funded by the Houston Endowment and Kinder Foundation -Improve schoolyards in high-priority areas (based on mapping, see Chapter 7 for more details)	PARD SPARK PISD	Low cost/ high ROI Low staff time	Make progress by 2025
Objective 7i	**Build strong programs and partnerships that ensure that local industry plays a key role in supporting and funding local parks** -Work with Neighborhood and Industry Network to reach out to industry and build partnerships -Work with industry to establish a grant program to assist neighborhood groups and local nonprofits in providing recreation opportunities in low service areas -Develop a "Refining Our Parks" campaign that drives participation of local industry in funding programs and regular park improvement projects through organizing park and volunteer projects on local "Days of Caring" -Ensure that at least one-quarter of Pasadena parks are adopted by local industrial corporation or other businesses by 2025 and half by 2030 -Generate $200,000 of annual financial and in-kind support by 2025 and $800,000 in annual financial and in-kind support by 2030	PARD NIN	Low cost Moderate staff time	Ongoing, meet goals by 2025 and 2030
Objective 7j	Work with Volunteer Pasadena to expand and strengthen system-wide program for volunteer recruitment and retention -Expand adopt-a-park program, establish regular park stewardship events, and build stronger ties with community groups such as the Rotary Club and Scouts -Expand park volunteer programs to at least 500 annual participants contributing at least 1,500 total hours by 2025 and 1,000 volunteers contributing 3,000 hours by 2030 -Create and highlight a section for park system volunteering on the PARD website -Develop core group of volunteers who can serve as strong advocates for park system improvements	PARD Volunteer Pasadena Rotary Club Scouts NIN	Low cost Low staff time	Ongoing, meet goals by 2025 and 2030
Objective 7k	Work with existing parks nonprofits, particularly Houston Parks Board, to receive and pool funds from private donors to support implementation of local parks projects	PARD HPB	Low cost Low staff time	Ongoing

Park System Standards

The standards shown in Table 6.2 were developed based on a combination of the benchmarking assessment (Chapter 3), community engagement results (Chapter 4), and consultation with the Parks and Recreation Department and local and regional park experts. These standards are specific to Pasadena's local context and needs. As noted by the National Recreation and Park Association when it moved away from using national standards for park resources, "There is not a single set of standards for parks and recreation that could possibly encompass the uniqueness found in every community across the country. Communities vary greatly by size, needs and desires; so too should their park and recreation agencies' offerings."[122] In the "New Standard" column the standards that are listed in **green** have already been met, **orange** indicates the standard is close to being met, and **red** indicates that a large increase would be necessary to meet the standard.

Table 6-2. New Park System Standards for Pasadena

Measure	Community Priority	Peer City High	Peer City Low	Peer City Average	National Average	Pasadena 2020	New Standard	Required Change
Parkland percent[i]	High	9.5%	2.8%	5.0%	8.8%	**1.7%**	**5%**	Add 945 acres; increase from 469 to 1,414 acres
Parkland per 1K residents	High	14.8	4.6	9.6	13.6	**3**	**9.3**	Same acreage change as above
Drinking fountains per 10K	Very high	5.3	1.4	2.9	2.7	**2**	**4**	Add 30 drinking fountains; increase from 30 to 60
Restrooms per 10K	Very high	2.2	0.2	1	1.8	**3.4**	**3.4**	Standard met; focus on site-specific needs
Playgrounds per 10K	High	3.1	0.9	2	2.6	**2.2**	**2.7**	Add 8 playgrounds; increase from 34 to 42
Picnic tables per 10K	High					**7.4**	**9.9**	Add 38; increase from 112 to 150
Pavilions per 10K	High					**0.5**	**0.7**	Add 3 pavilions; increase from 7 to 10
Miles of park trails per 10K	Very high					**1**	**2**	Add 15.3 miles; increase from 14.7 to 30 miles
Exercise stations per 10K	Medium					**0.4**	**0.6**	Add 3; increase from 6 to 9
Rec/senior centers per 20K	Medium	0.8	0.3	0.4	0.9	**1.1**	**1.1**	Standard met; however, southern Pasadena does not have its own recreation center now. In short-term, focus on expanding programming. Longer-term, look at options for a new, central rec center (see Objective 1g).
Tennis courts per 10K	Low	2.7	0.5	1.5	1.9	**1**	**1**	Standard met
Skate parks per 100K	Low	2	0.3	0.7	0.8	**0.7**	**0.7**	Standard met, but PARD should consider working with HCP2 to develop a 2nd skate park in southern Pasadena
Soccer/multi-sport fields per 10K	Medium	7.9	1.3	3.2	2.8	**0.5**	**1.3**	Add 12 soccer fields; increase from 8 to 20; eventually increase to 48 soccer fields if there is enough parkland available
Soft/baseball diamonds per 10K	Low	2	0.9	1.5	1.7	**1.3**	**1.3**	Standard met
Basketball hoops per 10K	Medium	4.8	0.7	2.5	3	**3.9**	**3.9**	Standard met
Splash pads per 100K	High	2.7	0.1	0.8	2	**2**	**2.5**	Add 1 splash pad; increase from 3 to 4
Swimming pools per 100K	Low	3.1	0.3	1.8	2.3	**2.6**	**2.6**	Standard met; however, pools are a very high priority and there is no year-round programming right now. Short-term, look for opportunities to work with HOAs to expand programming (Objective 6i). Longer-term look at options for a central rec center that would have an indoor pool (Objective 1g).
Disc golf per 100K	Low	0.8	0.2	0.5	0.6	**0.7**	**0.7**	Standard met
Dog parks per 100K	Low	1.2	0.3	0.8	1.4	**0.7**	**1**	Standard met (two additional county-managed dog parks)

Notes: City Park Facts (TPL, Center for City Parks Excellence) data used for peer city comparisons. See Chapter 3 for more details about benchmarking. Grayed out cells represent data that is not compiled by City Park Facts.

i These parkland numbers only include accessible parkland. Armand Bayou Nature Center, Kipper Mease Sports Complex, Pasadena Golf Course, and HOA parks are not included. See Chapter 3 for more details.











7 Priority Projects and Capital Improvements

Priority Project Recommendations

The recommendations in this chapter are divided into three major categories: park project recommendations, connectivity recommendations, and programming recommendations. Park project recommendations include recommendations related to both park improvements and acquisition of new parkland.

Park Project Recommendations

System-Wide

- Objective 1c: Develop new multi-benefit parks where they are needed most by utilizing city-owned land, partnering with other land owners (such as Harris County Flood Control District), and acquiring land as necessary.
- Objective 1f: Strategically add to park system with a focus on natural lands and nature-based recreation.
- Make significant progress toward adding 945 acres of accessible parkland to meet the new park system standard. In addition, add 1,000 acres of natural lands with a focus on environmental benefits and nature-based recreation and, as appropriate, work with partners to create conservation easements to expand protection of natural areas.
- Objective 1d: Improve existing parks by renovating and adding amenities where they are needed most (focus on top ten priority parks first).
- Strategically add the following amenities: 30 drinking fountains/water bottle filling stations; 8 playgrounds; 38 picnic tables; 3 pavilions; 3 exercise stations; 12 soccer fields; 1 splash pad; and 15.3 miles of (paved and unpaved) trails within parks.
- Signage should be improved, standardized, and translated into Spanish systemwide.
- Improve gateways, wayfinding, and internal circulation at all priority parks.
- Objective 4d: Improve overall environmental benefits of landscapes throughout Pasadena by leveraging parks and trail corridors toward ecological goals:
- Restore 25-50 acres of local native ecosystems within park properties.
- Install 10 green infrastructure projects in parks including both small-scale systems like rain gardens and large-scale projects such as multi-use detention basins in partnership with Houston Parks Board, Harris County Flood Control District, and other partners.
- Work with the Mayor, City Council, other departments, and the community to adopt goal of planting 300,000 new trees in Pasadena by 2030 (6.5% of Houston's regional goal of planting 4.6 million trees per Resilient Houston); treat parks as priority sites for new trees.
- Objective 4i: Establish new conservation-oriented land management practices as a part of the larger operational strategy including:
    - Restore all riparian areas in parkland and refined mowing schedules to minimize ecological harm.

Improvements to Existing Parks

Priority capital improvement projects have been identified for Memorial Park and Parklane as part of Chapter 9 and eight other priority parks were identified for a deeper look into specific near-term investments outlined below:



Light Company Park: While general updates are needed to existing infrastructure and the overall quality of the park needs to be improved, key recommendations include:

- Creating a more defined, cohesive, and connected perimeter.
- Planting trees to provide shade, cooling, and noise abatement near seating areas, and to provide more screening along the park perimeter.
- Providing small structural shade over existing amenities.
- Installing air quality monitoring equipment and create a warning system for park users if air quality becomes a risk factor.



Strawberry Park: Many well-loved amenities exist in Strawberry Park already and key recommendations focus on improving connectivity to and within the park, in addition to leveraging natural features toward improved experiences. Key recommendations include:

- Targeting key social gathering and activity buffer areas for concentrated tree planting efforts.
- Improving internal park connectivity to ensure amenities are well-connected to ADA walkways; improve wayfinding.
- Enhancing key park "gateways" with entrance signage and plantings to improve the pedestrian experience.
- Partnering with Bailey Elementary to improve the physical connection between the school and park.
- Refurbishing and activating the pavilion .



Ghana Playlot: Despite its size, Ghana playlot holds great potential for activating a neighborhood connection to the adjacent bayou, though currently underutilized. Beyond graffiti clean-up and general updates to existing amenities, two key recommendations include:

- Integration of local public art in the park.
- A re-envisioning of the connection to the adjacent channel as a natural asset and a potential long-term connection downstream to Holly Bay and a future regional greenway trail system.



Oaks Drive Playlot: With Pasadena Highlands Park nearby, features in Oaks Drive including a half-moon basketball court may feel redundant. Further engagement with this park's neighbors is necessary to understand how this park could better serve the community. Initial thoughts include the potential removal of the court and the enhancement of shade, community gathering space, and public art.



El Jardin Beach: Many Pasadena residents engaged through this process had not experienced this park — some not knowing of its existence and others commenting on the park location at the furthest southeast portion of Pasadena as the barrier to access. However, with bayfront access and minimal amenities, there is much potential to improve this site, especially as it pertains to improving the environmental quality and opportunity for residents to interact with nature. Key recommendations include:

- Restoring the diversity and quality of the vegetative buffer/dune system between the main park area and beach including enhancing the width, with a specific interest in improving habitat quality and storm surge protection.
- Plant salt-tolerant tree species near seating areas to provide more shade and wind protection.
- Re-locate and re-orient the parking lot with a focus on minimizing its presence in the core park areas.



Sherwood Park: Many of the surfaces in Sherwood Park need updates including the parking area, pathways, and court. Key recommendations include:

- Creating more social gathering spaces with benches and picnic tables
- Ensuring gathering spaces are oriented toward both key park amenities and shade



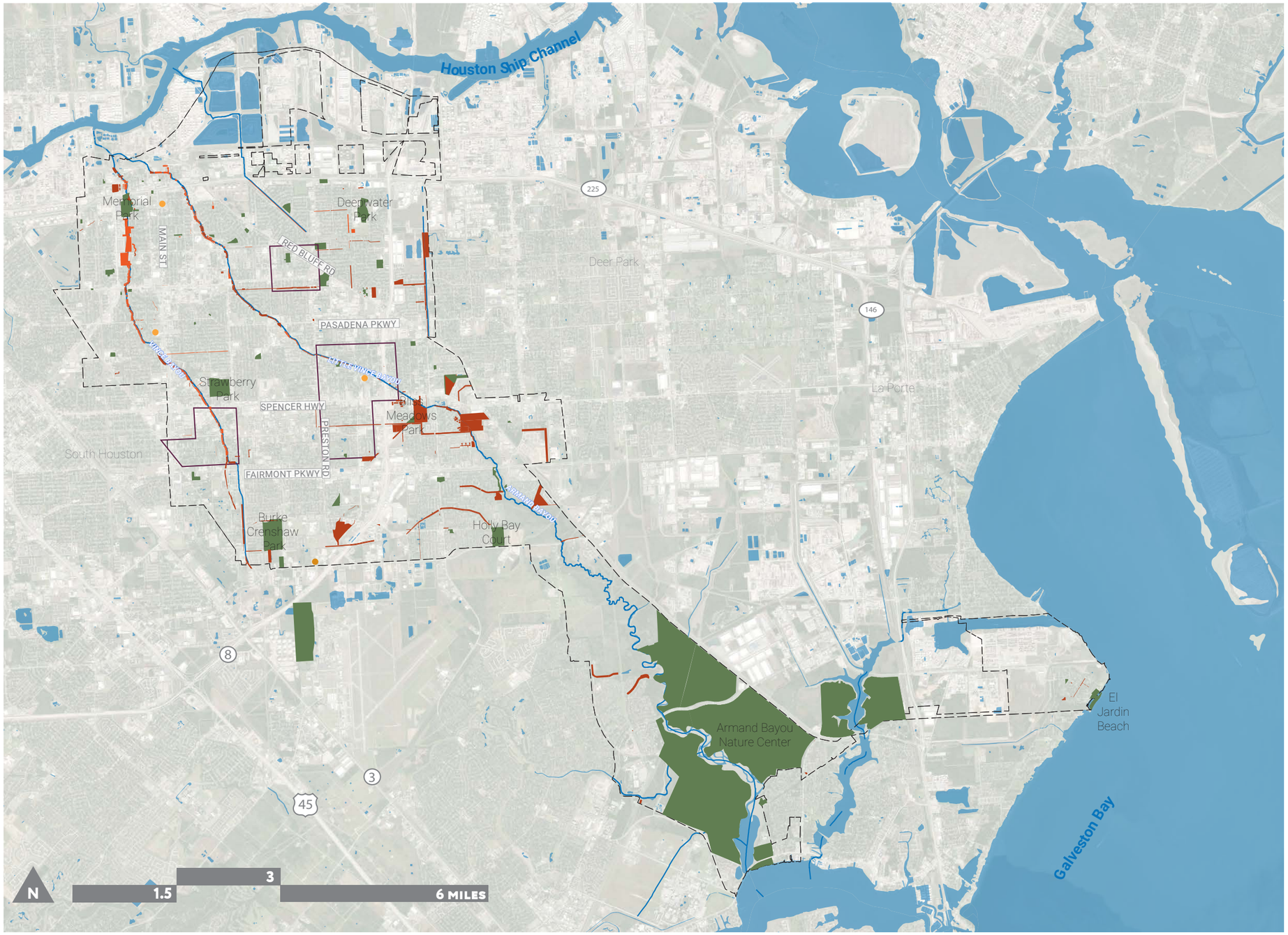
Tatar Park: Beyond baseline upgrades, any improvements to Tatar Park should preserve and take advantage of its substantial tree canopy. Its adjacency to a four-lane road, despite being in a residential neighborhood, is a cause for concern. Structural and vegetative buffering along the southwestern edge and new crosswalks to access the park across Pasadena Blvd. are just two improvements that could mitigate safety risks and traffic noise. Further community engagement is necessary to identify additional recommendations.



Bliss Meadows Park: Bliss Meadows Park has existing vegetation and a location with a lot of positives to build on. Perhaps one of the most suitable priority parks for ecologically driven improvements, all key recommendations are related to creating a higher-functioning ecosystem and opportunities for people to connect with nature. Bliss Meadows could serve as a pilot for Pasadena's nature-focused park initiatives. Key recommendations include:

- Leveraging underutilized space to create a habitat zone including the planting of pollinator plants, more diverse species selection, a mechanism for a small pooling of water (for habitat support), and a secluded seating area to enjoy the natural experience.
- Utilize green infrastructure to improve the natural drainage within the park.
- Restore riparian areas along detention features and Armand Bayou and utilize the site to pilot new maintenance and operations standards for these types of spaces.
- Connect the core area of existing Bliss Meadows Park to Armand Bayou detention features to the east and northeast with a loop trail and potential connection to a larger regional greenway system.
- Work with Harris County Flood Control District on expansion of park into the adjacent detention basin.

Figure 7-1. Priority Sites for New Parks[123]



LEGEND

- School in Very High Priority Areas
  - De Zavala Middle School
  - South Shaver Elementary School
  - Golden Acres Elementary School
- School in Other Priority Areas
  - Lomax Middle School
- Vacant Publicly Owned Land in Very High Priority Areas
- Vacant Publicly Owned Land in Other Priority Areas
- Neighborhoods in High Priority Areas with Limited Publicly Owned Land
- Water
- Bayous
- Park
- City Boundary

Opportunities for Schoolyard Parks

While schoolyard parks already exist throughout Pasadena in partnership with Pasadena Independent School District, many of these parks need improvements to both amenities and access. Increasing the quality of access to these locations will provide for higher levels of service in priority areas.

Objective 7h: Build on partnership with SPARK School Parks Program to work toward all Pasadena schools having high-quality playgrounds, fields, and other park resources that are available to community members outside of school hours. The following four schools were identified in our mapping process as intersecting high or very high priority areas (see Figure 7-1).

1. De Zavala Middle School
2. South Shaver Elementary School
3. Golden Acres Elementary School
4. Lomax Middle School

Priority Sites for New Parks

Overall, this plan calls for adding 945 acres of new parkland to the Pasadena system. New parks should be developed with multiple benefits as outlined in Chapter 1 and Healthy Parks Design Guidelines (Chapter 8), and should be located. Three key opportunities exist for new park sites: 1. Better leveraging existing public lands; 2. Land acquisition; and, 3. Improved quality and access to schoolyard parks.

The goal of the Priority Sites Map was to identify vacant public land, schools, and key areas for land acquisition within the Very High Priority, High Priority, and Moderate Priority areas of Pasadena. The public land category considered the following land ownership: City, County, State, and HCFCD. It also identified school sites that intersect the priority areas to identify opportunities for school park improvements.

Opportunities on Existing Public Lands

Of over 620 acres of vacant, public land within the City of Pasadena's Moderate, High, and Very High Priority areas, 150 acres exists within the very high priority areas ("vacant" may also include land currently being utilized for some flood control measures). This land should be prioritized for development of parks where feasible, with specific interest in the following strategies:

- With almost 480 of the 620 acres of vacant land within priority areas, Harris County Flood Control District (HCFCD) can partner with the City of Pasadena to better leverage HCFCD land toward multi-functional parks, flooding, and ecological goals — especially where sites are adjacent to existing or new park site, or where HCFCD lands create greenway corridors.
- With 110 acres of vacant City-owned land, the City of Pasadena can utilize land already in City ownership for new park development projects. A key priority project could include the development of City-owned land between Memorial and Strawberry Park along Vince Bayou.
- About 40 acres of Harris County-owned land exists within Pasadena beyond HCFCD land mentioned above in priority locations. This land can also be better leveraged toward park development goals.

Opportunities for Land Acquisition

Even if all vacant, public land not currently being used for parks in priority areas becomes developed, there will still be a need to acquire over 325 acres of parkland. The City of Pasadena, in partnership with the County and other public entities, should pursue the acquisition of land, especially in High Priority areas for park investment. Currently, there are almost 1,000 acres of vacant, privately-owned land within the City of Pasadena in priority areas, with over 40 acres in Very High Priority areas. Three neighborhoods are identified in Figure 7-1 as high-opportunity areas for parkland acquisition. Additionally, the creation of passive recreation and trails in contiguous parcels north of Armand Bayou (Middle Armand Bayou) will require the acquisition of large tracts of land currently under private ownership, and would provide and protect vital north / south connections for both people and wildlife.

Connectivity Recommendations

System-Wide

- Work to create an interconnected network of safe walking and biking routes connecting park trails, community trails, and regional trails—and connecting parks to homes, job centers, schools, and other community assets.
- Work with Harris County Precinct Two to support and inform the development of an updated trail connectivity plan for the city of Pasadena to connect to regional systems using the PHPP connectivity analysis as a starting point; identify priorities for using bayous and utility easements to create a network of greenways (Objective 5a)
- Create over 30 miles of off-road multi-use trails connecting parks and other key destinations and the creation of 16 trailheads to support the 30 mile system by 2025

Site/Neighborhood Specific

- Create a linear park with a greenway trail along Vince Bayou between Memorial and Strawberry Park
- Ensure existing trails between Strawberry Park and Burke Crenshaw meet quality and accessibility standards for multi-modal users
- Connect Burke Crenshaw Park east via connections to both Holly Bay Park and northeast to Bliss Meadows Park along an existing Centerpoint Energy Easement
- Extend trail systems within Armand Bayou north to both Holly Bay Park and Bliss Meadows
- Create a ROW-protected or grade-separated hike-and-bike trail between Armand Bayou and El Jardin Beach
- Support the implementation of connectivity improvements cited in the Pasadena Livable Centers Study
- Work with the Public Works Department to install crosswalks at key locations near priority parks as illustrated in the Crosswalk Improvement Recommendation Map
- Improve key connections between priority parks and community activity centers, schools, and bayous as identified in the Connectivity Recommendations Map, with sidewalk repairs, widened sidewalks where possible, shade provision, protected bike lanes, and enhanced landscape vegetation

The following two maps, Connectivity Recommendations Map and the Crosswalk Improvement Recommendation Map, identify high-impact, critical connections for park and bayou users. The identified connections would improve safety for pedestrians and cyclists seeking access to the top 10 priority parks, and would improve safety for pedestrians and cyclists seeking connections between Pasadena parks and bayous.

Figure 7-2. Connectivity Recommendations Map[124]

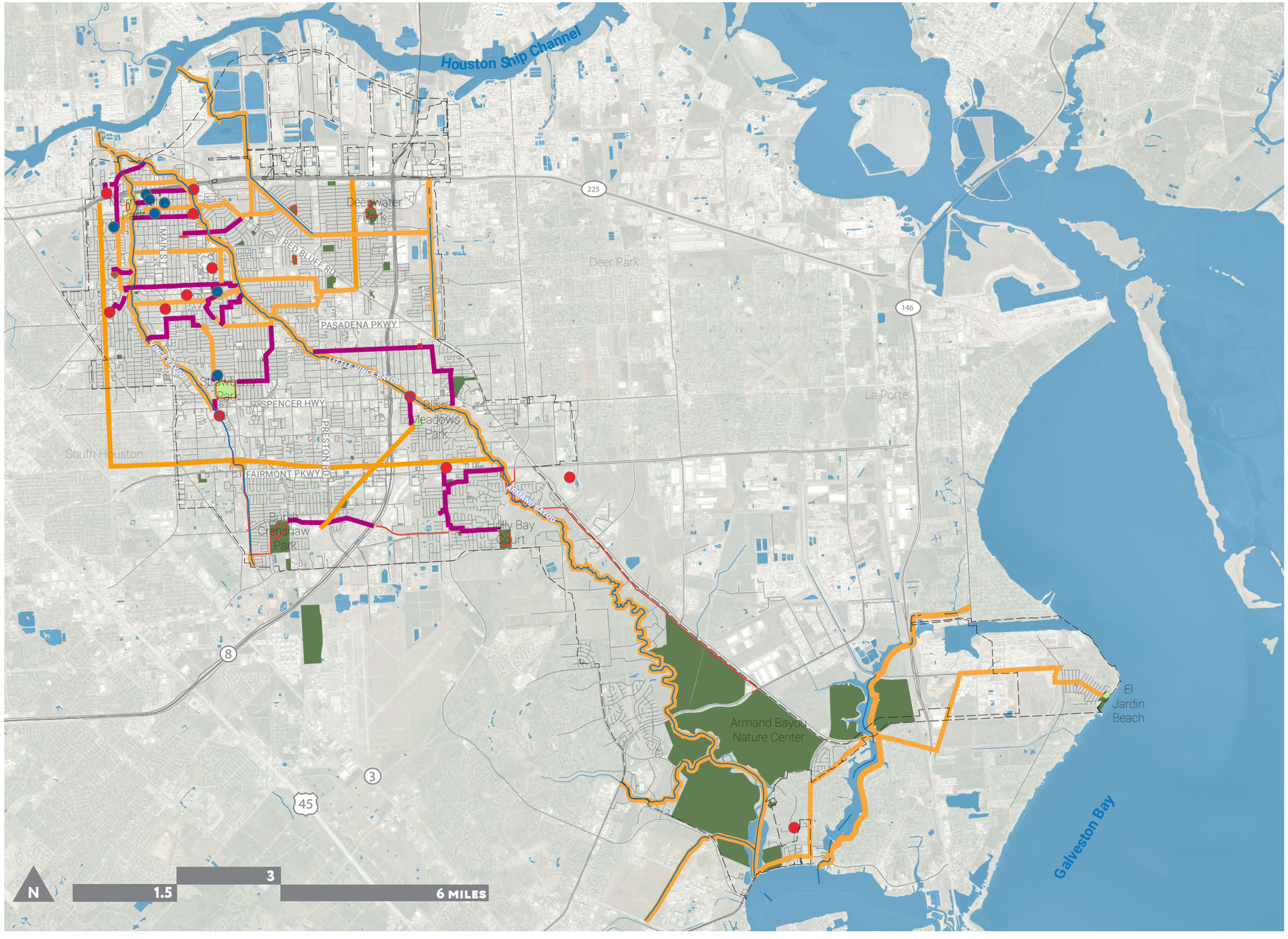
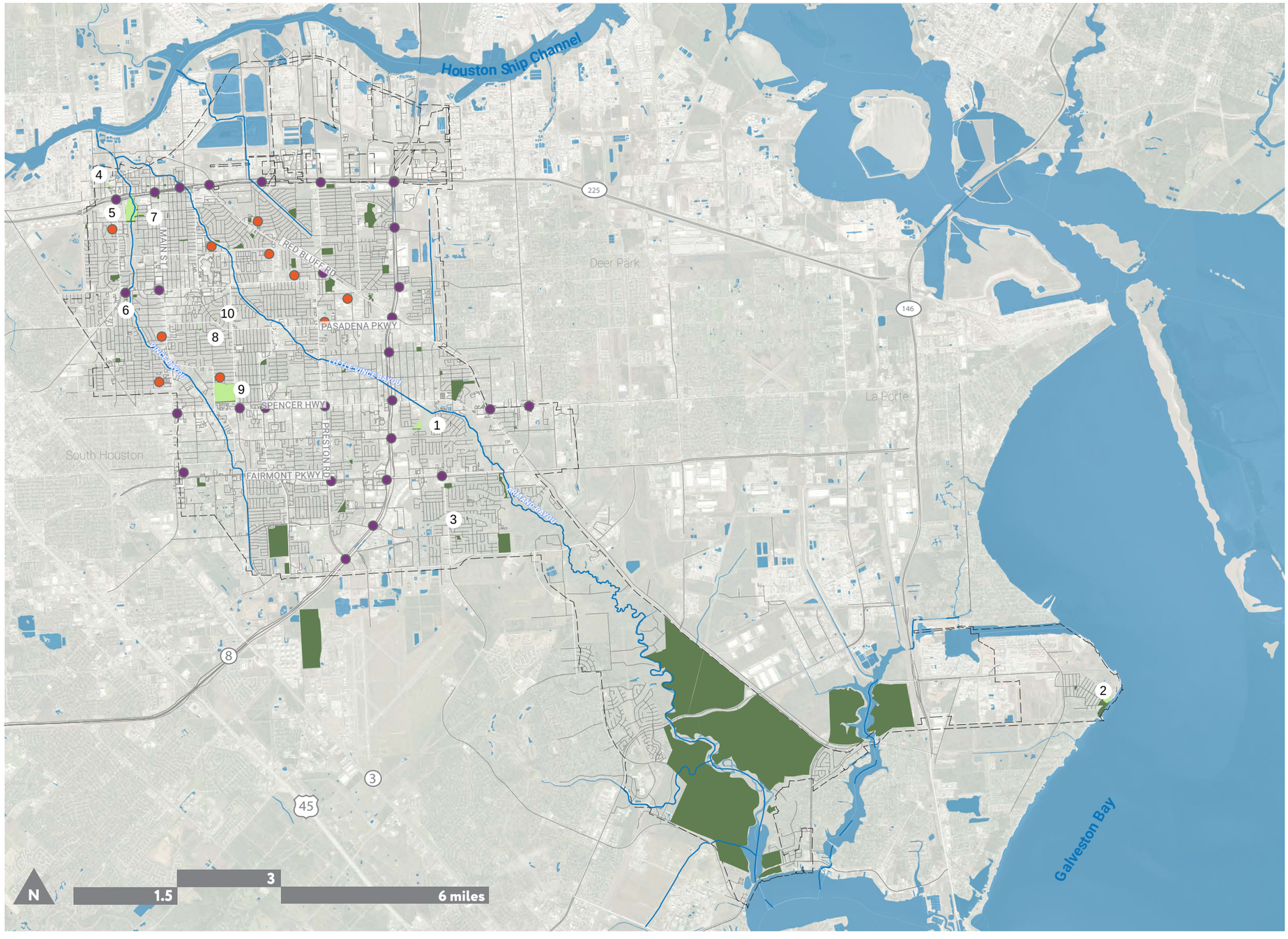


Figure 7-3. Crosswalk Improvement Recommendations Map[125]



1 Bliss Meadows Park
2 El Jardin Park
3 Ghana Park
4 Light Company Park
5 Memorial Park
6 Oaks Park
7 Park Lane Park
8 Sherwood Park
9 Strawberry Park
10 Tater Park

Crosswalks:
Red Bluff Rd+ I-225
Witter St+ I-225
Main St+ I-225
W Southmore Ave + I-225
Preston Rd + I-225
W Southmore Ave + Richey Street
Allen-Genoa Rd +Llano St
W Southmore Ave + Main Street
Preston Rd+ Red Bluff Rd
Spencer Hwy +Shaver Street
I-8 + I-225
I-8 + W 13th St
I-8+ San Augustine Ave
I-8+ Red Bluff Rd
Preston Rd + Spencer Hwy
I-8+ Pine Ave
Spencer Hwy + Red Bluff Rd
I-8+ Spencer Hwy
Burke Rd + Spencer Hwy
Center St +Spencer Hwy
I-8+ Vista Rd
I-8+ Fairmont Pkwy
Fairmont Pkwy + Preston Rd
I-8 + Crenshaw Rd
Fairmont Pkwy + Space Center Blvd
I-8 + Preston Road
Strawberry Rd + Spencer Hwy

LEGEND
- Priority Crosswalk Intersections (based on TxDOT Crash Data)
- Safe Routes to School Priority Schools
- Priority Park
- Park
- Water
- City Boundary

Connectivity Recommendations Map

Figure 7-2 identifies critical Neighborhood Connections and Regional Connections for Pasadena. The Regional Connections consist of utility corridors, bayous, and easements that could be transformed into hike and bike corridors. The Regional Connections also include longer Neighborhood Connections, as detailed below, but were categorized as Regional because of their length.

Neighborhood connections are identified as opportunities to connect park and open space assets. Improvements could be filling sidewalk gaps, creating on-street bike lanes, or creating off-street trails. The following four categories were analyzed:

A. **Bayous connecting to the top 10 priority parks.** Bayous were chosen based on physical proximity to the individual park. If the park is immediately adjacent to a bayou, the next closest bayou was chosen.

B. **Park connecting to park.** The top 10 priority parks were given another park to connect to, based on the priority park's amenity needs. If it currently has a more diverse amenity offering, it was paired with a nearby park that is currently amenity deficient. And vice versa.

C. **Activity centers connecting to the top 10 priority parks.** Activity centers were identified as a high-density cluster of attractions such as churches, daycare centers, recreation centers, libraries, and commercial areas. If it met this threshold, an activity center was chosen based on its proximity to the top 10 priority parks.

D. **School to park:** Schools that fell within a half mile from the top 10 priority parks were identified.

Results: The routes for Group A - D (above) were combined by prioritizing the route that connected the priority park to the most features (bayou, park, school, or activity center). Further analysis will be needed to identify what improvements should be made along the identified route to improve the safety of the connection.







Armand Bayou; Source: pasadenatxphoto.net

Crosswalks Improvements Recommendation Map

Figure 7-3 identifies intersections that need crosswalk improvements. Critical intersections were identified by the density of TxDOT crash data. These crash data points include car, pedestrian, and cyclist incidents from 2019. It also includes crosswalk improvement recommendations from the Safe Routes to School Plan.

Results: The identified intersections for improvement will need further analysis to identify how many crosswalks are needed. For example, one crosswalk improvement may be enough to improve overall safety and access to the park. Any crosswalks should be paired with an ADA-accessible curb ramp.

Programming Recommendations

Based on the Telephone Poll, expanding youth programming is the highest programming priority, followed by aquatics programming and special events. More fitness programming, adult programming, and environmental/outdoor education programming also received wide support in the Community Survey. In addition to relying on input from community engagement, the programming-related objectives listed below were developed using the needs assessment framework described in Chapter 1. The objectives below are also included with the full set of Healthy Parks Plan objectives in Chapter 6.

- Objective 1h: Extend recreation programming into southern areas of Pasadena that do not have close-to-home access to existing recreation centers; conduct feasibility study for a new multigenerational recreation/community center in central Pasadena; center would include indoor/covered swimming pool to allow for year-round aquatics programming
- Objective 2a: Promote events, programming, and other positive activities in parks that are perceived as unsafe
- Objective 2f: Implement an official policy that PARD will not turn away potential participants in programming based on economic or physical barriers
  - Reduce cost barriers for programming through (1) Better advertising for the scholarship program, including application materials in Spanish; (2) Increasing scholarship cap for youth participants from $100 to $200 per year; (3) Working with community groups, including Baker Ripley to reach out to potential participants who might need scholarship support
  - Extend and expand offerings of low- and no-cost adult fitness programming. Consider offering childcare.
- Objective 2g: Look for opportunities to provide programming for people with disabilities outside of the Verne Cox Multipurpose Recreation Center.
- Objective 3b: Work with Healthy Living Matters and Pasadena Vibrant Community to lead coalitions that help identify and address Pasadena's critical health issues and work towards partnerships to improve conditions through expanding park facilities and programming.

- Objective 3c: Expand partnerships with local and regional hospitals, community health centers, public health agencies, and health funders
    - Work with health partners on programming and events
    - Work toward goal of having health partners provide or fund 10 programs serving 2,000 residents per year by 2025 and 15 programs/events serving 3,000 citizens by 2030
- Objective 3d: Expand partnership with Pasadena Independent School District (PISD) with a focus on leveraging parks and park programming to improve student and family health
- Objective 4g: Partner with Armand Bayou Nature Center to expand environmental/outdoor education opportunities for Pasadena residents—both at Armand Bayou Nature Center and in PARD parks.
- Objective 6a: Provide all programming, outreach, and scholarship information in Spanish as well as English.
- Objective 6f: Monitor participation in and demand for programs and adjust offerings to meet the needs of the community with a focus on equity and health.
- Objective 6h: Expand youth sports programming, especially soccer.
    - Identify opportunities to recruit additional volunteer coaches or work with health partners to identify new funding streams to pay additional coaches
    - Create training program for new coaches; consider starting youth referee program to establish a pipeline for future coaches
    - Focus outreach and social media resources, particularly in Spanish, on recruiting coaches and participants
- Objective 6i: Respond to community programming demands through:
    - Looking into expanding availability of aquatics programming by working with HOAs to provide additional sites, particularly in southern Pasadena
    - Building stronger ties between Madison Jobe Senior Center and other community/recreation centers. Establish a pilot project for multi-generational programming.
    - Considering implementing an adult soccer league with a variety of available time slots. To encourage Hispanic/Latinx participation, use bilingual traditional marketing and social media advertising.
- Objective 6j: Enhance household participation in parks and recreation programming (including events) to at least 15% of all Pasadena residents by 2025; work with alternative providers to increase level of service in areas without easy access to PARD community/recreation centers; this includes much of the southern portion of the city

Program Life Cycle Analysis

While implementing these and any other new programming goals, PARD should consider the anticipated life cycle of the new program using the life cycle analysis tool in Chapter 8 (Tools and Guidelines).











8 Tools & Guidelines

Overview

The Healthy Parks Plan is designed to be not only a report, but a set of tools that the Pasadena Parks and Recreation Department and its partners can use for ongoing adaptive planning and management. Conditions in Pasadena will change over time, as will opportunities for funding, partnerships, and parkland acquisition. The Healthy Parks Plan is designed to be responsive to these changes. The Plan outlines priorities for the next five years, but the tools and guidelines can also be used much farther into the future. As noted in the preface of this report, there are a number of key elements of the Healthy Parks Plan that can serve as ongoing tools. These are listed below along with where they can be found.

The tools and guidelines in the chapter include a Project Selection Criteria and Rubric that guides where the asset should be, what amenities should be here, and how the project could be implemented. The guide goes into more detail with Healthy Parks Design Guidelines on how to select park space and amenities broken into six categories with related toolkits. The categories include: MOVE, RELAX, GATHER, COOL OFF, BREATH, and SUPPORT NATURE. Next a Finance Feasibility Study Summary provides guidance on mechanisms for funding projects in the area. This chapter also includes two assessment tools, a Programming Life Cycle Assessment and a Park Assessment Tool, and finally the end of the chapter has an example Park Evaluation Tool worksheet.

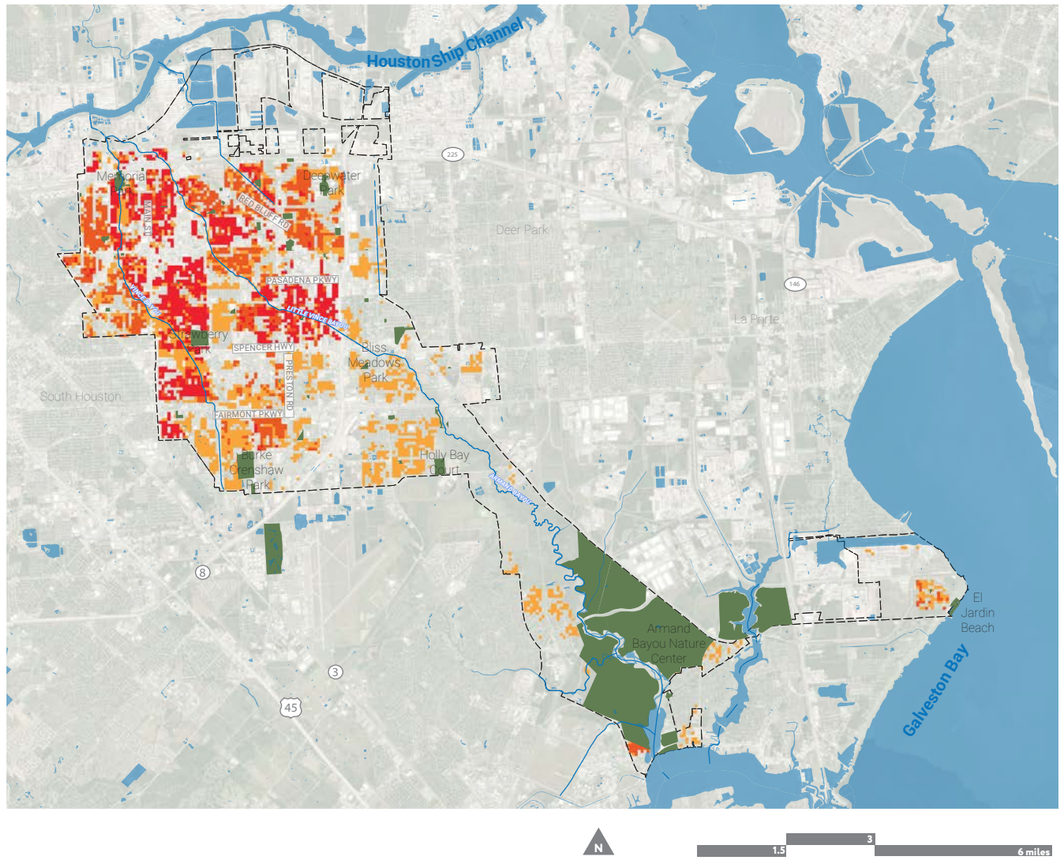
Pasadena Healthy Parks Plan identifies priority areas where park investments will maximize improvements to community health and equity. The data-driven mapping process identifies these priority areas by not only examining existing parks, existing recreation facilities, and access to these parks and facilities, but by also examining social and environmental determinants of health. These include socioeconomic factors, the built environment, community health, and environmental hazards. After examining over 50 variables, the entire city of Pasadena was ranked on a scale of “Low Need” to “Very High Need” in park investments.

The mapping process determined that not every neighborhood had the same need for park investments. Certain areas had more at-risk residents with high social vulnerability and poor community health outcomes; some areas had factors associated with poor environmental quality; and other areas did not have safe access to a high-quality park. Due to this variability of need and geography, this chapter aims to provide a variety of solutions that can be applied to the specific need of the surrounding community and environment.



Source: pasadenatxphoto.net

Figure 8-1. Overall Priorities Map





Park Assessments

The final overall priorities map indicated geographic areas in Pasadena of moderate to highest need for park investments. From the overall priority scores, ten city-owned parks were selected for further site evaluation, distributed geographically across Pasadena. Park assessments included inventorying amenities, evaluating park quality and function, and documenting access and safety concerns. Compiling accurate, up-to-date information about the ten identified priority parks helped determine gaps and opportunities for amenities investments and enhancements.

The Design Guidelines toolkit addresses underlying gaps and opportunities by offering a suite of amenities that were underrepresented in the parks, as well as amenities that could pose solutions to multiple community and environmental risks.

The City of Pasadena will continue to evaluate parks over time. Any new or existing park that receives future investment should first undergo the Healthy Parks Park Assessment, which is detailed in the decision flow chart in the following section.

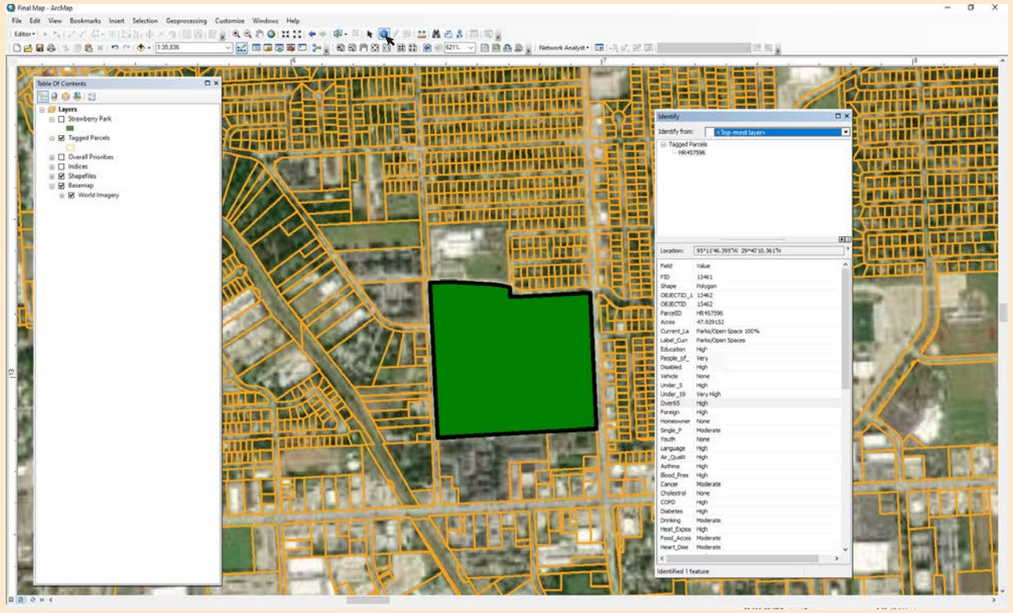


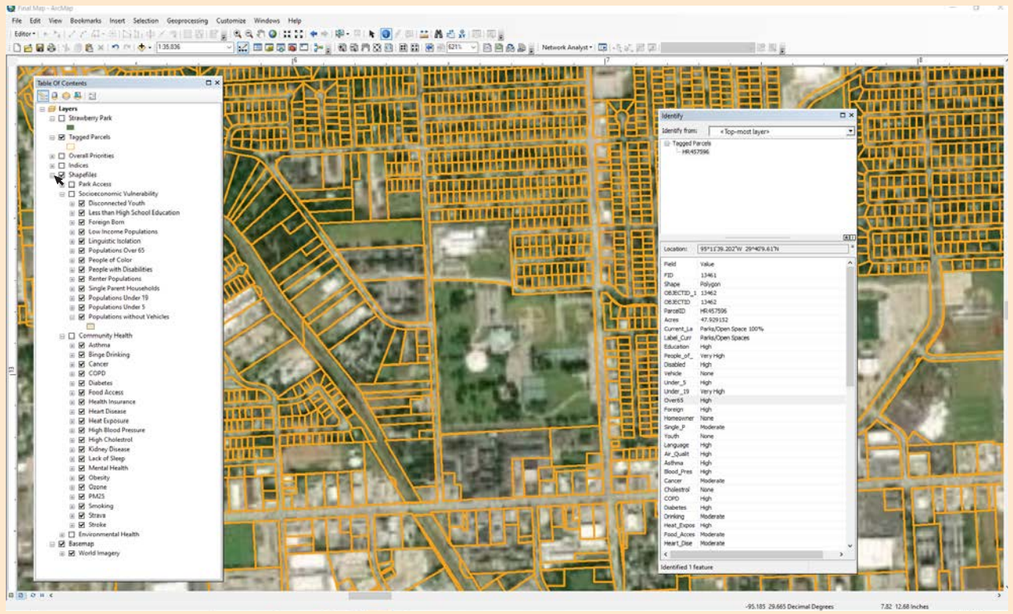
Image of Memorial Park in Pasadena taken during a Park Assessment

ArcGIS Tool

The mapping analysis as part of the Pasadena Healthy Parks Plan is all housed within an ArcGIS geodatabase. A geodatabase is a collection of geographic datasets of various types stored in a common file system folder. This information can be opened in ArcMap to view all Pasadena parks, the score of 50 different variables analyzed for each park, and the park priority level. The graphic below shows how the data can be viewed and accessed. This specific data provides a tool for the Parks and Recreation Department, the City of Pasadena, and their partners to dive further into the qualities of each park system. The chapter sections that follow provide tools for project and healthy park amenity selection, funding strategies, and other important assessments and tools.

The ArcGIS data, when opened in ArcMap can be used to view the mapping analysis results and the value that each park has been assigned. The Figure to the right shows Strawberry Park, a high priority park in northwest Pasadena. The identify tool can be used to click on the parcel and show the data that is linked to the park. The ArcGIS Table of Contents shows all the different attributes assigned to the park and the surrounding parcels under the main categories of Socioeconomic Vulnerability, Community Health, and Environmental Health. This can be used to understand the context in which the park is located and what type of interventions might best support community needs.





Images showing ArcGIS Parcel Selection Tool

Project Selection Criteria

These project selection criteria were used to identify the priority projects in Chapter 7 (Priority Projects and Capital Improvements). The criteria are also intended for ongoing use by the Parks and Recreation Department, the City of Pasadena, and their partners as they evaluate potential new projects and adapt to changing circumstances and opportunities.

The project selection criteria are based on all of the data and community input that went into developing the system-wide goals and objectives were also identified in Chapter 6. Priority projects should help the City of Pasadena meet the ACCESSIBLE, WELCOMING, HEALTHY, ENVIRONMENTALLY RESILIENT, CONNECTED, and FISCALLY SOUND goals outlined in Chapter 7. Each potential project should be evaluated based on its potential to strategically address Pasadena's most pressing park needs.

Project Selection Criteria

1. Where

First, criteria target WHERE new parks or park and connectivity improvements should be located.

1. Is the location an equity focus area?
   Review:
   - *Socioeconomic Vulnerability Map*
   - *Community Health Indices*

2. Does the location fill a park access gap?
   Review:
   - *Parks Access Map*
   - *Programming Map*

3. Does the location fill a connectivity gap?
   Review:
   - *Connectivity Map*

4. Does the location help protect an important environmental value (for example: protect wetlands or floodplain) or reduce an environmental risk (for example: reduce an urban heat island)?
   Review:
   - *Environmental Value Map*
   - *Environmental Risk Map*

*All maps are in Chapter 4 (Mapping Priorities)

2. What

Second, criteria target WHAT amenities should be provided or improved.

1. Once a priority area is selected (either an existing park or a new park area), determine your park typology based on the park typology definitions in the Healthy Parks Plan report.
   These definitions can be found in Chapter 3. How large is your park, and what is its service area?
2. Evaluate your park by utilizing the Healthy Park Assessment methodology to determine gaps in healthy parks amenities.
   If you chose an existing park, perform a Healthy Park Assessment on-site. This methodology can be found in later sections of this chapter. How does your park or site have opportunities for improvement? What amenities is it missing?
3. Review the Park System Standards to determine system-wide gaps your park's improvements could fill.
   What amenities are lacking in your park's service area?
4. Review the community health and environmental data to determine the health issues affecting the park's surrounding service area residents.
   Does the location address community health and environmental health needs?
   - *Community priorities from engagement*
   - *Unmet park system standards*
   - *Programming Map*
5. Ensure the park meets the Standards in the Basics Checklist on p. 144.
   Prioritize park improvements that bring the park up to the baseline standard.
   - *Environmental Risk Map*
   - *Environmental Value Map*
   - *Community Health Map*
6. Select amenities in the Health Parks Design Guidelines Toolkits
   Select amenities from each category in the toolkit to address community health, environmental issues, and service gaps.

3. How

Finally, criteria target HOW projects will be implemented.

1. Does the project help the city leverage substantial outside funding?

2. Does the project help the city leverage durable partnerships with outside partners?

3. Does the project provide more substantial benefits than other potential projects that would cost about the same?

4. Does the project overburden the park system's operations and maintenance capacity?

Table 8-1. Project Selection Scoring Rubric

WHERE	WHAT	HOW
Equity focus area? Score 0-3 **Fill park access gap?** Score 0-3 **Fill connectivity gap?** Score 0-3 **Meet an important environmental need?** Score 0-3 **In a top 10 priority park?** Score 0 or 1	**Fill service/amenity gap?** Score 0-4 **Address community and environmental health needs?** Score 0-4	**Help the city leverage outside funding**? Score 0-3 **Help the city leverage partnerships?** Score 0-3 **Avoid overburdening the park system's O&M capacity?** Score 0-3
Total possible: 13	**Total possible: 8**	**Total possible: 9**

First, criteria target WHERE new parks or park and connectivity improvements should be located. Locations are prioritized if they:

- Target an equity focus area (based on Socioeconomic Vulnerability and Community Health Indexes)
- Fill an park access or park service gap (based on Park Access Map + Programming Map as appropriate)
- Fill a key connectivity gap (for connectivity projects, based on Connectivity Map)
- Help protect an important environmental value (for example: protect wetlands or floodplain) or reduce an environmental risk (for example: reduce an urban heat island)
- Location in a top10 priority park (those included in the In-Depth Park Assessments)

Second, criteria target WHAT amenities should be provided or improved. Improvements are prioritized if they:

- Fill a service/amenity gap
  - Community priorities from engagement:
    - Priority amenities: Restrooms, drinking fountains, playgrounds, pathways, pavilions/ covered spaces for gathering and picnic areas, splash pads/water features
  - Unmet park system standards
  - Programming Map
  - In-depth park assessments
- Address community health and environmental health needs
  - Environmental Risk Map: Are there environmental risks in the air (air pollution exposure, susceptibility to flooding) that need to be taken into account in project design?
  - Environmental Value Map: Are there important environmental resources (waterways, areas with high levels of native biodiversity) that need to be avoided or protected?
  - Community Health Map: What are the particular health concerns in the neighborhood of the potential project?
  - Make sure the park meets the standards in the basics checklist on the following page.
  - Select an amenity from the Healthy Parks toolkits described more in the following pages.

Projects are scored more highly if they help meet an additional key component of the Healthy Parks Plan goals by:

- Improving park safety or maintenance or otherwise making a park more welcoming
- Improving accessibility for people with disabilities
- Helping to improve community health through providing opportunities for physical fitness, social gatherings, connecting to nature, or reducing extreme heat
- Improving environmental resilience by protecting/ restoring native ecosystems or helping to mitigate flooding

Finally, criteria target HOW projects will be implemented. Projects are rated more highly if they:

- Help the city leverage substantial outside funding
- Help the city leverage a durable partnerships with outside partners (particularly industry partners or health partners)
- Provide more substantial benefits than other potential projects that would cost about the same
- Do not overburden the park system's operations and maintenance capacity

Healthy Park Design Guidelines

Parks and Health

The Pasadena Healthy Parks Design Guidelines offer a suite of evidence-based park amenities organized within a health-enhancing "toolkits," to demonstrate how park amenities can maximize the health benefits of parks. Having a variety of park amenities will attract diverse park visitors, as well as help improve community health. Public parks play a critical role in public health. The health benefits of parks include:

1. **Providing access to opportunities for physical activity.** Research shows people who live near parks are more likely to exercise outdoors. Increased physical activity helps reduce risk factors such as obesity and related diseases.

2. **Increasing access to close-to-home nature.** Research shows that exposure to nature reduces stress and improves immune function—increasing both mental and physical health.

3. **Strengthening social connections and supporting networks** through providing space and activities that promote social gatherings. Research shows that strong social connections are closely tied to mental and physical health.

4. **Reducing environmental risks.** Research shows that tree canopy, well-designed landscaping, and green infrastructure in parks can reduce air pollution and extreme heat, protect water quality, and reduce flooding. Each of these environmental risks pose significant health risks that can be mitigated by parks.

These Design Guidelines were driven by an equity focused mapping and public engagement process. These efforts considered the systemic inequities of Pasadena's residents and Pasadena's development history to provide increased support and parks investment in areas where residents have the fewest resources.

Toolkit Index

The Pasadena Healthy Parks Design Guidelines provide recommended amenities to be integrated into new or existing parks in Pasadena. They are broken up into six categories:

- **Move**, which focuses on promoting physical activity in parks;
- **Relax**, which focuses on the mental health benefits that a connection with nature provides;
- **Gather**, which provides recommendations on how to bring people together in parks to build community and social support;
- **Cool Off**, which focuses on how parks can reduce extreme heat and cool neighborhoods;
- **Breathe**, which provides recommendations that improve air quality; and
- **Support Nature**, which demonstrates how supporting biodiversity and ecology can benefit nature and people.

Each category has three to six tools. Healthy Parks should integrate two to three tools from each category to improve health in a multifaceted way. In the Move category, be sure to select tools that serve a range of age groups. Some activities, such as athletic fields, may not be appropriate for the very young or very old.

Toolkits

Move Pg. 146

Relax Pg. 150

Gather Pg. 154

Cool Off Pg. 158

Breathe Pg. 162

Support Nature Pg. 166

Design Basics Checklist

Healthy Parks must meet a set of basic standards to ensure that they are accessible, safe, restorative, and equitable. These standards provide a foundation onto which healthy parks can be built using the tools, programs, and features recommended in this toolkit.

Park Access

- ☐ ADA-accessible entrances
- ☐ Sidewalks along roads accessing park entrances
- ☐ Sufficient parking and bicycle parking
- ☐ Sufficient accessible parking spaces
- ☐ Playgrounds inclusive to children in wheelchairs
- ☐ No “hostile architecture”

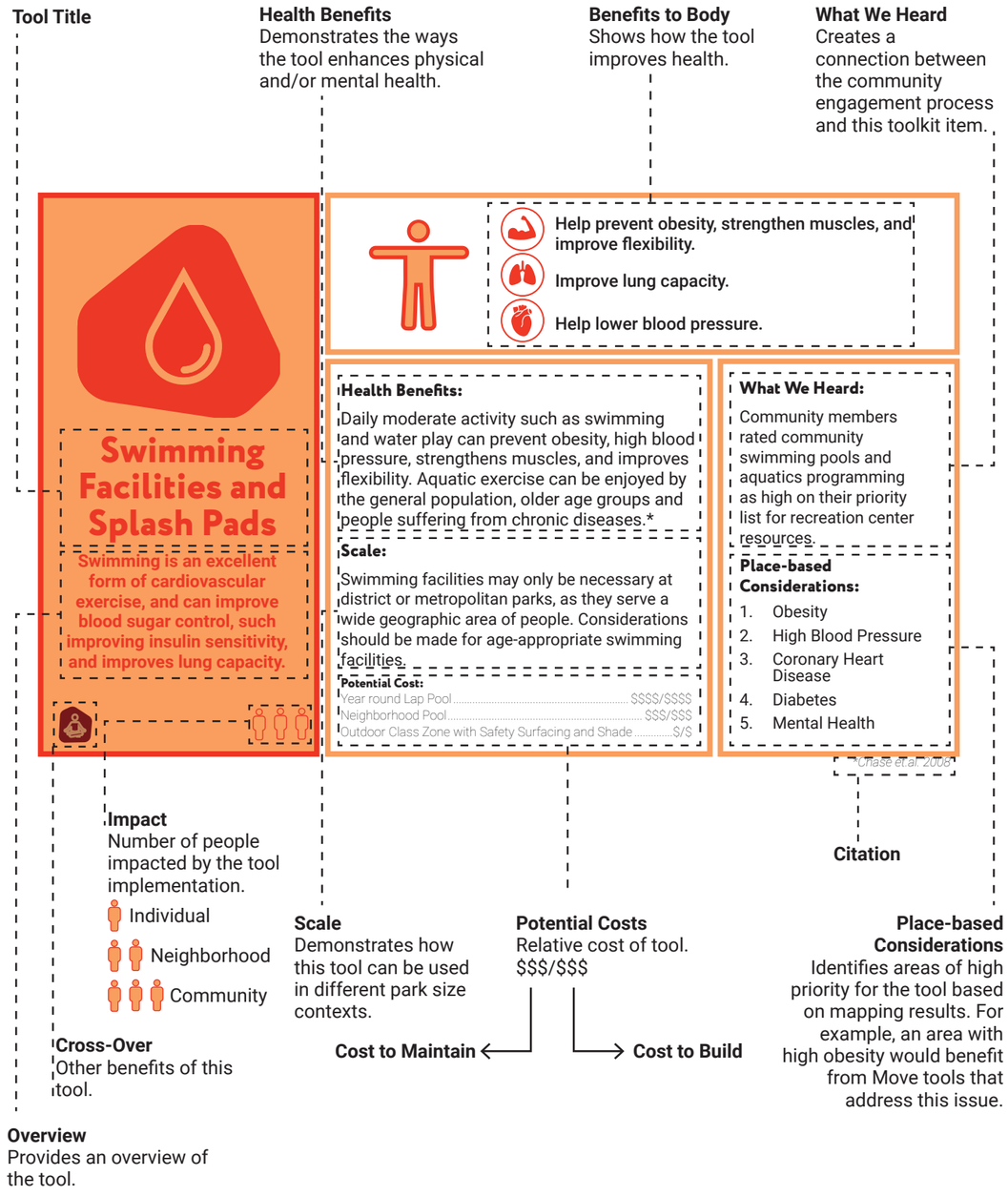
Basic Supportive Facilities

- ☐ Permanent restrooms
- ☐ Trash and recycling receptacles
- ☐ Drinking fountains

Basic Safety

- ☐ Intuitive wayfinding with clear views and multiple ways to get around park
- ☐ No litter, vandalism, graffiti
- ☐ Clear directional signage

Design Guidelines Tool Key



Move

Sedentary lifestyles of low physical activity increase the risk of obesity, high blood pressure, diabetes, anxiety, and depression.

Public parks and amenities are one tool health professionals, planners, and city policy-makers can use to provide opportunities for active lifestyles.

Parks that encourage visitors to move their bodies should offer a range of activities and amenities for all of ages and capabilities. Low-impact activities may include walking trails, kayak/canoe launches, and yoga in the park. Amenities for more strenuous cardiovascular exercise may include athletic fields, lap pools, and tracks.

A range of age-appropriate amenities should be chosen so all ages and abilities have the opportunity to exercise. It is important for park amenities to reflect the recreational desires of the communities that use the parks. To ensure the parks will be used, this toolkit provides a suite of tools selected from the outcomes of the Pasadena Healthy Parks community engagement process.

Goals Alignment

Objective 1h

- Extend recreation programming into southern area of Pasadena that does not have close-to-home access to existing recreation centers

Fitness Programs

Fitness programs include classes, organized fitness events, such as races for charity, and other public events that promote physical fitness.

Help prevent obesity, strengthen muscles, improve flexibility, and balance.

Help lower blood pressure.

Health Benefits:

Organized fitness programs prevent obesity, lower blood pressure, strengthen muscles, and improve flexibility and balance. In addition, multicomponent physical activity programs — including balance, strength and cardio — are more effective than doing a single type of physical activity and can reduce the number of injuries experienced.[126]

Scale:

Fitness programs can be organized at many different scales. Even small pocket parks can host yoga classes or Tai Chi.

Potential Cost:

Informal Lawn ..... $/$
Trail or Asphalt Park Path ..... $/$$
Outdoor Class Zone with Safety Surfacing and Shade ..... $$/$$

What We Heard:

Expanding youth programming is the highest programming priority, followed by aquatics and special events.

Place-based Considerations:

1. Obesity
2. High Blood Pressure
3. Coronary Heart Disease
4. Diabetes
5. Mental Health

Athletic Fields

Children who play sports have a lower body mass index. Soccer, basketball, and other sports that provide cardiovascular exercise helps prevent obesity, lowers blood pressure, and strengthens muscles.

Help prevent obesity, strengthen muscles and bones.

Help lower blood pressure.

Health Benefits:

Sports and other activities on athletic fields help prevent obesity, lower blood pressure, strengthen muscles, and strengthens bones.[127] Certain athletic field activities can provide more vigorous intensity aerobic exercise.

Scale:

While pocket parks may not be large enough for soccer or basketball courts, they may have smaller opportunities for games, such as outdoor ping-pong tables, basketball half-courts, or pickleball.

Potential Cost:

High school-level soccer field with bleachers, goals ..... $$$/$$$
Concrete high school-level basketball court with goals ..... $$/$$
Open field for informal games ..... $/$$

What We Heard:

Hispanic/Latinx respondents were much more likely to have used soccer fields, basketball courts, and playgrounds than white respondents.

Place-based Considerations:

1. Obesity
2. High Blood Pressure
3. Coronary Heart Disease
4. Diabetes
5. Mental Health

Swimming Facilities and Splash Pads

Swimming is an excellent form of cardiovascular exercise, and can improve blood sugar control, and lung capacity.

- Help prevent obesity, strengthen muscles, and improve flexibility.
- Improve lung capacity.
- Help lower blood pressure and prevent coronary heart disease.

Health Benefits:

Daily moderate activity such as swimming and water play can prevent obesity, high blood pressure, strengthens muscles, and improves flexibility. Aquatic exercise can be enjoyed by the general population, older age groups and people suffering from chronic diseases.[128]

Scale:

Swimming facilities may only be necessary at parks that they serve a wide geographic area of people. Considerations should be made for age-appropriate swimming facilities.

Potential Cost:

Year round Lap Pool	$$$$/$$$$
Neighborhood Pool	$$$/$$$
Outdoor Class Zone with Safety Surfacing and Shade	$/$

What We Heard:

Community members rated community swimming pools and aquatics programming as high on their priority list for recreation center resources.

Place-based Considerations:

1. Obesity
2. High Blood Pressure
3. Coronary Heart Disease
4. Diabetes
5. Mental Health

Fitness Equipment

Fitness equipment in parks can improve strength, flexibility, balance, and cardiovascular fitness. These help prevent obesity, lowers blood pressure, and increases muscle strength.

- Helps prevent obesity, strengthens muscles, and improves balance.
- Helps lower blood pressure.

Health Benefits:

Using fitness equipment helps prevent obesity, lowers blood pressure, increases muscle strength, and improves balance. [129]

Scale:

In large parks, fitness equipment may be scattered along a walking path to create a fitness trail. In small parks, equipment may be clustered closer together.

Potential Cost:

Outdoor exercise equipment with safety surfacing and shade structure	$$/$$$
3-5 pieces of strength focused equipment	$/$

What We Heard:

Fitness equipment emerged as a medium priority for Pasadena residents.

Place-based Considerations:

1. Obesity
2. High Blood Pressure
3. Coronary Heart Disease
4. Diabetes

Water Recreation

Water recreation can include kayaking, canoeing, and paddle boarding. These activities help prevent obesity, lowers blood pressure, and increases body strength.

- Boosts happiness levels.
- Helps prevent obesity and increases core and upper body strength.
- Helps lower blood pressure.

Health Benefits:

Water recreation helps prevent obesity, lowers blood pressure, and increases abdominal and upper body strength.[130] Proximity to water has the added benefit of providing a relaxing way to get exercise and boost happiness levels[131].

Scale:

Small waterfront parks can have boat launches or docks. Larger parks may consider boathouse and recreation centers.

Potential Cost:

Boathouse/Rec Center	$$$$/$$$$
Accessible dock with parkway and walkway	$$$/$$$
Accessible dock	$$/$$

What We Heard:

Aquatics programming was the second highest priority for parks programming.

Place-based Considerations:

1. Obesity
2. High Blood Pressure
3. Coronary Heart Disease
4. Diabetes
5. Mental Health

Hiking & Biking Trails

Hiking and biking trails can be used in many ways by individuals with different skill levels. In addition to providing health benefits, trail networks can reduce vehicular use by providing an alternative mobility type.

- Help prevent obesity and strengthen muscles.
- Help lower blood pressure

Health Benefits:

Moderate-to-vigorous physical activity utilizing hiking and biking trails can prevent obesity, strengthen muscles, and lowers blood pressure[132].

Scale:

Trails systems can be a short 1 mile loop or connect to regional wide systems that continue for multiple miles. Consider tying trails to larger networks to promote more use.

Potential Cost:

Trail with asphalt surface	$/$$
Trail with natural surface	$

What We Heard:

Residents love the trails in Pasadena's parks and nearly half would like to be able to walk or bike to the park.

Place-based Considerations:

1. Obesity
2. High Blood Pressure
3. Coronary Heart Disease
4. Diabetes
5. Mental Health

Relax

Many communities, especially communities of color and lower-incomes, are exposed to chronic stress.

Everyone can benefit physically and psychologically from parks that are designed to provide respite and relaxation. City neighborhoods are often stimulating environments, but this can lead to a sensory overload that make it difficult to find a peaceful moment. Increasing the access that communities have to nature directly impacts their physical, emotional, and psychological well-being. Physical interventions can be introduced to a park space depending upon the context that directly respond to varying environmental stressors. These responses can include a variety of water or planting features from small to large that eliminate traffic noise or green spaces that are designed to be accessible, open and welcoming. Strategically placed vegetation can help dampen noise or a fountain can provide a place to sit and reflect peacefully.

Goals Alignment

Objective 2b

- Implement equity-focused environmental design principles that help prevent crime and promote positive behavior in parks where there are safety concerns (real and perceived)

Objective 2c

- Address maintenance issues that contribute to public safety concerns

Objective 2h

- Add cultural and artistic elements to parks, add visual unity through signage and wayfinding

Water Features

Water features can provide spaces for calm reflection or active play depending upon their scale. Time spent in "blue space" has been shown to decrease stress levels.

Decreases stress level and increase happiness.

Health Benefits:

Water features and "blue space" can decrease stress level and increase overall happiness.[133] They also can have the added benefit of providing a pleasant soundscape that can buffer other urban sounds.[134]

Scale:

Water features can be a small standing fountain, larger fountains that people can sit by, or more natural streams and ponds.

Potential Cost:

Neighborhood Pool	$$$$/$$$$
Splash Pad	$$/$$
Dry Creek Rain Garden	$/$$

What We Heard:

Almost 30% of park visitors have used splash pads or water features in Pasadena parks in the last year.

Place-based Considerations:

1. Heat Exposure
2. Mental Health

Green Spaces

Green spaces shade hot surfaces, which can greatly reduce the "heat island" effect. They have also been shown to reduce stress by providing safe spaces to relax, exercise, and socialize.

Decrease stress level and mental fatigue.

Help prevent heat-related illnesses.

Health Benefits:

Vegetation and natural elements provide for restorative experiences in a number of ways. Green spaces can decrease mental fatigue, stress levels and the inability to concentrate.[135]

Scale:

Green Spaces can range from pocket parks, large neighborhood parks and conservation areas.

Potential Cost:

100+ Shade Trees	$$/$$
10 - 50 Shade Trees	$/$

What We Heard:

Shade (72%) was by far the most common response for what makes parks feel relaxing. This was followed by plants and trees (64%).

Place-based Considerations:

1. Heat Islands
2. Asthma
3. Mental Health
4. Vacant Lot Density
5. Air Quality
6. Flood Zone

Visibility & Safety

Ensuring adequate lighting throughout the park allows all community members to move through the space easily. Maintaining open sight lines across the park also allows for users to see who and what is around them.

Decreases stress level and reduces fear.

Health Benefits:

Providing site safety, and visibility creates a sense of security, connection, social interaction, and quality of life improvement through the reduction of fear and ease of navigation. Improved visibility and the feeling of safety decreases stress level.[136]

Scale:

Visibility and safety can look like increased lighting, picking plants that don't grow as densely to preserve sight lines, and designing walkways that are visible from across the park.

Potential Cost:

Pole lights throughout a neighborhood a park ..... $$/$$$
Solar lights at a trailhead ..... $/$$

What We Heard:

59% of park visitors have said that feeling safe is relaxing while visiting a park.

Place-based Considerations:

1. Crime Statistics
2. Disconnected Youth
3. Mental Health

Noise Reduction

Noise pollution can amplify stress when it prevents people from truly being able to relax. In park spaces, noise pollution can be counteracted through landscaped barriers, water features, and explicitly designed sound barriers.

Decreases stress level and deepens relaxation.

Health Benefits:

The reduction of noise pollution from vehicular traffic or other urban sounds, allows for deeper relaxation, decreasing stress levels, and increases general well-being within those outdoor spaces.[137]

Scale:

Noise reduction can happen through a variety of interventions, from increased plantings to water features.

Potential Cost:

Engineered concrete sound barrier ..... $$/$$$$
Landscape barrier ..... $$$/$$$

What We Heard:

49% of park visitors said that quiet parks are more relaxing.

Place-based Considerations:

1. High Blood Pressure
2. Mental Health

Accessibility & Wayfinding

Design for accessibility and ensuring adequate wayfinding throughout a park allows all community members to move through the space easily. Wayfinding such as signs or landscape cues can make people feel more relaxed.

Decreases stress level and increases ability to move freely in the park.

Health Benefits:

Providing site accessibility and wayfinding creates a sense of security, connection, social interaction, and quality of life improvement through the reduction of fear and ease of navigation for people of all ages and abilities.[138]

Scale:

ADA accessible trails, sidewalks, tables, and equipment can be installed from large parks to smaller pocket parks. Signage, clear viewpoints and sight lines can also be used to increase ease of mobility.

Potential Cost:

ADA accessible equipment ..... $$/$$$
ADA accessible trail & signage ..... $/$$

What We Heard:

Accessibility emerged as a priority for residents of Pasadena, and was a major topic in the accessibility focus group.

Place-based Considerations:

1. Crime Statistics
2. Disconnected Youth
3. Mental Health

Gather

Parks are places for friends and families to gather.

Outdoor space can be designed to be more welcoming and amenable to gatherings. Making intentional space for community events, also encourages strong community identity and social connections. Events can be planned and held on a regular basis to encourage people to use parks to celebrate holidays and cultural events, engage in group exercise, and experience the arts in the outdoors. Physical interventions, like shade structures or pavilions, benches, and grills can be included to make spaces more comfortable for a variety of groups and gathering types. Special care should be taken to ensure that park users of all ages, abilities, and identities feel comfortable and welcome using the spaces.

Goals Alignment

Objective 2a

- Promote events, programming, and other positive activities in parks that are perceived as unsafe

Objective 2d

- Ensure that parks have adequate comfort amenities to feel welcoming

Benches

Benches, tables, picnic areas, and flexible open space provide areas for people to gather and socialize. Shared experiences helps to lessen feelings of isolation.

Help prevent depression and improve social cohesion.

Health Benefits:

Benches, tables, and picnic areas provide places for people to gather and connect. This creates social cohesion, which has been shown to ease stress and depression.[139] Trees cover in gathering spaces also has been shown to improve social cohesion.[140]

Scale:

Benches can be placed regularly around a park space to ensure that visitors feel welcome to sit and rest.

Potential Cost:

Benches, tables, picnic areas ..... $$

What We Heard:

Some parks in Pasadena do not feel very welcoming because they lack seating.

Place-based Considerations:

1. Disabled Population
2. Mental Health
3. Amenities

Pavilions

Pavilions provide sheltered spaces, which help to combat heat-related illnesses and depression by encouraging socializing outdoors with reprieve from sunburn and heat.

Help prevent depression by supporting socialization.

Help prevent sickness from heat exposure.

Health Benefits:

Sheltered spaces can provide a shaded place for people to gather, increasing social opportunities which help prevent depression and heat-related illness from exposure to the elements.[141]

Scale:

Pavilions range in size. A smaller pavilion may be appropriate in a smaller park, but a larger one or multiple smaller pavilions can be placed in a larger park.

Potential Cost:

Pavilions ..... $$$

What We Heard:

Spending time with friends and family is the most common reason for using parks according to the Community Survey

Place-based Considerations:

1. Heat Exposure
2. Mental Health
3. Disconnected Youth
4. Tree Canopy

Community Gardens

Participating in a community garden increases fruit and vegetable consumption, promotes physical activity, and strengthens social ties. They also provide a space to bond and learn with one another.

Relieve stress, anxiety, and depression.

Help prevent obesity and improves nutrition.

Health Benefits:

Community gardens provide stimulating social connection, produce nutritious food, and create opportunities for recreation, exercise, therapy and eduction, thus helping to prevent obesity and improve overall nutrition.[142]

Scale:

Community Gardens can vary greatly in size. Small patches of raised beds can be located in a smaller portion of a garden, or larger plots can be partitioned out to provide more food access.

Potential Cost:

Raised beds and plots ..... $

What We Heard:

Community members expressed an interest in farmers markets and other events in parks.

Place-based Considerations:

1. Food Access
2. Obesity
3. Cholesterol
4. Low Income Households

Social Events

Social cohesion and a strong local community can be formed through the connections people make at social events. Forming stronger social connections can ease depression and reduce risk of heart disease and stroke.

Help prevent depression.

Support heart health.

Health Benefits:

People in communities having strong social ties show greater resilience and ability to cope with change. Social events help prevent depression and physical social activities can support heart health.[143]

Scale:

Events can operate at a variety of scales depending on the programming. Special care should be taken to ensure that programs offered are welcoming and provide opportunities for all types of participants.

Potential Cost:

Social events programming ..... $$

What We Heard:

There is a great deal of support for having more events in Pasadena parks. More events was the second biggest priority for improving parks for social gatherings.

Place-based Considerations:

1. Mental Health
2. Disconnected Youth
3. Linguistic Isolation
4. Households Without Cars

Picnic Tables & Barbecues

Picnic tables and barbecues provide open space for community members to gather, cook, and eat together. This in turn builds community connections and social bonds.

Help to prevent depression and social isolation.

Health Benefits:

People in communities having strong social ties show greater resilience and ability to cope with change. Gatherings at picnics and barbecues help to prevent depression and social isolation.[144]

Scale:

These spaces can be as small as a few grills and benches, to larger tables under shade structures and more professionally sized grills.

Potential Cost:

Tables and grills ..... $

What We Heard:

Picnic areas and seating were among the top priorities for improving parks for social gatherings. These features, along with places to cook, were especially strong priorities.

Place-based Considerations:

1. Low Income Households
2. Linguistic Isolation
3. Food Access

Cool Off

The heat of a Texas summer can make spending time outside difficult and dangerous.

Trees and shade structures can provide welcome relief, especially when they shelter benches and tables. Pavement choices can also influence park temperatures; lighter materials, for example, tend to reflect rather than absorb and retain heat. Vegetation and water features support evaporative cooling. Resting areas can be placed where they are likely to catch a breeze. Cool spots will benefit all community members, but particularly those who are especially vulnerable to heat stress because of their age or underlying health conditions. Exposure to heat can trigger heat-related illnesses that can include heat rash, heat cramps, heat exhaustion, and heat stroke.

People with underlying health problems, such as heart disease, chronic illness, asthma, lung disease, and obesity are at higher risk for heat-related diseases.

Goals Alignment

Objective 3f

- Prioritize adding park features, especially trees, canopies, and pavilions that help protect park users from extreme heat.

Objective 4e

- Work with partners to expand Pasadena's urban forest

Trees

Trees can reduce air temperature through evaporative cooling and provide shade from direct heat. Also, trees can improve air quality, which can worsen as temperatures increase.

- Help with mental health and mood.
- Reduce air quality related illnesses.
- Help prevent heat-related illnesses.

Health Benefits:

People in urban areas have a lower risk of psychological distress if they have more trees within a walkable distance of their homes.[145] Trees also reduce temperature and can improve air quality.

Scale:

Larger regional and regional plus parks might require assessments of tree health and canopy cover whereas smaller park spaces, especially those with sports fields, may not have many trees and could benefit from a tree planting project.

Potential Cost:

100+ Shade Trees ..... $$/$$
10 - 50 Shade Trees ..... $/$

What We Heard:

We heard from the telephone poll that heat was a major concern for Pasadena residents.

Place-based Considerations:

1. Heat Exposure
2. Asthma
3. Heat Islands
4. Tree Canopy
5. Mental Health

Shade Structures

Shade structures can provide temporary relief from direct heat from the sun. Adequate shading and sheltered activity areas allow for safe park usage.

- Help prevent depression and improve social cohesion.
- Help prevent heat-related illnesses.

Health Benefits:

Shade structures help prevent heat-related illnesses by providing spaces for people to escape the heat.[146] They also provide the depression-easing benefits of improved social cohesion.

Scale:

Shade structures can be located throughout park spaces of any size, especially in pocket parks that might not have tree canopy. These structures can have great impact in parks that have benches, tables, and playgrounds that are not currently shaded by trees.

Potential Cost:

40x60' shade structure with lighting ..... $$$$/$$$$
Three 10x20' shade structures ..... $$$/$$$

What We Heard:

We heard from the telephone poll that heat was a major concern for Pasadena residents. Shade structures enable residents to find relief from direct heat.

Place-based Considerations:

1. Heat Exposure
2. Heat Island
3. Asthma
4. COPD

Cool Pavement

Paving materials can reach upwards of 130° F during hot summer months, this heat can radiate into the air creating even hotter environments that put people at risk for heat-related illnesses.

Helps prevent heat-related illnesses.

Health Benefits:

Cool pavement helps prevent heat-related illnesses by providing more comfortable spaces for people to inhabit for longer periods of time.[147]

Scale:

These materials can be used in parking lots, playgrounds, or sidewalks surrounding park spaces. Scale here is influenced by the need for paving or existing construction plans that will require pavement. Some cool pavements like permeable pavers have the added benefit of absorbing stormwater.

Potential Cost:

Permeable Pavers ..... $$$$/$$
Permeable Concrete ..... $$/$$
Concrete ..... $/$

What We Heard:

Heat is a major concern for Pasadena residents. Cool pavements reduce the amount of heat radiated back into the atmosphere.

Place-based Considerations:

1. Heat Exposure
2. Heat Islands
3. Asthma
4. COPD

Green Infrastructure

Plants and trees cool the local environment and remove pollutants out of the atmosphere that contribute to higher temperatures. Green infrastructure also provides ways to reduce energy use and manage flooding.

Helps with mental health and mood.
Helps ease the symptoms of COPD.
Helps prevent heat-related illnesses.

Health Benefits:

Green infrastructure helps prevent heat-related illnesses, boosts mental health, and may ease the symptoms of chronic obstructive pulmonary disease (COPD), a chronic inflammatory lung disease.[148]

Scale:

Green infrastructure projects focused on reducing heat can range from trees and native plantings to green walls and roofs. Parks that have community centers or existing buildings can integrate green walls and roofs. Smaller parks without buildings can benefit from trees and native plantings.

Potential Cost:

Biofiltration Pond for Multi-acre Site ..... $$/$$$$
20'x30' Rain Garden ..... $/$$

What We Heard:

Heat is a major concern for Pasadena residents. Green infrastructure projects utilize the built and natural environment to cool local air temperatures.

Place-based Considerations:

1. Asthma
2. Heat Exposure
3. Heat Islands
4. COPD
5. Mental Health

Breathe

It is hard to experience the health benefits of parks if spending time outdoors is dangerous due to poor air quality.

Air pollution from heavy automobile traffic on busy roads or nearby industrial activity can exacerbate chronic health conditions, such as asthma or chronic inflammatory pulmonary disease (COPD), a chronic inflammatory lung disease. During the community engagement process for this report, many residents expressed concerns about air quality in Pasadena. While addressing the root causes of poor air quality is outside the scope of these guidelines, there are some measures communities can take to reduce the harmful effects of air pollution. The city could create a program that alerts citizens of poor air quality conditions, and those with respiratory illnesses may want to avoid vigorous outdoor exercise on those days. Additional site-specific measures may include temporary car-free streets adjacent to parks on pre-planned days. This could encourage walking and biking, improve local air quality, extend park programming, and help community members envision the possibility of a less car-centric future.

Goals Alignment

Objective 4e

- Work with partners to expand Pasadena's urban forest.

Idling Interventions

Cars can be a major source of air pollution in urban areas as they emit carbon dioxide and other chemicals. When idling, cars are stationary while the engine is still on, producing pollutants for a longer period of time.

Help improve lung health and symptoms of COPD.

Health Benefits:

Idling interventions can improve lung health, the symptoms of chronic obstructive pulmonary disease (COPD), and result in substantial benefits to public health.[149]

Scale:

Idling can be addressed anywhere a car would need to stop for more than ten seconds, which includes drive-through lines and school zones. Interventions can be implemented at a site through the design of vegetative buffers to block air pollution from the park. Policies can be drafted to address idling in school zones.

Potential Cost:

Vegetative Swale for (6) neighborhood blocks ..... $$/$$$$
Vegetative Swale for (1) neighborhood block ..... $$/$$

What We Heard:

Residents of Pasadena are interested in exercising more; outdoor air quality is important if people will be spending time outdoors exercising.

Place-based Considerations:

1. Asthma
2. Heat Exposure
3. Heat Islands
4. COPD

Minimizing Parks in High Risk Areas

Parks should not be within a 500 to 1000 foot buffer of major highways and industrial facilities.

Help improve lung health and symptoms of COPD.

Health Benefits:

Minimizing parks in high risk areas can improve lung health and the symptoms of chronic obstructive pulmonary disease (COPD), a chronic inflammatory lung disease.[150]

Scale:

Policies should prevent parks from being located close to known sources of air pollution. Parks can be assessed for their existing proximity to these hazardous sites and street canyons.

Potential Cost:

n/a

What We Heard:

Residents of Pasadena are interested in exercising more; outdoor air quality is important if people will be spending time outdoors exercising.

Place-based Considerations:

1. Asthma
2. Heat Exposure
3. Heat Islands
4. COPD



Car Free Zones

Car free zones enable other modes of transportation that produce fewer emissions. It is a great way to allow people to feel more comfortable navigating streets on foot or bike in their neighborhood.



- Decrease stress level and deepen relaxation.
- Help improve lung health.
- Help decrease the risk of heart disease and obesity.

Health Benefits:

Car Free Zones can help decrease the risk of heart disease and obesity[151] and reduction reduce noise pollution from vehicles allowing for deeper relaxation, decreasing stress levels.[152]

Scale:

Car-free zones can mean shutting down a street to cars, and only allowing for walking and biking. It can be used to extend park programming from the park into the street. The frequency with which the street is car-free can also be scaled from being a small monthly action to a permanent change.

Potential Cost:

Closing neighborhood street to cars for weekend ..... $/$

What We Heard:

Residents of Pasadena are interested in exercising more; outdoor air quality is important if people will be spending time outdoors exercising.

Place-based Considerations:

1. Asthma
2. Obesity
3. Heart Disease
4. COPD

Support Nature

Supporting nature means something different to every person and can have many benefits.

Green space in parks can absorb stormwater, which can reduce flooding of nearby homes and businesses, especially in flood zones. Parks can also support natural systems by providing areas with native flowers and grasses that provide food and habitat for pollinators or migrating birds and butterflies. These landscapes often need human support to grow. Landscapes can be restored by removing sod and planting native meadows or prairies that must be maintained to resist the encroachment of invasive species. When people volunteer their time to support the local ecosystem health, cities, neighborhoods, and ultimately, the people living there become healthier and more resilient.

Goals Alignment

Objective 4b

- Adopt and implement standards for low-impact development (LID) for park facilities, including energy and water efficiency

Objective 4c

- Protect and restore local ecosystems, including prairie, coastal, and remnant forest habitats

Objective 4d

- Expand landscaping with native plants by 80% and increase plant biodiversity across all parks and open spaces City-wide

Objective 4e

- Work with partners to expand Pasadena's urban forest.

Restoration Areas

Landscape restoration practices to revegetate natural areas with native plant communities can create bird and animal habitat and foster local biodiversity.

Help support immune function and response.

Health Benefits:

Exposure to diverse plant species and types of pollen help children develop normal immune responses. This can be achieved by planting a mix of plants and trees in parks.[153] Utilizing volunteers with restoration activities can have additional benefits; working in soil has been shown to boost immune function.[154]

Scale:

Natural areas restoration can range from small pocket prairies to large-scale coastal or wetland restoration.

Potential Cost:

1-mile stream restoration ..... $$$/$$$$
20x30 Pocket Prairie with Native Plants ..... $/$$

What We Heard:

Community members ranked "Opportunities to access to nature and see wildlife" as high on their activity opportunities in parks.

Place-based Considerations:

Environmental Health

1. Wetlands
2. Streams and Bayous
3. Heat Islands
4. Habitat

Coastal Adaptation

As sea levels rise, coastal open space can temporarily hold floodwater, and through restoration practices replace wetlands as they are lost.

Helps prevent the stress from flood damage and may boost happiness.

Health Benefits:

Coastal adaptation to climate change will reduce home and business flooding, which causes stress and may worsen mental health problems.[155] Blue spaces have been shown to increase happiness levels.

Scale:

Coastal restoration may include "soft" features, which include vegetation and coastal wetland restoration, or a mix of soft and "hard" features, which include breakwaters, and seawalls that integrate ecological features.

Potential Cost:

Hard features ..... $$$/$$$$
Soft features ..... $$/$$$

What We Heard:

Our surveys, which were focused on recreation, did not include questions about sea level rise or coastal adaptation.

Place-based Considerations:

Environmental Health

1. Sea Level
2. Flood Zone
3. Streams and Bayous

Green Infrastructure

Green infrastructure installations integrate vegetation, grading, and special soil to absorb stormwater runoff into the ground before it causes flooding.

Helps prevent the stress from flood damage and may boost happiness.

Health Benefits:

A network system of green stormwater infrastructure in cities can reduce home flooding. Flood events can increase stress and may worsen mental health problems.[156] There are many other benefits to green infrastructure listed in the Cool-Off section.

Scale:

Green infrastructure can range in scale from small cisterns and rain gardens in parks to extensive features, such as permeable paving in all park parking lots.

Potential Cost:

Permeable Pavers ..... $$/$$$
Biofiltration Pond for multiacre site ..... $$/$$$
20'x30' Rain Garden ..... $/$

What We Heard:

Community members ranked "Opportunities to access nature and see wildlife" as high on their activity opportunities in parks.

Place-based Considerations:

1. Flood Zone
2. Wetland
3. Streams and Bayous
4. Heat Islands

View to Nature

Views to nature from houses, business, and medical facilities can have health benefits and are a good way for less mobile individuals to get dose of green space.

Improves emotional well-being.

Reduces pain and recovery time after a medical intervention.

Health Benefits:

Views to nature from hospitals, homes, or other places people are recovering from medical conditions can shorten stays, lessen pain, reduce minor complications, and improve emotional well-being.[157]

Scale:

Parks, restoration areas or urban trees can be planned around health care facilities or places that people are recovering from medical conditions.

Potential Cost:

100+ Trees ..... $$/$$
20x30 Pocket Prairie with Native Plants ..... $/$$

What We Heard:

Community members ranked "Opportunities to access nature and see wildlife" as high on their activity opportunities in parks.

Place-based Considerations:

1. Poor Mental Health
2. High Blood Pressure
3. Coronary Heart Disease
4. Diabetes

Finance Feasibility Study Summary

A Park Finance Feasibility Study was conducted for the Pasadena Healthy Parks Plan in Fall 2019. The full study is available in the online appendices. A summary of key findings is included below. The findings of the Finance Feasibility Study are a key tool for the Pasadena Parks and Recreation Department and its partners to use in identifying funding for the implementation of the Healthy Parks Plan.

Strongest Park Finance Options for the City of Pasadena

The Park Finance Feasibility studied identified four especially strong options for funding to support and expand Pasadena's Park System. These are listed below and described in more detail in the remainder of this summary. Additional options that are included in the full study include sales tax, public improvement district, municipal management district, tax increment reinvestment zone (TIRZ), new market tax credit, Land and Water Conservation Fund (LWCF), and the SPARK Schoolyard Park Program.

1. Parkland Dedication Ordinance
2. General Obligation Bonds for Parks
3. Texas Parks and Wildlife Dept Grants
4. FEMA Hazard Mitigation Grants

Parkland Dedication Ordinance

Local governments may require subdivision developers or builders to dedicate land for a park and/or pay a fee that the local government may use to acquire and develop park facilities. These parkland dedications allow local governments to provide park facilities in newly developed areas without burdening the existing population. The intent is for new residents to pay for the cost of new parks because they are increasing the demand for those amenities. The city must use the dedicated land or fees collected to benefit the subdivision from which they originated. Additionally, any fees collected must be spent in a "reasonable timeframe." From 2009 to 2019, Pasadena received approximately 2,777 building permits for additional dwelling units. If Pasadena had a parkland dedication ordinance in place which required 1 acre per 100 dwelling units, or $1,000 per dwelling unit as a fee in lieu, the city could potentially have an additional 27.77 acres or $2,777,000 in collected fees. Many cities in Texas have adopted parkland dedication ordinances, including nearby Houston, Pearland, and Deer Park. Parkland dedication ordinances do not require voter approval.

General Obligation Bonds for Parks

Pasadena issues general obligation bonds and certificates of obligation to provide funds for the construction and improvement of the city's infrastructure. Generally bonds can only be used for capital expenses, rather than ongoing expenses such as operations and maintenance. Pasadena could issue general obligation bonds to fund parks and recreation in the city. For example, a $30 million bond would add $2.2 million to the city's annual debt service requirements, requiring an increase of $0.025 per $100 in the property tax rate, and would cost the median homeowner $28 per year in additional property taxes. The city will be retiring a 2012 general obligation bond issue in February 2023, and the annual debt service payments will drop from $9.16 million to $7.96 million. The city could issue a bond for parks at that time and, depending on the amount, could do so without raising property taxes. Voter approval would be required to issue general obligation bonds to fund parks. Across Texas municipal bond measures to fund parks and conservation have passed 90% of the time with an average voter approval rate of 65%.

Texas Parks and Wildlife Department Grants

The Texas Parks and Wildlife Department (TPWD) administers the following recreational grant programs: Boating Access Grants, Clean Vessel Act (CVA) Grants, CO-OP Grants, Local Parks Grants, Recreational Trails Grants, and Target Range Grants. CO-OP Grants, Local Parks Grants, and Recreational Trails Grants are described below. All of the grant types are included in the full Finance Feasibility Study.

CO-OP Grants

The Community Outdoor Outreach Program (CO-OP) grant provides funding (from $5,000 to $50,000) to local governments and nonprofit organizations for programming that introduces under-served populations to environmental and conservation programs as well as TPWD mission oriented outdoor activities. Grants are available to tax-exempt organizations and local governments introducing non-traditional constituents to TPWD related outdoor recreation, conservation, and environmental education programs.

Local Park Grants

The Local Park Grant Program consists of five individual programs that assist local units of government with the acquisition and/or development of public recreation areas and facilities throughout the State of Texas. The Program provides 50% matching grants on a reimbursement basis to eligible applicants. All grant-assisted sites must be dedicated as parkland in perpetuity, properly maintained and open to the public. Funding for the Local Park Grant Program comes from a portion of the state sales tax on sporting goods through the Texas Recreation and Parks Account and the Texas Large County & Municipality Recreation & Parks Account. Additional funds come from off- shore gas royalties through the federal Land and Water Conservation Fund.

Recreational Trails Grants

TPWD administers the National Recreational Trails Fund in Texas under the approval of the Federal Highway Administration. This federally funded program receives its funding from a portion of federal gas taxes paid on fuel used in non-highway recreational vehicles. The reimbursable grants can be up to 80% of project cost with a maximum of $200,000 for non-motorized trail grants.

FEMA Hazard Mitigation Grants

FEMA has three Hazard Mitigation Assistance (HMA) grant programs to support states, tribal governments, and local communities in implementing acquisition projects. All three HMA programs share the purpose of protecting communities from natural disasters, but they have different periods of funding availability. The programs are the Pre-Disaster Mitigation (PDM) Program, the Hazard Mitigation Grant (HMG) Program (after a disaster), and the Flood Mitigation Assistance (FMA) Program (annual). Participation in FEMA's acquisition programs is strictly voluntary and property owners are not required to participate. Generally, FEMA pays up to 75 percent for hazard mitigation projects. The remaining 25 percent is the responsibility of the applicant. FEMA may contribute up to 90 percent for PDM projects and up to 100 percent for FMA projects that meet certain criteria. After a property is acquired, it must be dedicated and maintained in perpetuity as open space for the conservation of natural floodplain functions, but development of parks for outdoor recreational activities is allowed.

Programming Life Cycle Assessment

While implementing these and any other new programming goals, PARD should consider the anticipated life cycle of the new program using the life cycle analysis tool below.

Monitoring programs will better enable PARD to assess the success of their programming overall, and will help each division formulate specific quantitative and qualitative goals for the next fiscal year, along with measurable targets. Particular forms of monitoring should include:

- Monitor participation in and demand for programs and adjust offerings to meet the needs of the community with a focus on equity and health
- Use data to assess program trends (enrollment data and annual survey)
- Align program offerings with community needs and priorities; evaluate program lifecycle annually with the goal of having 50-60% of programs in seedling, sprouting, and growth stages and 40% in flowering and wilting stages

Table 8-2. Programming Life Cycle Analysis

Stage	Description	Recommended Proportion
Seedling	A new program; participation is limited	50 to 60 %
Sprouting	Participation increases rapidly	
Growing	Participation continues to increase, but at a slower rate	
Flowering	Program reaches maturity with a consistent audience; growth stops	40%
Wilting	Other programs begin to compete for the program's participants	
Going to Seed	Participation declines; participants leave to populate new programs	0 to 10%

Park Assessment Tool

The Park Assessment Tool was originally developed by The Trust for Public Land for use in park system assessments in Maine, New Jersey, and central Texas. It was adapted for use in the Pasadena context (see Online Appendix A: Assessments of Priority Parks). The Park Assessment Tool facilitates evaluation of park access, park features, supportive facilities, safety and maintenance, aesthetics, health, and culture and convenience. Park quality is not solely based upon these factors. As noted in Chapter 6, SOPARC (System for Observing Play and Recreation in Communities) analysis is recommended for assessing the impacts of park improvement interventions. However, the simplicity and affordability of the Park Assessment Tool methodology makes it possible for the Parks and Recreation Department to repeat the assessment periodically to track progress system-wide.

PASADENA HEALTHY PARKS PLAN: PARK EVALUATION TOOL

For evaluation of parks during non-winter months

GENERAL INFORMATION

Park Name (and ID)

Park Evaluator **Date and Time**

Open Space Type (circle one)

Regional Park Neighborhood Park Pocket Park Plaza/ Square Special Use Natural Area

Major Amenities (check all that apply)

- ☐ Natural Area
- ☐ Playground/Play Structure
- ☐ Plaza/Square
- ☐ Picnic Area/Pavilion
- ☐ Splash Pad/Park
- ☐ Fitness Station
- ☐ Community Center
- ☐ Trail
- ☐ Golf Course
- ☐ Pool
- ☐ Skate Park
- ☐ Open Lawn (usable for *lounging or casual sports)*
- ☐ Dog Waste Bags
- ☐ Dog Park
- ☐ Arboretum
- ☐ Water Feature
- ☐ Historic Feature
- ☐ Horticultural/ Demonstration Garden
- ☐ Visitor Information Booth
- ☐ Education/Nature Center
- ☐ Community Garden
- ☐ Athletic Field or Court
- ☐ Performance Stage/Space
- ☐ Boat Launch
- ☐ Bike Share
- ☐ Cemetery

TOTAL SCORE

Score		Weight *Adjustable*	Weighted Score	Category
_____	x	_____	_____	1. Park Access
_____	x	_____	_____	2. Park Features
_____	x	_____	_____	3. Supportive Facilities
_____	x	_____	_____	4. Safety & Maintenance Concerns
_____	x	_____	_____	5. Aesthetics
_____	x	_____	_____	6. Health
_____	x	_____	_____	7. Culture & Accessibility
			_____	**TOTAL**

SCORING INSTRUCTIONS

Instructions

All items should be scored on a 1 to 5 scale. 5 is the highest possible quality rating.

5 could mean abundant, well provided, very attractive, excellent condition, no concerns, true, etc.
1 could mean scarce, no provision, very unappealing, terrible, unusable, derelict, very concerning, absolutely not, etc.

In general, all criteria should be scored. Section 2: Park Features and Section 6: Health are exceptions.
In other sections, if an asterisk precedes the criteria, see the note in the text for circumstances in which scoring is not required. It may be determined in the field that some criteria are not relevant to a particular site. Use "n/a" sparingly.
Only score amenities that are present.

1. PARK ACCESS

Score	Criteria
	Park Entrances
_____	Sufficient number of unlocked entrances for park size (or an open perimeter) *Informal entrances may be an indicator of insufficient provision; choice of entrances is valuable*
_____	Highly visible entrances to encourage use by passersby; easy to locate entrances (or an open perimeter)
_____	Well designed park entrances *Care and attention given to design of gates, plantings, and ground surface, as appropriate to the site*
_____	Signage (as appropriate to park size and use): Park name, hours and rules (including pet-related), maps for parks with extensive trails, multilingual (English and Spanish) all parks
_____	ADA-accessible entrances (n/a for dedicated hiking/biking areas or where topography prohibits) *At least the primary entrance or a visible entrance near the primary entrance should be ADA-accessible such as paved paths with no obstructions, at least 5 feet wide, and a ramp no steeper than 1:12 pitch*
	Safe and Convenient Access to Entrances
_____	Crosswalks, and crossing signals in higher traffic areas, at or close to park entrances (n/a when park entrance is located along a very small, low-traffic, quiet street)
_____	Sidewalks along roads accessing park entrances, both immediate and adjacent.
_____	Location of park entrances connects to surrounding circulation patterns and activity areas *Streets align with entrances, entrances are adjacent to schools or retail areas, etc.*
	Transportation Access
_____	Sufficient on-site/overflow parking for intended park uses/available park amenities
_____	Sufficient bicycle parking in park or adjacent to park entrance (at least one bike rack; more as appropriate)
_____	Bus stops nearby (n/a for parks in rural spaces)
	Sufficient on-site accessible parking spaces
	Access to All Park Areas
_____	Pathways connect to destinations; signage indicates where destinations are when not obvious
_____	Some trails are ADA-accessible (n/a in dedicated hiking/biking areas)
	Sum of scores
	Total number of scored items
	Average score (sum / total number)

2. PARK FEATURES - Condition, Maintenance, Usability & Appearance

Recreational and Educational Uses (only score for features present within the park)

Score	Criteria
_____	Amphitheaters/music/performance/event spaces *Pavement and seating condition (cracks, deterioration), cleanliness, overall attractiveness*
_____	Picnic areas/pavilions *Pavement and furniture condition (broken/protruding parts, potential for splinters) and appearance of structure*
_____	Splash pad/park *Water features, pavement condition (cracks, deterioration), cleanliness*
_____	Paved open spaces/plazas *Pavement condition (cracks, loose pavers, deterioration), lighting, overall attractiveness*
	Skate park *Condition (cracks, deterioration), cleanliness, features*
	Boat launch
_____	*Facility condition (broken/protruding parts)*
	Off-leash dog park
_____	*Complete fencing in good condition, turf wear, lighting*
	Education/interpretive center
_____	*Welcoming and maintained building*
	Sum of scores
	Total number of scored items
	Average score (sum / total number)

3. SUPPORTIVE FACILITIES

Score	Criteria
	Permanent restrooms, not portable toilets (n/a for pocket parks)
_____	*Usable (not locked), sufficient provision for scale of the park, reasonably maintained (no severe maintenance issues)*
_____	Sufficient number of trash and recycling receptacles, no overflowing receptacles
_____	Functioning drinking fountains
	Sum of scores
	Total number of scored items
	Average score (sum / total number)

4. SAFETY & SERIOUS MAINTENANCE CONCERNS

Score	Criteria
	Park Context/Surrounding Environment
_____	No adjacent derelict land or buildings
_____	No graffiti, vandalism, or broken windows adjacent to the park or visible from inside the park
_____	No evidence of alcohol/substance abuse in areas adjacent to the park
_____	No evidence of unauthorized camping or vagrancy in areas adjacent to the park. Write evidence types in notes section.
	The following criteria all relate to conditions inside the park/on park property.
	No Serious Maintenance Concerns
_____	No graffiti, vandalism, broken windows or furniture
_____	No derelict land or buildings
_____	No litter
_____	No animal waste
_____	Vegetation is maintained *No overgrown grass, weeds, bushes or dirt patches in green areas*
	Inappropriate Uses
_____	No evidence of alcohol/substance abuse
_____	No evidence of unauthorized camping or vagrancy in the park
	Roads (n/a if park contains no roads)
	Traffic calming measures to ensure safety of pedestrians and cyclists where cars are permitted in parks *Narrow streets, speed bumps, planted circles, curbside bulb-outs, and other obstructions to slow drivers*
	Park Design

Regarding the following: Characteristics such as visibility, openness, active use, and a quickly understandable pathway circulation system and park layout that make it easy to find one's way around create safer park conditions.

_____ Easily and quickly understandable path system and/or park layout

_____ Multiple and efficient (non-circuitous) ways to get through the park (n/a for small sites)

_____ Ability to see ahead for a generous distance on primary routes (context specific)
Lack of obstructions, wide paths or path "shoulders" which are mowed or have low vegetation

_____ Easy to find park entrances/exits from inside the park

_____ More than one entrance/exit

_____ Ability to see into and out of the park (unobstructed sightlines) from most areas and all primary destinations
(n/a in natural areas with extensive trail systems)

_____ Active areas near the park edge to create an inviting view from the street/make people more inclined to enter

_____ Clustering of activity areas to encourage greater informal surveillance

_____ Park functions as a shortcut through the neighborhood to encourage presence of people
(n/a in nat. areas w/ extensive trail systems)

_____ No isolated areas within the park (n/a in natural areas)

_____ No trail dead ends that lead to deserted areas

Directional Signage in Parks with Extensive Trail Systems (n/a for parks without extensive trail systems)

_____ Clear directional signage, that also indicate the direction to exits, in parks with more extensive trail systems; maps at path intersections are desirable in parks with complex trail systems in both English and Spanish

Sum of scores

Total number of scored items

Average score (sum / total number)

5. AESTHETICS

Score	Criteria
_____	Diversity of uses/activities (n/a if a single use facility, such as a playground or pool)
_____	Abundant and well place trees in park or along park edge if a pocket park
_____	Attractively designed park perimeter (as seen from inside and outside the park) *Attractive vegetation, wood fences instead of chain link, unattractive cement walls, unappealing entrance landscaping*
_____	Variety and coordination of color in programmed environments (n/a for natural areas) *Play structures or fitness station equipment, skate parks, etc.*
_____	High quality materials *Wood rather than vinyl or aluminum building siding, etc.*
_____	Attractively designed and coordinated signage *Primary and secondary signs designed as a group of coordinated elements, high quality materials, good condition*
_____	Attractive and coordinated light fixtures and furnishings *Benches, lamp posts, trash receptacles, etc.*
_____	Sense of style *Unique landscape or amenity design treatments, fun or sophisticated look/feel, etc.*
_____	Pleasant sounds *As appropriate to the context, no roaring highways or industrial sounds*
_____	Effective mitigation of unappealing surrounding land uses, such as industrial facilities, etc. (n/a if no such adjacent uses) *Mitigation could include walls, privacy fencing, tall hedges, rows of dense trees and vegetation*

Sum of scores

Total number of scored items (do not count blank or n/a)

Average score (sum / total number)

6. HEALTH

Score	Criteria
	Physical Health
	Active Transportation
	Paved trails or paths
_____	*Potholes/cracks, obstructions, benches, lighting, directional and distance markers, connects to activity areas, views, litter*
	Dirt trails
_____	*Erosion, obstructions, litter and debris, benches, directional and distance markers, views*
	Connections to larger active transport networks
_____	*Connections to exiting bike or walking paths to encourage active transportation to and from park, sufficient bike parking onsite, etc.*
	Sports Fields and Courts (N/A if not applicable)
	Soccer/football/Ultimate/field hockey/lacrosse field
_____	*Turf wear, levelness, evidence of puddles, yard markers/goals*
	Baseball/softball diamond/field
_____	*Turf wear, levelness, evidence of puddles, lighting, and fences/backstops*
	Tennis court
_____	*Cracks, weeds, low spots, lighting, equipment condition (nets)*
	Basketball court
_____	*Cracks, weeds, low spots, lighting, equipment condition (hoops)*
	Volleyball court
_____	*Cracks, weeds, low spots, lighting, equipment condition (nets)*
	Outdoor swimming pool
_____	*Pool and deck condition (cracks, deterioration), cleanliness, features*
	Open lawns
_____	*No overgrown grass or dirt patches, overall attractiveness*
	Playground
_____	*Equip. condition (broken/protruding parts, rust), soft ground (mulch, rubber, etc.)*
	Fitness station
_____	*Equip. condition (broken/protruding parts, potential for splinters, rust)*
	Opportunities for All Ages
	Two to three fitness opportunities for children
_____	*Examples: Playgrounds, All sports courts/fields, skateboarding, open fields*
	Two to three fitness opportunities for teenagers
_____	Examples: *all sports courts/fields, climbing wall, skateboarding, swiming, open fields*
	Two to three fitness opportunities for adults
_____	*Examples: community gardens, pool, skateboarding, all sports courts/fields, boating*
	Two to three fitness opportunities for seniors
	Examples: Walking trails, community gardens, tennis, boating, swimming, multipurpose gym
	Mental Health
	Social Connections
	Man-made shelters/natural shade
_____	*(n/a for small sites)*
_____	Benches

_____	Community gardens
_____	*Plot maintenance, litter and debris, attractiveness of structures, broken fences*
	Connection with Nature
	Presence of Water
_____	*Views of water present, perceived water quality, flowing or stagnant, naturalized edge or engineered edge*
	Opportunities for nature observation and vistas
_____	*Paths, benches, pavilions for observation of lakes, creeks, trees, landscape vistas, birds and wildlife, etc.*
	Variety of landscape types and environments (n/a if a single use facility, such as a playground or pool)
_____	*Hills, meadows, forests, water, open lawns, paved areas/plazas, manicured vs. naturalistic*
_____	Attractive park surroundings; presence of expansive views or views to neighborhoods from inside park
	Effective mitigation of loud or unappealing surrounding noises from highways, industry, etc.
	(n/a if located in a quiet neighborhood)
	Environmental Health
	Variety of vegetation (degree of variety is appropriate to the space)
_____	*Different species, different forms/heights/shapes (trees vs. shrubs vs. herbaceous vegetation), different colors (flowers)*
	Vegetated Stormwater Infrastructure
_____	*Detention ponds are planted with native grasses and flowers, presence of bioswales and rain gardens*
	Permeable Paving
_____	*Parking lots and other areas of impervious cover have porous paving*
_____	Air Quality Monitor
	Sum of scores
	Total number of scored items (do not count blank or n/a)
	Average score (sum / total number)

7. Culture and Convenience

Score	Criteria
	Art within the park
_____	*Murals, sculptures, pavement art*
_____	Building design within the park celebrates culture and local architecture
_____	Amphitheatre or bandshell for performance events
_____	Historical markers or interpretative signage
_____	Horticultural/demonstration gardens
_____	Signs in English and Spanish
	Playgrounds inclusive to children in wheelchairs
_____	*Ramps in playground equipment, swings with an accessible chair*
	No “hostile architecture”
_____	*No spikes on the ground to prevent sleeping, no arms in the center of benches to prevent sleeping*
	Sum of scores
	Total number of scored items (do not count blank or n/a)
	Average score (sum / total number)

OBSERVATIONS (Optional)

Use this area for notes about a park deficiency that could be quickly and inexpensively rectified, safety hazards, unique characteristics about the park character or context that may have affected scoring, or any other potentially useful information.











9 Concept Plan

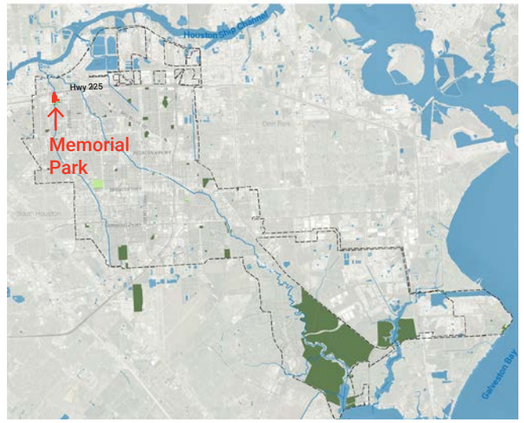
Memorial Park Concept Design

Throughout the Healthy Parks Plan process, ten parks were identified as priority parks whose improvements would most positively impact the health of nearby communities. These opportunities emerged as a result of the project selection criteria, which uses the suitability/priority mapping process as a basis for selecting parks for improvements. Memorial Park, as well as the adjacent Parklane Park, were identified as top priority during this process (see Project Selection Scoring Rubric below). This chapter presents a concept design for Memorial Park with design ideas to transform Memorial park into a healthy, resilient, and vibrant recreational amenity for the City of Pasadena.

Selection Process

Memorial Park is one of Pasadena's top 10 priority parks based on the suitability analysis described in Chapter 5. The park is in an area with relatively high levels of socioeconomic vulnerability and health inequity. It was chosen for conceptual design because Memorial Park has the potential to be a truly exceptional signature park for Pasadena. It is a large community park with diverse amenities and unique natural features. However, many aspects of the park are somewhat outdated, and its natural features could be better integrated. Memorial Park has the potential to highlight ecological resources from native plants and trees on-site to those tied to the larger regional system of bayous. Ideally, Memorial Park will serve as both a neighborhood and regional destination and as the northernmost park along a new bayou greenway from Memorial Park to Strawberry Park and eventually extending farther south.

Context Map



Project Selection Scoring Rubric for Memorial Park (from Chapter 8)

Where?	What?	How?
Equity focus area?	**Fill service/amenity gap?**	**Help the city leverage outside funding?**
Score: 3/3	Score: 1/3	Score: 2/3
Fill park access gap?	**Address community and environmental health needs?**	**Help the city leverage partnerships?**
Score: 2/3	Score: 2/3	Score: 2/3
Meet an important environmental need?		**Avoid overburdening the park system's O&M capacity?**
Score: 3/3		Score: 2/3
In a top 10 priority park?		
Score: 1/1		
TOTAL SCORE: 10/10	**TOTAL SCORE: 3/6**	**TOTAL SCORE: 6/9**

TOTAL OVERALL SCORE: 19/25



Memorial Park straddles Vince Bayou in a community defined by single family residences, apartment buildings, and commercial use just south of Highway 225.

Design Process

1. Design Guidelines

Identify needs for the site based on the "How to Use the Design Guidelines" process outlined in the Design Guidelines Chapter 8. The table below provides a summary of each step, and the results of that as it relates to the design of Memorial Park. The "Community Health Data" and "Environmental Health Data" tables on the right present the detailed findings of Steps 1e and 1f in the Design Guidelines process for Memorial Park. These tables also record the existing park elements that help address the poor health outcomes or environmental vulnerabilities of the site, and the proposed design elements in the new design.

Design Guideline Process (See Chapter 8)

Step	Description	Memorial Park Tie-In
1.1	Review the overall parks need map to find priority areas for park investment.	Memorial Park is one of Pasadena's top 10 priority parks based on the suitability analysis described in Chapter 5.
1.2	Evaluate your park by utilizing the Healthy Park Assessment methodology to determine gaps in healthy parks amenities.	Memorial Park received a score of 4.13/5. It received a score of 4.5 for all categories except "Culture and Convenience," because only some of the playground areas were inclusive to children in wheelchairs.
1.3	Determine your park typology based on the park typology definitions in Table 3-3.	Memorial Park is a Community Park.
1.4	Review the Park System Standards to determine system-wide gaps your park's improvements could fill.	The updated design of Memorial Park fills system-wide gaps in soccer fields, playground, acccess to nature, trails, drinking fountains.
1.5	Review the community health data to determine the health issues affecting the park's surrounding service area residents.	See "Community Health" table.
1.6	Review the environmental data to determine environmental issues affecting the park's surrounding service area.	See "Environmental Data" table.
1.7	Ensure the park meets the Basics checklist.	The current design of Memorial Park meets all standards in the Basics Checklist, however not all playgrounds are inclusive to children in wheelchairs.
1.8	Select design tools from the Toolkits.	See "Proposed Design Elements" in the Community Health and Environmental Data Tables.

Step 1.5: Community Health Data for Memorial Park

Health Outcome	Existing Elements That Address Health Outcome	Proposed Design Elements
COPD	Athletic Fields, Splash Pad, Trails	Athletic Fields, Trails
Poor Mental Health	Trees, Athletic Fields, Gathering Spaces	Trees, Athletic Fields, Gathering Spaces
High Obesity	Athletic Fields, Splash Pads, Trails	Athletic Fields, Skate Park, Playground

Step 1.6: Environmental Data for Memorial Park

Environmental Vulnerabilities	Existing Elements that Address Environmental Issues	Proposed Design Elements
Within 500 feet of a highway	None	Noise Reduction (Vegetated Buffer)
Projected to experience 4-10 feet of sea level rise	None	Green Infrastructure (Water Quality Pond), Natural Areas Restoration (Riparian Planting)
Within 100 year floodplain	None	Green Infrastructure (Water Quality Pond), Natural Areas Restoration (Riparian Planting)
Slightly above average temperatures	Trees	Trees, Natural Areas Restoration (Riparian Planting)

2. Site Analysis

The second step in the Memorial Park design process involved a thorough site analysis of Memorial Park, its context, and design challenges and opportunities.

Memorial Park Context

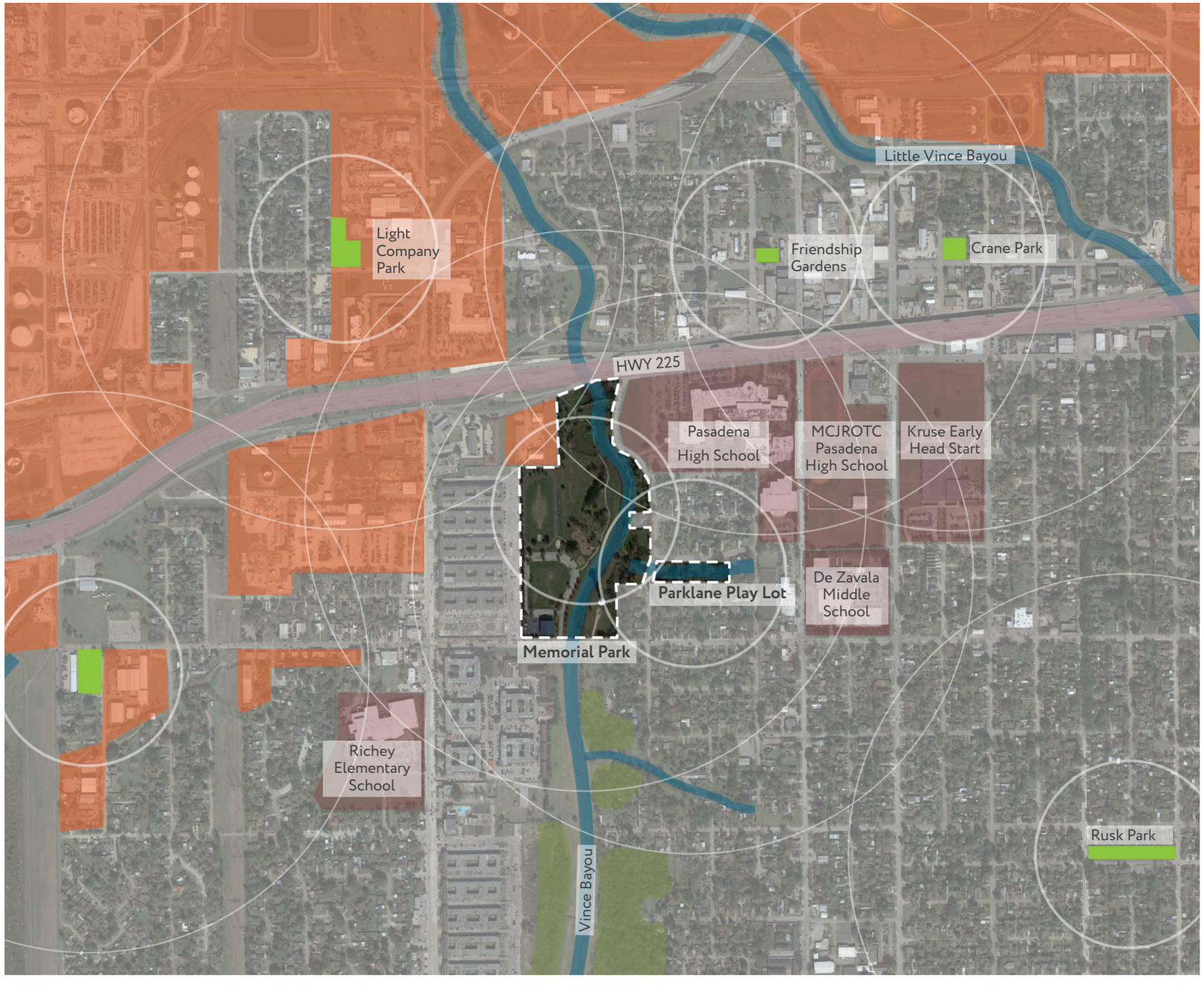
Memorial Park is surrounded by five neighborhood parks. These parks provide a range of amenities, ranging from playgrounds, walking trails, flower gardens, and indoor recreation facilities. This analysis identified opportunities for Memorial Park to provide more walking trails, grills, swings, and other recreational amenities unavailable at many other parks.

Neighboring Park Amenities

Amenities	Parks						
	Light Company Park	Friendship Gardens	Crane Park	Vermillion Park	Rusk Park	Parklane Play Lot	Memorial Park
Playground	●		●	●	●		●
Picnic Table	●	●	●	●	●		●
Benches	●	●		●	●		●
Parking	●				●		●
Basketball Court	●		●		●		●
Swings			●	●			
Walking Trail					●		●
Backstop				●			●
Recreation Facility					●		

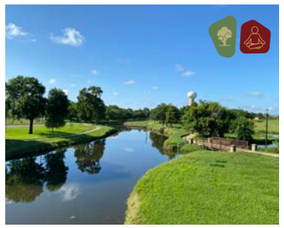
Memorial Park also includes the following amenities not found at any other listed parks: Exercise Station, Fishing, Gazebo, Lake/Bayou, Skate Park, Splash Pad, Soccer Field, Restrooms, Water Fountains

Memorial Park Context Map



2. Site Analysis

Park Inventory



1 Vince Bayou and Trail



2 Gazebo



3 Athletic Track



4 Picnic Area



5 Pond



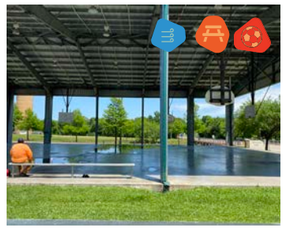
6 Playground



7 Splash Pad



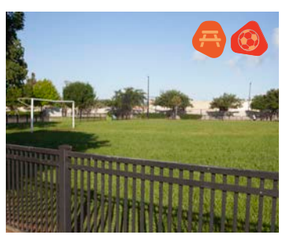
8 Skate Park



9 Basketball Courts



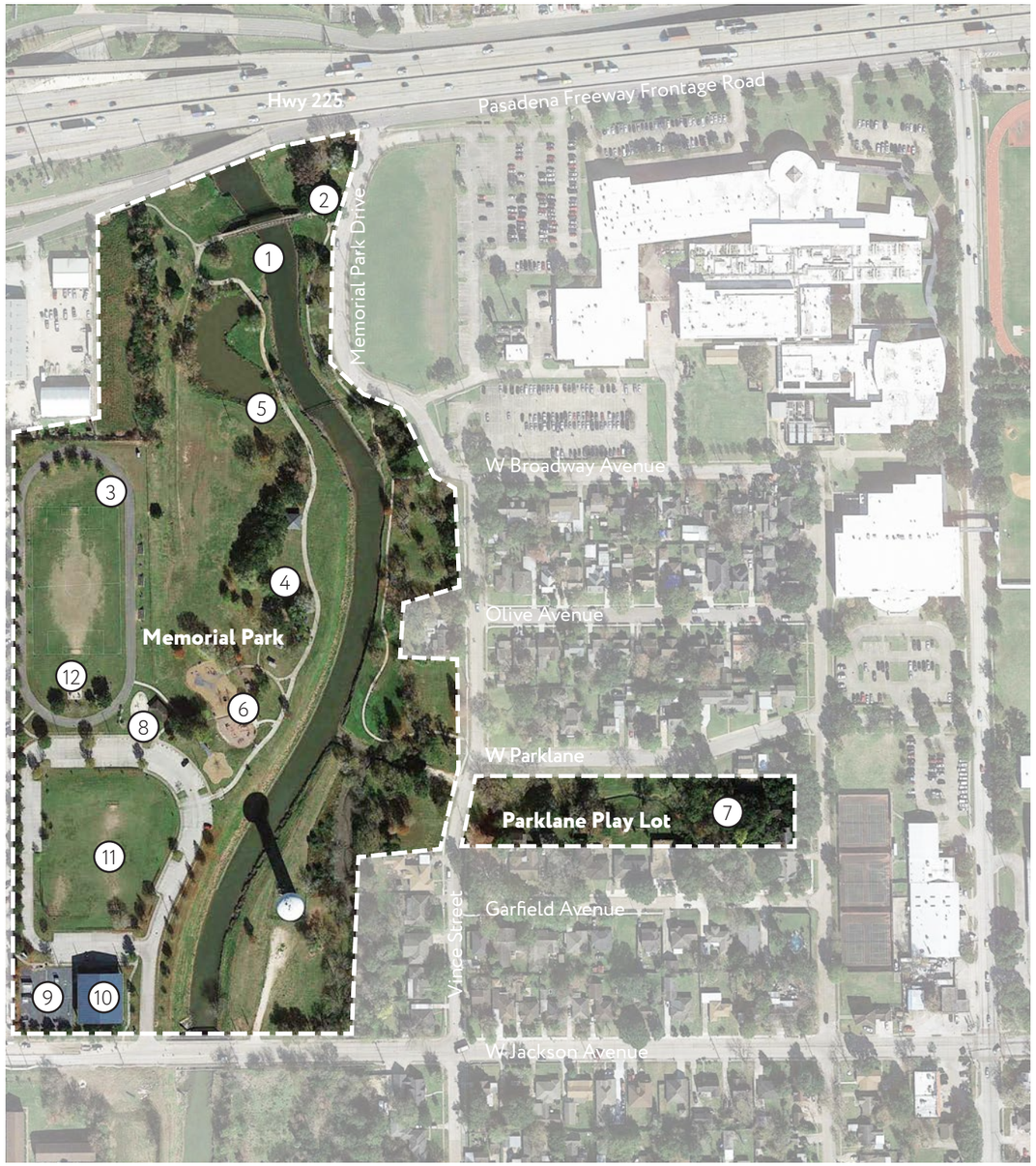
10 Turf and Trees



11 Athletic Fields



12 Fitness Station



3. Challenges and Opportunities

The third step of the Memorial Park design process included identifying challenges and opportunities within the park itself for ecological improvements and features, as well as an analysis of park circulation.

Park Ecology

Existing Condition Photos



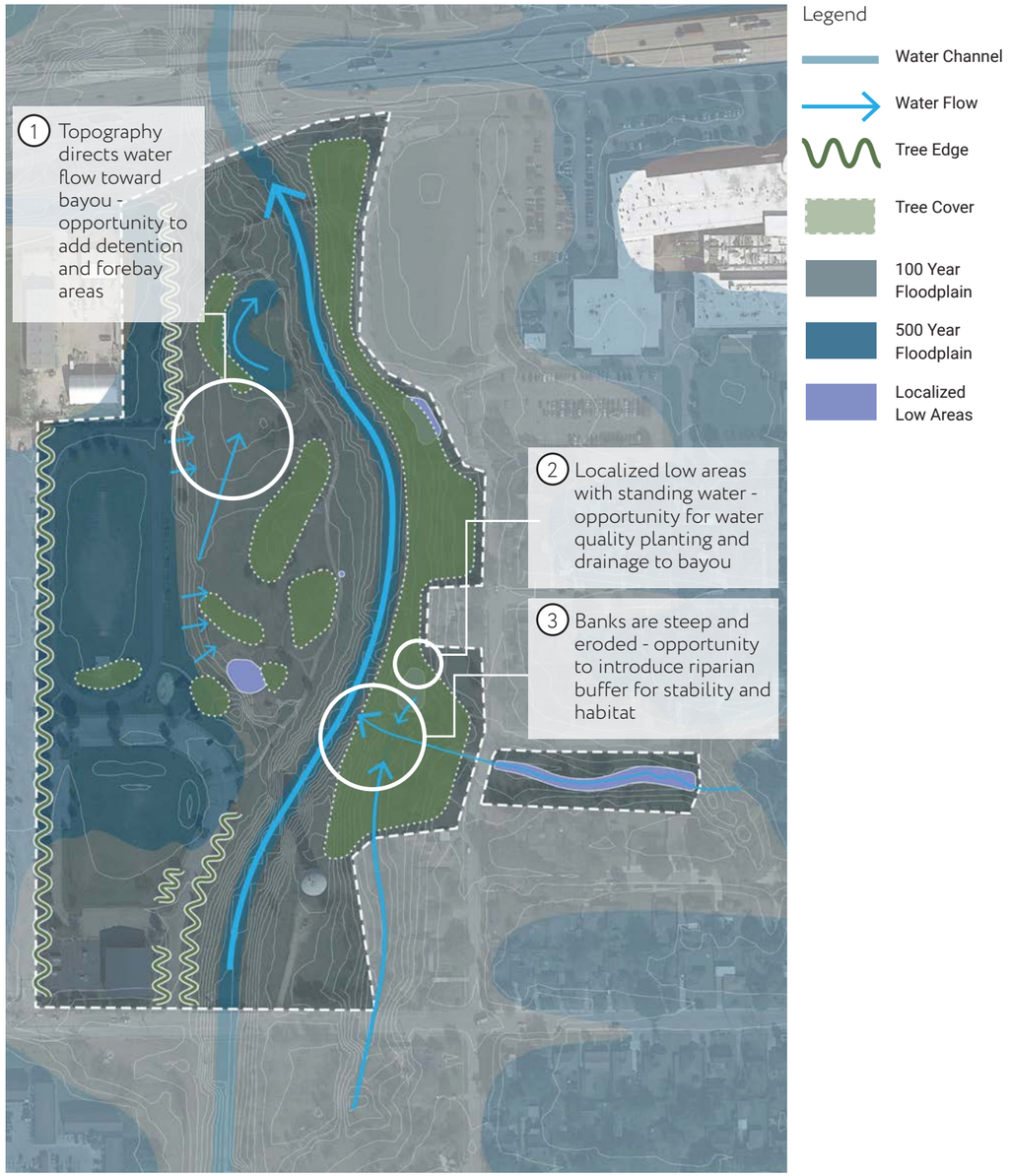
Topography and pond



Existing localized low area



Steep banks void of plant life



3. Challenges and Opportunities

Circulation

Existing Condition Photos



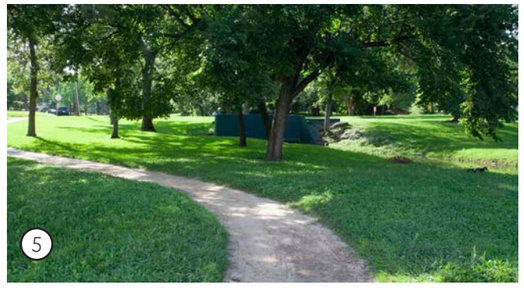
Flood-prone walk covered in silt, resulting in accessibility issues



Rest room that is inaccessible due to lack of ramp and path connection



Neighborhood park entry that does not meet ADA accessibility requirements due to change in elevation



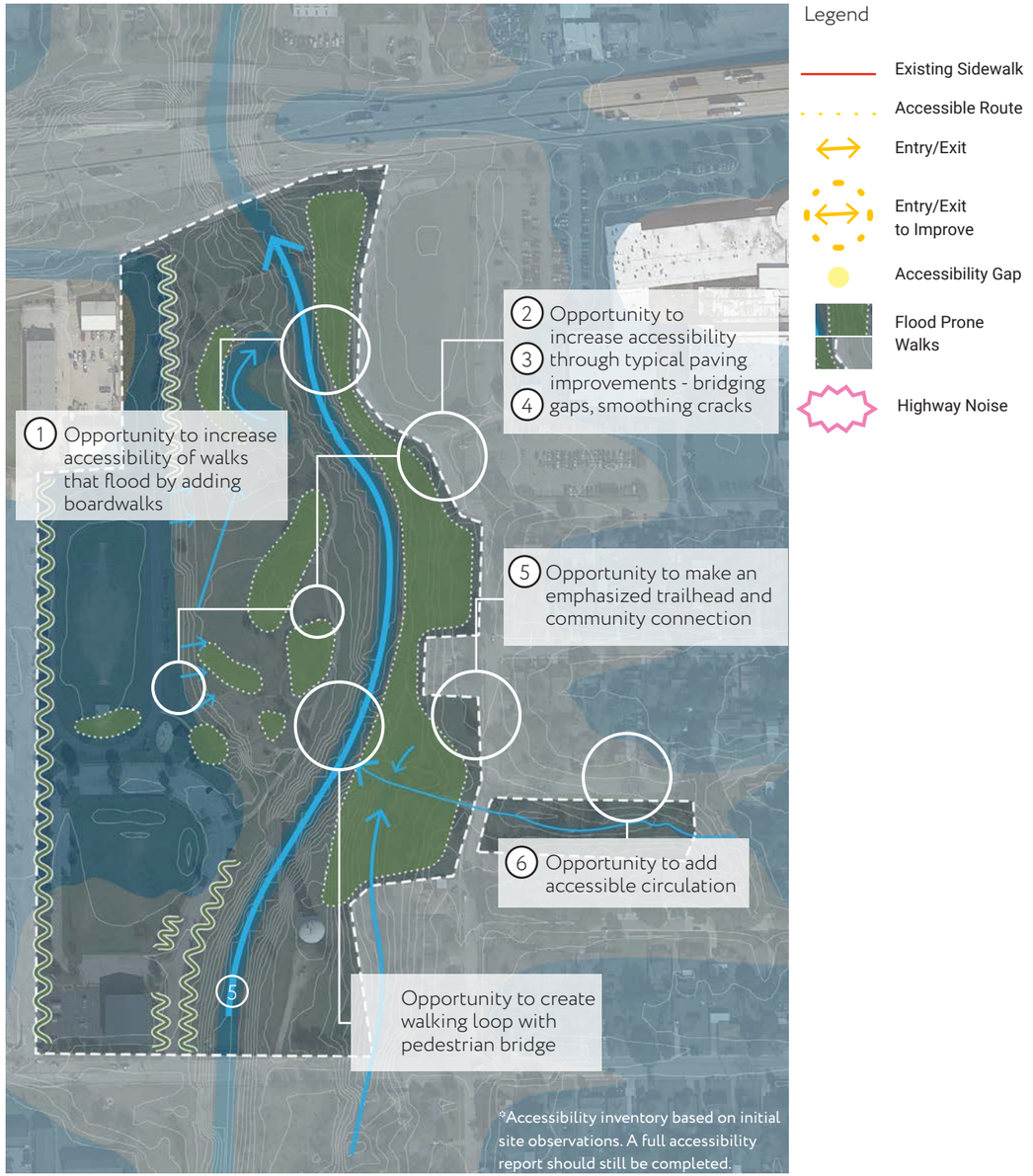
Trail from Memorial Park to Parklane Play Lot is undefined and not ADA accessible.



Path to picnic area that does not meet ADA accessibility requirements due to change in elevation



Parklane Play Lot has no existing paths



Concept Designs

Phase 1 - Minimum Impact

The minimum impact design for Memorial Park takes into account the many existing park features that are assets, and aims to enhance access, ecology, and park usage by integrating further accessible trail connections and programmable amenities. Many existing park features could all be greatly enhanced by some relatively low-impact additions of concrete paths, such as restrooms, the splash pad, athletic fields, picnic areas, and the fitness station. These features exist as quality park amenities but are currently inaccessible due to gaps in the path system.

Design Guidelines Toolkit Key

- Move
- Relax
- Gather
- Cool Off
- Breathe
- Support Nature

Design Precedents



Hillside Playground



Floodable Trail and Riparian Planting - Buffalo Bayou Park



Boardwalk - Keith Wiess Park



Legend

1. Pedestrian Entrance
2. Parking
3. Athletic Field Paths
4. Shelter
5. Fitness Access
6. Splash Pad Access and Seating
7. Hillside Playground
8. Trail Loop
9. Riparian Planting
10. Neighborhood Entrance
11. Picnic Shelter

All features shown on aerial image are existing to be preserved

Phase 2 - Full Design

Memorial Park rests entirely within the 100-year and 500-year floodplains, meaning that the park will experience flooding on a regular basis as evidenced by flooding trends in the Greater Houston area. This means that park amenities must be able to withstand partial or complete water inundation. The features and amenities included in the design of Memorial Park, while not necessarily benefitting from experiencing flooding, have been carefully selected to meet the requirement of withstanding flooding events with regular maintenance. For example, upon a minor flooding event, concrete trails near Vince Bayou will most-likely be covered with water and then silt after the water recedes. A minor flood event will not harm the integrity of the concrete path, but regular maintenance in the form of silt removal will be required.

Design Guidelines Toolkit Key

- Move
- Relax
- Gather
- Cool Off
- Breathe
- Support Nature

Design Precedents



Multi-use Athletic Field



Pedestrian Bridge



Restored Bayou



Legend

1. Pedestrian Entrance
2. Parking
3. Multi-use Athletic Field
4. Splash Pad
5. Multi-use Courts
6. Basketball Courts
7. Equipment and Facilities
8. Hillside Playground
9. Soccer Field
10. Skate Park
11. Riparian Planting
12. Pedestrian Bridge
13. Neighborhood Entrance
14. Secondary Parking
15. Detention Pond with Water Quality Planting
16. Tot Play Lot
17. Existing Trees Preserved
18. Boardwalk
19. Connection to Existing Pedestrian Bridge
20. Vegetated Buffer and Berm to Mitigate Highway Noise

Parklane Play Lot Concept Design

Parklane Play Lot is a pocket park adjacent to Memorial Park. It is just east of Memorial Park across Vince Street, nestled into a residential area just south of Pasadena High School. The scale of this park demonstrates the nested scales of water in Pasadena's park system, specifically in regard to the watershed. Surface runoff water enters the stream in Parklane Play Lot, flows to Vince Bayou in Memorial Park, and continues through Buffalo Bayou to Galveston Bay and the Gulf of Mexico. There is an important opportunity to capitalize on watershed systems education, starting in Parklane Play Lot especially given its proximity to nearby schools.

Design Guidelines Toolkit Key

- Move
- Relax
- Gather
- Cool Off
- Breathe
- Support Nature

Design Precedents



Educational Signage



Wooded Boardwalk and Bridge



Pedestrian Boardwalk



Legend

1. Pedestrian Entrance
2. Riparian Stream Edge
3. Boardwalk and Bridges
4. Sidewalk
5. New Tree Planting
6. Existing Trees Preserved











Proof of Adoption

10/6/20 agenda

AGENDA REQUEST

☐ ORDINANCE ☒ RESOLUTION Reso F NO: 2020-124

CAPTION: A resolution accepting the Pasadena Healthy Parks Plan prepared by Asakura Robinson, Houston Parks Board and Land and Water Connections Consulting as an accurate assessment of the recreational needs of the City of Pasadena, with the intent to follow recommendations as set forth therein.

RECOMMENDATIONS & JUSTIFICATION: Recreational needs of the citizens of the City of Pasadena.

(IF ADDITIONAL SPACE IS REQUIRED, PLEASE ATTACH SECOND PAGE)

BUDGETED: ☐ COUNCIL DISTRICT(S) AFFECTED:

REQUIRES APPROPRIATION: ☐
See attached Certification

	COUNCIL ACTION	
Jed Aplaca DATE: 9/14/20	FIRST READING:	FINAL READING:
BUDGET DEPARTMENT	V Barra MOTION	MOTION
PURCHASING DEPARTMENT	Bass SECOND	SECOND
APPROVED:		
CITY ATTORNEY	10-6-20 DATE	DATE
MAYOR	DEFERRED:	

RESOLUTION NO. 2020-124

A Resolution accepting the Pasadena Healthy Parks Plan prepared by Asakura Robinson, Houston Parks Board and Land and Water Connections Consulting as an accurate assessment of the recreational needs of the City of Pasadena, with the intent to follow recommendations as set forth therein.

WHEREAS, City Council, by Ordinance No.2019-040 authorized and approved an interlocal agreement between the City of Pasadena, Texas and the Houston Parks Board for the Pasadena Healthy Parks Plan; and

WHEREAS, the Pasadena Healthy Parks Plan was a collaborative effort prepared by Asakura Robinson, the Houston Parks Board and Land and Water Connections Consulting attached hereto as Exhibit "A"; and

WHEREAS, the Pasadena Healthy Parks Plan is community and data driven with a focus on health and equity to determine park needs, contribute to a healthy environment, improve physical, mental, social and economic health of Pasadena residents, and to ensure accessibility to all ages and abilities; NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PASADENA:

SECTION 1. That the City Council of the City of Pasadena, Texas hereby accepts the Pasadena Healthy Parks Plan prepared by Asakura Robinson, Houston Parks Board and Land and Water Connections Consulting and hereby expresses its intent

P&R-HealthyParksPlan.Reso.2020

to follow recommendations as set forth therein.

SECTION 2. That the City Council officially determines that a sufficient written notice of the date, hour, place and subject of this meeting of the City Council was posted at a place convenient to the public at the City Hall of the City for the time required by law preceding this meeting, as required by the Open Meetings Law, Chapter 551, Texas Government Code; and that this meeting has been open to the public as required by law at all times during which this resolution and the subject matter thereof has been discussed, considered and formally acted upon. The City Council further confirms such written notice and the contents and posting thereof.

PASSED, APPROVED AND ADOPTED THIS THE 6th day of October, A.D., 2020.

JEFF A. WAGNER, MAYOR
OF THE CITY OF PASADENA, TEXAS

ATTEST:

LINDA RORICK
CITY SECRETARY
CITY OF PASADENA, TEXAS

APPROVED:

CITY ATTORNEY
CITY OF PASADENA, TEXAS

P&R-HealthyParksPlan.Reso.2020











Endnotes

Endnotes

1 Spoon, Chad. “Improving Public Health through Public Parks and Trails: Eight Common Measures | Active Living Research,” 2017. https://activelivingresearch.org/blog/2017/08/improving-public-health-through-public-parks-and-trails-eight-common-measures. American Public Health Association. “Improving Health and Wellness through Access to Nature (Policy Statement),” November 5, 2013. https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/08/09/18/improving-health-and-wellness-through-access-to-nature. Wood, Lisa, Paula Hooper, Sarah Foster, and Fiona Bull. “Public Green Spaces and Positive Mental Health – Investigating the Relationship between Access, Quantity and Types of Parks and Mental Wellbeing.” Health & Place 48 (November 1, 2017): 63–71. https://doi.org/10.1016/j.healthplace.2017.09.002.

2 Gascon, Mireia, Margarita Triguero-Mas, David Martínez, Payam Dadvand, David Rojas-Rueda, Antoni Plasència, and Mark J. Nieuwenhuijsen. “Residential Green Spaces and Mortality: A Systematic Review.” Environment International 86 (January 1, 2016): 60–67. https://doi.org/10.1016/j.envint.2015.10.013. Silveira, Ismael Henrique da, and Washington Leite Junger. “Green Spaces and Mortality Due to Cardiovascular Diseases in the City of Rio de Janeiro.” Revista de Saúde Pública 52 (April 20, 2018). https://doi.org/10.11606/S1518-8787.2018052000290. Kim, Hye-Jin, Jin-Young Min, Hyun-Jin Kim, and Kyoung-Bok Min. “Parks and Green Areas Are Associated with Decreased Risk for Hyperlipidemia.” International Journal of Environmental Research and Public Health 13, no. 12 (December 2016). https://doi.org/10.3390/ijerph13121205. Twohig-Bennett, Caoimhe, and Andy Jones. “The Health Benefits of the Great Outdoors: A Systematic Review and Meta-Analysis of Greenspace Exposure and Health Outcomes.” Environmental Research 166 (2018): 628–37. https://doi.org/10.1016/j.envres.2018.06.030.

3 Lachowycz, Kate, and Aaron P. Jones. “Greenspace and Obesity: A Systematic Review of the Evidence.” Obesity Reviews : An Official Journal of the International Association for the Study of Obesity 12, no. 5 (2011): NaN-NaN. https://doi.org/10.1111/j.1467-789X.2010.00827.x. Bell, Janice F., Jeffrey S. Wilson, and Gilbert C. Liu. “Neighborhood Greenness and 2-Year Changes in Body Mass Index of Children and Youth.” American Journal of Preventive Medicine 35, no. 6 (December 2008): 547–53. https://doi.org/10.1016/j.amepre.2008.07.006. Dzhambov, Angel M., Donka D. Dimitrova, and Elena D. Dimitrakova. “Association between Residential Greenness and Birth Weight: Systematic Review and Meta-Analysis.” Urban Forestry & Urban Greening 13, no. 4 (January 1, 2014): 621–29. https://doi.org/10.1016/j.ufug.2014.09.004. Dadvand, Payam, Audrey de Nazelle, Francesc Figueras, Xavier Basagaña, Jason Su, Elmira Amoly, Michael Jerrett, Martine Vrijheid, Jordi Sunyer, and Mark J. Nieuwenhuijsen. “Green Space, Health Inequality and Pregnancy.” Environment International 40 (April 2012): 110–15. https://doi.org/10.1016/j.envint.2011.07.004.

4 Marselle, Melissa R., Katherine N. Irvine, and Sara L. Warber. “Examining Group Walks in Nature and Multiple Aspects of Well-Being: A Large-Scale Study.” Ecopsychology 6, no. 3 (September 1, 2014): 134–47. https://doi.org/10.1089/eco.2014.0027. Bratman, Gregory N., J. Paul Hamilton, Kevin S. Hahn, Gretchen C. Daily, and James J. Gross. “Nature Experience Reduces Rumination and Subgenual Prefrontal Cortex Activation.” Proceedings of the National Academy of Sciences 112, no. 28 (July 14, 2015): 8567–72. https://doi.org/10.1073/pnas.1510459112. Bratman, Gregory N., Gretchen C. Daily, Benjamin J. Levy, and James J. Gross. “The Benefits of Nature Experience: Improved Affect and Cognition.” Landscape and Urban Planning 138 (June 1, 2015): 41–50. https://doi.org/10.1016/j.landurbplan.2015.02.005.

5 Scheinfeld, David Emmanuel. “From Battlegrounds to the Backcountry : The Intersection of Masculinity and Outward Bound Programming on Psychosocial Functioning for Male Military Veterans,” 2014. https://repositories.lib.utexas.edu/handle/2152/26928. Anderson, Craig L., Maria Monroy, and Dacher Keltner. “Awe in Nature Heals: Evidence from Military Veterans, at-Risk Youth, and College Students.” Emotion, 2018, No Pagination Specified-No Pagination Specified. https://doi.org/10.1037/emo0000442.

6 Bratman, Gregory N., Gretchen C. Daily, Benjamin J. Levy, and James J. Gross. “The Benefits of Nature Experience: Improved Affect and Cognition.” Landscape and Urban Planning 138 (June 1, 2015): 41–50. https://doi.org/10.1016/j.landurbplan.2015.02.005. Atchley, Ruth Ann, David L. Strayer, and Paul Atchley. “Creativity in the Wild: Improving Creative Reasoning through Immersion in Natural Settings.” PLOS ONE 7, no. 12 (December 12, 2012): e51474. https://doi.org/10.1371/journal.pone.0051474.

7 Ward Thompson, Catharine, Jenny Roe, Peter Aspinall, Richard Mitchell, Angela Clow, and David Miller. “More Green Space Is Linked to Less Stress in Deprived Communities: Evidence from Salivary Cortisol Patterns.” Landscape and Urban Planning 105, no. 3 (April 15, 2012): 221–29. https://doi.org/10.1016/j.landurbplan.2011.12.015. Marselle, Melissa R., Katherine N. Irvine, and Sara L. Warber. “Examining Group Walks in Nature and Multiple Aspects of Well-Being: A Large-Scale Study.” Ecopsychology 6, no. 3 (September 1, 2014): 134–47. https://doi.org/10.1089/eco.2014.0027. Valtchanov, Deltcho, and Colin G. Ellard. “Cognitive and Affective Responses to Natural Scenes: Effects of Low Level Visual Properties on Preference, Cognitive Load and Eye-Movements.” Journal of Environmental Psychology 43 (September 1, 2015): 184–95. https://doi.org/10.1016/j.jenvp.2015.07.001. Hansen, Margaret M., Reo Jones, and Kirsten Tocchini. “Shinrin-Yoku (Forest Bathing) and Nature Therapy: A State-of-the-Art Review.” International Journal of Environmental Research and Public Health 14, no. 8 (August 2017). https://doi.org/10.3390/ijerph14080851. Ulrich, Roger S., Robert F. Simons, Barbara D. Losito, Evelyn Fiorito, Mark A. Miles, and Michael Zelson. “Stress Recovery during Exposure to Natural and Urban Environments.” Journal of Environmental Psychology 11, no. 3 (September 1, 1991): 201–30. https://doi.org/10.1016/S0272-4944(05)80184-7.

8 Kuo, Ming. “How Might Contact with Nature Promote Human Health? Promising Mechanisms and a Possible Central Pathway.” Frontiers in Psychology 6 (August 25, 2015). https://doi.org/10.3389/fpsyg.2015.01093.

9 Gascon, Mireia, Margarita Triguero-Mas, David Martínez, Payam Dadvand, David Rojas-Rueda, Antoni Plasència, and Mark J. Nieuwenhuijsen. “Residential Green Spaces and Mortality: A Systematic Review.” Environment International 86 (January 1, 2016): 60–67. https://doi.org/10.1016/j.envint.2015.10.013. Villeneuve, Paul J., Michael Jerrett, Jason G. Su, Richard T. Burnett, Hong Chen, Amanda J. Wheeler, and Mark S. Goldberg. “A Cohort Study Relating Urban Green Space with Mortality in Ontario, Canada.” Environmental Research 115 (May 1, 2012): 51–58. https://doi.org/10.1016/j.envres.2012.03.003. Takano, T., K. Nakamura, and M. Watanabe. “Urban Residential Environments and Senior Citizens’ Longevity in Megacity Areas: The Importance of Walkable Green Spaces.” Journal of Epidemiology & Community Health 56, no. 12 (December 1, 2002): 913–18. https://doi.org/10.1136/jech.56.12.913.

10 Bowler, Diana E., Lisette M. Buyung-Ali, Teri M. Knight, and Andrew S. Pullin. “A Systematic Review of Evidence for the Added Benefits to Health of Exposure to Natural Environments.” BMC Public Health 10, no. 1 (August 4, 2010). MacKerron, George, and Susana Mourato. “Happiness Is Greater in Natural Environments.” Global Environmental Change 23, no. 5 (October 1, 2013): 992–1000. https://doi.org/10.1016/j.gloenvcha.2013.03.010.

11 Maas, J., R. A. Verheij, S. de Vries, P. Spreeuwenberg, F. G. Schellevis, and P. P. Groenewegen. “Morbidity Is Related to a Green Living Environment.” Journal of Epidemiology & Community Health 63, no. 12 (December 1, 2009): 967–73. https://doi.org/10.1136/jech.2008.079038.

12 American Public Health Association. “Improving Health and Wellness through Access to Nature (Policy Statement),” November 5, 2013. https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/08/09/18/improving-health-and-wellness-through-access-to-nature.

13 Colcombe, Stanley, and Arthur F. Kramer. “Fitness Effects on the Cognitive Function of Older Adults: A Meta-Analytic Study.” Psychological Science 14, no. 2 (March 2003): 125–30. https://doi.org/10.1111/1467-9280.t01-1-01430. Murtagh, Elaine M., Marie H. Murphy, and Janne Boone-Heinonen. “Walking: The First Steps in Cardiovascular Disease Prevention.” Current Opinion in Cardiology 25, no. 5 (September 2010): 490–96. https://doi.org/10.1097/HCO.0b013e32833ce972. Simons, C. W., and J. C. Birkimer. “An Exploration of Factors Predicting the Effects of Aerobic Conditioning on Mood State.” Journal of Psychosomatic Research 32, no. 1 (1988): 63–75. https://doi.org/10.1016/0022-3999(88)90089-x.

14 CDC. “Physical Activity Recommendations By Age Group.” Centers for Disease Control and Prevention, July 30, 2020. https://www.cdc.gov/physicalactivity/basics/age-chart.html.

15 CDC. “Health and Economic Costs of Chronic Diseases: Lack of Physical Activity,” September 10, 2020. https://www.cdc.gov/chronicdisease/about/costs/index.htm.

16 Rideout, Victoria J., Ulla G. Foehr, and Donald F. Roberts. “Generation M2: Media in the Lives of 8- to 18-Year-Olds.” Kaiser Family Foundation, January 2010. https://www.kff.org/wp-content/uploads/2013/01/8010.pdf.

17 Spoon, Chad. “Improving Public Health through Public Parks and Trails: Eight Common Measures | Active Living Research,” 2017. https://activelivingresearch.org/blog/2017/08/improving-public-health-through-public-parks-and-trails-eight-common-measures. Community Preventive Services Task Force. “Increasing Physical Activity: Built Environment Approaches,” May 2017. https://www.thecommunityguide.org/sites/default/files/assets/OnePager-Physical-Activity-built-environment.pdf. Roemmich, James N., Leonard H. Epstein, Samina Raja, Li Yin, Jodie Robinson, and Dana Winiewicz. “Association of Access to Parks and Recreational Facilities with the Physical Activity of Young Children.” Preventive Medicine 43, no. 6 (December 1, 2006): 437–41. https://doi.org/10.1016/j.ypmed.2006.07.007. Ellaway, Anne, Sally Macintyre, and Xavier Bonnefoy. “Graffiti, Greenery, and Obesity in Adults: Secondary Analysis of European Cross Sectional Survey.” BMJ 331, no. 7517 (September 15, 2005): 611–12. https://doi.org/10.1136/bmj.38575.664549.F7. Mytton, Oliver T, Nick Townsend, Harry Rutter, and Charlie Foster. “Green Space and Physical Activity: An Observational Study Using Health Survey for England Data.” Health & Place 18, no. 5 (September 1, 2012): 1034–41. https://doi.org/10.1016/j.healthplace.2012.06.003. Sanders, Taren, Xiaoqi Feng, Paul P. Fahey, Chris Lonsdale, and Thomas Astell-Burt. “The Influence of Neighbourhood Green Space on Children’s Physical Activity and Screen Time: Findings from the Longitudinal Study of Australian Children.” International Journal of Behavioral Nutrition and Physical Activity 12, no. 1 (September 30, 2015): 126. https://doi.org/10.1186/s12966-015-0288-z.

18 Williams, David R., and Lisa A. Cooper. “COVID-19 and Health Equity—A New Kind of ‘Herd Immunity.’” JAMA 323, no. 24 (June 23, 2020): 2478–80. https://doi.org/10.1001/jama.2020.8051.

19 “The Color of Coronavirus: COVID-19 Deaths Analyzed by Race and Ethnicity.” APM Research Lab, August 19, 2020. https://www.apmresearchlab.org/covid/deaths-by-race.

20 Reeves, Tiffany Ford, Sarah Reber, and Richard V. “Race Gaps in COVID-19 Deaths Are Even Bigger than They Appear.” Brookings (blog), June 16, 2020. https://www.brookings.edu/blog/up-front/2020/06/16/race-gaps-in-covid-19-deaths-are-even-bigger-than-they-appear/.

21 American Public Health Association. “APHA Leader Calls for Greater Access to COVID-19 Resources for Hispanics.” APHA Public Relations, May 18, 2020. https://www.apha.org/news-and-media/news-releases/apha-news-releases/2020/hispanics-and-covid-19.

22 Nagel, Catherine. “A Special Message on the Power of Parks During the COVID-19 Crisis.” City Parks Alliance, March 19, 2020. https://cityparksalliance.org/blog/special-message-power-parks-covid-19/.

23 Forest Research. “Benefits of Green Infrastructure, Evidence Note: Social Interaction, Inclusion, and Community Cohesion,” 2009. https://www.forestresearch.gov.uk/documents/2498/urgp_evidence_note_011_Social_interaction_inclusion_and_community_cohesion.pdf. Coley, Rebekah Levine, William C. Sullivan, and Frances E. Kuo. “Where Does Community Grow?: The Social Context Created by Nature in Urban Public Housing.” Environment and Behavior 29, no. 4 (July 1, 1997): 468–94. https://doi.org/10.1177/001391659702900402. Shafer, C. Scott, Bong Koo Lee, and Shawn Turner. “A Tale of Three Greenway Trails: User Perceptions Related to Quality of Life.” Landscape and Urban Planning 49, no. 3 (July 20, 2000): 163–78. https://doi.org/10.1016/S0169-2046(00)00057-8. Swanwick, Carys, Nigel Dunnet, and Helen Woolley. “Nature, Role and Value of Green Space in Towns and Cities: An Overview.” Built Environment (1978-) 29, no. 2 (2003): 94–106. Takano, T., K. Nakamura, and M. Watanabe. “Urban Residential Environments and Senior Citizens’ Longevity in Megacity Areas: The Importance of Walkable Green Spaces.” Journal of Epidemiology & Community Health 56, no. 12 (December 1, 2002): 913–18. https://doi.org/10.1136/jech.56.12.913. More references here: https://depts.washington.edu/hhwb/Thm_Community.html.

24 Valtorta, Nicole, and Barbara Hanratty. “Loneliness, Isolation and the Health of Older Adults: Do We Need a New Research Agenda?” Journal of the Royal Society of Medicine 105, no. 12 (December 2012): 518–22. https://doi.org/10.1258/jrsm.2012.120128. Holt-Lunstad, Julianne, Timothy B. Smith, and J. Bradley Layton. “Social Relationships and Mortality Risk: A Meta-Analytic Review.” PLOS Medicine 7, no. 7 (July 27, 2010): e1000316. https://doi.org/10.1371/journal.pmed.1000316.

25 “Benefits and Importance of Social Capital.” Social Capital Research & Training (blog). Accessed September 14, 2020. https://www.socialcapitalresearch.com/literature/theory/benefits/.

26 US EPA, OW. “Green Infrastructure in Parks Guide.” Reports and Assessments, May 30, 2017. https://www.epa.gov/nps/green-infrastructure-parks-guide. Coutts, Christopher, and Micah Hahn. “Green Infrastructure, Ecosystem Services, and Human Health.” International Journal of Environmental Research and Public Health 12, no. 8 (August 2015): 9768–98. https://doi.org/10.3390/ijerph120809768. Nowak, David J., Daniel E. Crane, and Jack C. Stevens. “Air Pollution Removal by Urban Trees and Shrubs in the United States.” Urban Forestry & Urban Greening 4, no. 3 (April 3, 2006): 115–23. https://doi.org/10.1016/j.ufug.2006.01.007. Gregory McPherson, E. “Accounting for Benefits and Costs of Urban Greenspace.” Landscape and Urban Planning 22, no. 1 (September 1, 1992): 41–51. https://doi.org/10.1016/0169-2046(92)90006-L. Borneman, Elizabeth. “Using Green Space to Reduce Water Pollution.” Geography Realm (blog), February 6, 2017. https://www.geographyrealm.com/using-green-space-reduce-water-pollution/.

27 Nowak, David J., Daniel E. Crane, and Jack C. Stevens. “Air Pollution Removal by Urban Trees and Shrubs in the United States.” Urban Forestry & Urban Greening 4, no. 3 (April 3, 2006): 115–23. https://doi.org/10.1016/j.ufug.2006.01.007.

28 Estrada, Francisco, W. J. Wouter Botzen, and Richard S. J. Tol. “A Global Economic Assessment of City Policies to Reduce Climate Change Impacts.” Nature Climate Change 7, no. 6 (June 2017): 403–6. https://doi.org/10.1038/nclimate3301.

29 Riley, Kevin, Holly Wilhalme, Linda Delp, and David P. Eisenman. “Mortality and Morbidity during Extreme Heat Events and Prevalence of Outdoor Work: An Analysis of Community-Level Data from Los Angeles County, California.” International Journal of Environmental Research and Public Health 15, no. 4 (April 2018). https://doi.org/10.3390/ijerph15040580.

30 National Recreation and Park Association. “Economic Impact of Local Parks.” National Recreation and Park Association, 2018. https://www.nrpa.org/publications-research/research-papers/the-economic-impact-of-local-parks/.

31 Outdoor Industry Association. “Texas: Economic Benefits of Outdoor Recreation.” Accessed September 14, 2020. https://outdoorindustry.org/wp-content/uploads/2017/07/OIA_RecEcoState_TX.pdf.

32 The George Mason University Center for Regional Analysis. “Promoting Parks and Recreation’s Role in Economic Development.” Prepared for National Recreation and Park Association, May 2018. https://www.nrpa.org/siteassets/nrpa-economic-development-report.pdf.

33 Fernandez, Linda, Monobina Mukherjee, and Thomas Scott. “The Effect of Conservation Policy and Varied Open Space on Residential Property Values: A Dynamic Hedonic Analysis.” Land Use Policy 73 (April 1, 2018): 480–87. https://doi.org/10.1016/j.landusepol.2017.12.058. Crompton, John L. “The Impact of Parks on Property Values: Empirical Evidence from the Past Two Decades in the United States.” Managing Leisure 10, no. 4 (October 1, 2005): 203–18. https://doi.org/10.1080/13606710500348060. Crompton, John L. “The Role of the Proximate Principle in the Emergence of Urban Parks in the United Kingdom and in the United States.” Leisure Studies 26, no. 2 (April 1, 2007): 213–34. https://doi.org/10.1080/02614360500521457.

34 Asian Pacific Environmental Network, Causa Justa::Just Cause, Council of Housing Organizations, PolicyLink, Public Advocates, and Urban Habitat. “A Bay Area Agenda for INVESTMENT WITHOUT DISPLACEMENT,” September 13, 2011. https://www.publicadvocates.org/wp-content/uploads/2016/04/bay_area_agenda_for_investment_without_displacement_0.pdf. Altazan, Elisabeth. “Anti-Displacement Task Force Recommendations.” Austin, Texas, November 2018. http://www.austintexas.gov/sites/default/files/files/Housing/Anti-Displacement_Task_Force_Draft_Report_10.10.18.pdf. Aboelata, Manal J., Rachel Bennett, Elva Yanez, Ana Bonilla, and Nikta Akhavan. “Healthy Development without Displacement: Realizing the Vision of Healthy Communities for All.” Oakland, CA: Prevention Institute, July 2017. https://www.preventioninstitute.org/publications/healthy-development-without-displacement-realizing-vision-healthy-communities-all. Way, Heather, Mueller, Elizabeth, and Wegmann, Jake. “Uprooted: Residential Displacement in Austin’s Gentrifying Neighborhoods, and What Can Be Done About It.” University of Texas at Austin, Center for Sustainable Development, 2018. https://sites.utexas.edu/gentrificationproject/.

35 Pasadena Economic Development Corporation. “Economic Development Strategic Plan.” Prepared by TIP Strategies, Inc., July 2018.

36 World Population Review. “Pasadena, Texas Population 2019 (Demographics, Maps, Graphs).” Accessed March 15, 2019. http://worldpopulationreview.com/us-cities/pasadena-tx-population/.

37 H-GAC Regional Data Lab. “2018 Annual Regional Growth Forecast: Counties.” Accessed September 14, 2020. https://datalab.h-gac.com/rgf2018/.

38 Pasadena Economic Development Corporation. “Economic Development Strategic Plan.” Prepared by TIP Strategies, Inc., July 2018.

39 Martin Associates. “2014 Economic Impact of Marine Cargo Activity at the Port of Houston: Executive Summary,” September 4, 2015. http://porthouston.wpengine.com/wp-content/uploads/2016/08/Economic_Impact_2015_Executive_Summary1.pdf.

40 Bureau of Labor Statistics. “Texas Economy at a Glance.” Accessed March 15, 2019. https://www.bls.gov/eag/eag.tx.htm. See also https://ycharts.com/indicators/pasadena_tx_unemployment_rate.

41 US Census American Community Survey 2013-2017 5 year data

42 US Census American Community Survey 2013-2017 5 year data

43 HGAC, City of Pasadena

44 US Census American Community Survey 2013-2017 5 year data

45 Safe Routes Pasadena. “Keeping Our Kids and Communities Safe: A Safe Routes to School Action Plan for Pasadena, TX.” Healthy Living Matters, 2018. http://www.healthylivingmatters.net/userfiles/Servers/Server_59212/file/Pasadena_SRTS_Plan-compressed(1).pdf.

46 Headwaters Economics. “City of Pasadena: A Profile of Socioeconomic Measures,” n.d. https://headwaterseconomics.org/tools/economic-profile-system/.

47 US Census Bureau. “U.S. Census Bureau QuickFacts: Pasadena City, Texas.” Accessed March 15, 2019. https://www.census.gov/quickfacts/pasadenacitytexas.

48 US Census American Community Survey 2013-2017 5 year data

49 US Census American Community Survey 2013-2017 5 year data

50 U.S Geological Survey 2012 National Land Cover Database

51 U.S Geological Survey 2012 National Land Cover Database.

52 Pasadena Economic Development Corporation. “Economic Development Strategic Plan.” Prepared by TIP Strategies, Inc., July 2018.

53 Phillips, J. Brian. “Houston, We Have a (Zoning) Problem.” The Objective Standard (blog), February 20, 2009. https://www.theobjectivestandard.com/issues/2009-spring/houston-zoning-problem/.

54 Harris County Public Health. “Healthy Planning in Pasadena: A Health Impact Assessment in Harris County, Texas,” 2016. https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2015/hia-map/state/texas/healthy-planning-in-pasadena-texas-a-health-impact-assessment.

55 Office of Disease Prevention and Health Promotion. “Social Determinants of Health,” 2020. https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health.

56 Office of Disease Prevention and Health Promotion. “Social Determinants of Health,” 2020. https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health.

57 Klineberg, Stephen L., Jie Wu, and Cristina Barrera. “What Accounts for Health Disparities? Findings from the Houston Surveys (2001-2013).” Kinder Institute for Urban Research, 2014. https://kinder.rice.edu/sites/g/files/bxs1676/f/documents/SHEAHealthFINAL.pdf.

58 Center for Disease Control and Prevention, 500 Cities, 2019

59 Center for Disease Control and Prevention, 500 Cities, 2019

60 US Census American Community Survey 2013-2017 5 year data

61 City of Pasadena, GIS Map Viewer, https://maps.viewprogis.com/vp/pasadena-tx#

62 Houston Wilderness. “About Ecoregions.” Accessed March 15, 2019. http://houstonwilderness.org/about-ecoregions.

63 Jacob, John S, Kirana Pandian, Ricardo Lopez, and Heather Biggs. “More Flooding, Fewer Fish: Freshwater Wetland Loss in the Houston Area, 1992–2010,” 2019, 3. https://agrilifeextension.tamu.edu/library/wildlife-nature-environment/more-flooding-fewer-fish-freshwater-wetland-loss-in-the-houston-area-1992-2010

64 US Fish and Wildlife Service. “IPaC: Information for Planning and Consultation.” Accessed March 12, 2019. https://ecos.fws.gov/ipac/location/TPMF26KCMZEGHJQUCDJRYYXIVA/resources.

65 “Disaster Declarations for States and Counties | FEMA.Gov.” Accessed September 11, 2020. https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties.

66 Trevizo, Perla. “Texas on Path of Half of the Country’s 14 Billion-Dollar Disasters in 2019.” HoustonChronicle.com, January 16, 2020. https://www.houstonchronicle.com/news/houston-texas/houston/article/Texas-on-path-of-half-of-the-1-billion-disasters-14981812.php.

67 Harris County Flood Control District. “Harris County’s Flooding History.” Accessed September 11, 2020. https://www.hcfcd.org/About/Harris-Countys-Flooding-History.

68 Howell, Junia, and James R. Elliott. “As Disaster Costs Rise, So Does Inequality.” Socius 4 (January 1, 2018): 2378023118816795. https://doi.org/10.1177/2378023118816795.

69 Blake, Eric S., and David A. Zelinsky. “National Hurricane Center Tropical Cyclone Report: Hurricane Harvey.” NOAA, n.d. https://www.nhc.noaa.gov/data/tcr/AL092017_Harvey.pdf.

70 Department of Commerce. “August/September 2017 Hurricane Harvey.” Service Assessment. Accessed September 11, 2020. https://www.weather.gov/media/publications/assessments/harvey6-18.pdf.

71 Post, Chris Mooney, The Washington. “Hurricane Harvey Was Year’s Costliest U.S. Disaster at $125 Billion in Damages.” The Texas Tribune, January 8, 2018. https://www.texastribune.org/2018/01/08/hurricane-harvey-was-years-costliest-us-disaster-125-billion-damages/.

72 Waldman, Scott. “Global Warming Tied to Hurricane Harvey.” Scientific American. Accessed September 11, 2020. https://www.scientificamerican.com/article/global-warming-tied-to-hurricane-harvey/.

73 Jones, Jaimy. “Harvey Grant to Enable ‘Historic’ $105M for Pasadena Flood Projects - HoustonChronicle.Com,” December 19, 2018. https://www.chron.com/neighborhood/pasadena/news/article/Harvey-grant-to-enable-historic-132M-for-13477853.php.

74 Harris County Flood Control District. “RESILIENCE, Capital and Bond Funded Projects: Building Our Infrastructure.” Accessed September 11, 2020. https://www.hcfcd.org/Resilience.

75 2017 Landsat 8 OLI/TIRS C1 Level-1 United States Geological Survey

76 Dawson, Bill. “Texas in the National Climate Assessment: Gleanings from 1,600 Pages.” Texas Climate News, December 4, 2018. https://texasclimatenews.org/?p=15710.

77 Texas Parks & Wildlife, “Texas Watershed Viewer,” accessed March 12, 2019, https://tpwd.maps.arcgis.com/apps/Viewer/index.html?appid=2b3604bf9ced441a98c500763b8b1048.

78 John Harden, “For Years, the Houston Area Has Been Losing Ground - HoustonChronicle.Com,” May 28, 2016, https://www.houstonchronicle.com/news/houston-texas/houston/article/For-years-the-Houston-area-has-been-losing-ground-7951625.php.

79 City of Pasadena, Drinking Water Report (2018), https://www.pasadenatx.gov/ArchiveCenter/ViewFile/Item/1126

80 “H-GAC’s Water Resources Information Map (WRIM),” accessed March 17, 2019, http://h-gac.maps.arcgis.com/apps/MapSeries/index.html?appid=30b802d67f5d4a2aa7915cc30bca9318.

81 Coastal Coordination Council, “Armand Bayou Watershed Plan,” accessed March 14, 2019, https://www.h-gac.com/community/water/watershed_protection/armand/documents/ab_wpp_armand_bayou.pdf.

82 Trevizo, Perla. “Despite Progress, Houston Air Quality among Worst in the Nation, Study Finds.” HoustonChronicle.com, April 24, 2019. https://www.houstonchronicle.com/lifestyle/renew-houston/health/article/Despite-progress-Houston-air-quality-among-worst-13836322.php

83 2015 Federal Emergency Management Agency National Flood Hazard Layer

84 2015 Texas Commission on Environmental Quality Stream Segments and City of Houston

85 US EPA, OCSPP. “Toxics Release Inventory (TRI) Program.” Overviews and Factsheets. US EPA, January 31, 2013. https://www.epa.gov/toxics-release-inventory-tri-program.

86 US EPA, OCSPP. “Toxics Release Inventory (TRI) Program.” Overviews and Factsheets. US EPA, January 31, 2013. https://www.epa.gov/toxics-release-inventory-tri-program.

87 US EPA, OCSPP. “Risk-Screening Environmental Indicators (RSEI) Model.” Collections and Lists. US EPA, March 13, 2014. https://www.epa.gov/rsei.

88 US EPA, OCSPP. “Risk-Screening Environmental Indicators (RSEI) Model.” Collections and Lists. US EPA, March 13, 2014. https://www.epa.gov/rsei.

89 US EPA, OAR. “National Air Toxics Assessment Frequent Questions (Risk 1).” Reports and Assessments. US EPA, December 6, 2015. https://www.epa.gov/national-air-toxics-assessment/nata-frequent-questions.

90 US EPA, OAR. “National Air Toxics Assessment Frequent Questions (Risk 3).” Reports and Assessments. US EPA, December 6, 2015. https://www.epa.gov/national-air-toxics-assessment/nata-frequent-questions.

91 Data from Pasadena Parks and Recreation Department and Houston Parks Board

92 Data from Pasadena Parks and Recreation Department

93 Data from Pasadena Parks and Recreation Department

94 Data from Pasadena Parks and Recreation Department

95 Priority parks determined based on mapping analysis in Chapter 10 and additional consultation with the Pasadena Parks and Recreation Department

96 National Wheelchair Softball Association. “Wheelchair Softball Fields.” Accessed September 12, 2020. https://www.wheelchairsoftball.org/page/show/5739484-fields.

97 The Trust for Public Land. “2019 City Park Facts.” The Trust for Public Land. Accessed September 12, 2020. https://www.tpl.org/2019-city-park-facts.

98 National Recreation and Park Association. “NRPA Park Metrics | Research | National Recreation and Park Association | NRPA,” 2020. https://www.nrpa.org/publications-research/ParkMetrics/.

99 2019 US Census Bureau Tiger/Line Shapefile

100 US Census Bureau. “U.S. Census Bureau QuickFacts: Pasadena City, Texas.” Accessed March 15, 2019. https://www.census.gov/quickfacts/pasadenacitytexas.

https://www.census.gov/quickfacts/pasadenacitytexas

101 US Census Bureau. “U.S. Census Bureau QuickFacts: Harris County, Texas.” Accessed September 14, 2020. https://www.census.gov/quickfacts/harriscountytexas.

https://www.census.gov/quickfacts/harriscountytexas

102 Harris County Public Health. “Healthy Planning in Pasadena: A Health Impact Assessment in Harris County, Texas,” 2016. https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2015/hia-map/state/texas/healthy-planning-in-pasadena-texas-a-health-impact-assessment.

103 US Census American Community Survey 2013-2017 5 year data

104 US Census American Community Survey 2013-2017 5 year data

105 US Census American Community Survey 2013-2017 5 year data

106 Maas, J., R. A. Verheij, S. de Vries, P. Spreeuwenberg, F. G. Schellevis, and P. P. Groenewegen. “Morbidity Is Related to a Green Living Environment.” Journal of Epidemiology & Community Health 63, no. 12 (December 1, 2009): 967–73. https://doi.org/10.1136/jech.2008.079038. Morris, Amy Wilson, and Sarah Thomas. “The Economic, Health, and Social Benefits of Conservation.” Coalition for Our Natural Interest, 2018. https://ournaturalinterest.org/wp-content/uploads/2018/11/Our-Natural-Interest-Research-Report.pdf.

107 Harris County Public Health. “Healthy Planning in Pasadena: A Health Impact Assessment in Harris County, Texas,” 2016. https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2015/hia-map/state/texas/healthy-planning-in-pasadena-texas-a-health-impact-assessment.

108 Centers for Disease Control and Prevention, 500 Cities, 2019; U.S. Department of Agriculture, Food Access 2015; City of Pasadena, Land Use, 2019; Environmental Protection Agency Environmental Justice Screen, Air Quality, 2017; National Center for Atmospheric Research, Heat Exposure, 2010; STRAVA data, 2018, TXDOT

109 Center for Disease Control, United States Department of Agriculture, City of Pasadena, National Center for Atmospheric Research, Strava, EPA EJScreen.

110 US Census American Community Survey 2013-2017 5 year data

111 Berman, Marc G., Ethan Kross, Katherine M. Krpan, Mary K. Askren, Aleah Burson, Patricia J. Deldin, Stephen Kaplan, Lindsey Sherdell, Ian H. Gotlib, and John Jonides. “Interacting with Nature Improves Cognition and Affect for Individuals with Depression.” Journal of Affective Disorders 140, no. 3 (November 2012): 300–305. https://doi.org/10.1016/j.jad.2012.03.012. Kondo, Michelle C., Sara F. Jacoby, and Eugenia C. South. “Does Spending Time Outdoors Reduce Stress? A Review of Real-Time Stress Response to Outdoor Environments.” Health & Place 51 (May 1, 2018): 136–50. https://doi.org/10.1016/j.healthplace.2018.03.001. Kuo, Frances E. “Ming.” “Nature-Deficit Disorder: Evidence, Dosage, and Treatment.” Journal of Policy Research in Tourism, Leisure and Events 5, no. 2 (July 1, 2013): 172–86. https://doi.org/10.1080/19407963.2013.793520.

112 US EPA. “Best Practices for Reducing Near-Road Pollution Exposure at Schools.” Other Policies and Guidance. US EPA, October 29, 2015. https://www.epa.gov/schools/best-practices-reducing-near-road-pollution-exposure-schools.

113 This data comes from 2015 Federal Emergency Management Agency National Flood Hazard Layer, 2019 Texas Parks and Wildlife Department Wetlands, Texas Commission on Environmental Quality Stream Segments and City of Houston, Houston Area Council District, Houston Galveston Area Council, 2018 Natural Resources Conservation Service,Texas Water Development Board Water Quality by Well,2019 Superfund Sites TCEQ,Landsat 8 OLI/TIRS C1 Level-1 United States Geological Survey, HGAC, 2015 Current and Future Land Use Houston Galveston Area Council, City of Pasadena Public Works, and Forestry Data Houston Galveston Area Council,National Oceanic and Atmospheric Administration, TWDB 2006 Data,and iNaturalist Data.

114 2015 Federal Emergency Management Agency National Flood Hazard Layer, Houston Area Council District, 2018 Natural Resources Conservation Service, Texas Water Development Board Water Quality by Well, Landsat 8 OLI/TIRS C1 Level-1 United States Geological Survey, Texas Commission on Environmental Quality, National Oceanic and Atmospheric Administration.

115 2019 Texas Parks and Wildlife Department Wetlands, Texas Commission on Environmental Quality Stream Segments, City of Houston, Houston Galveston Area Council, 2015 Current and Future Land Use Houston Galveston Area Council, City of Pasadena Public Works, National Oceanic and Atmospheric Administration, iNaturalist Data.

116 2017 Landsat 8 OLI/TIRS C1 Level-1 United States Geological Survey

117 The Trust for Public Land. “ParkServe: Pasadena, Texas.” The Trust for Public Land, 2019. https://www.tpl.org/city/pasadena-texas.

118 The Trust for Public Land. “ParkServe® - About, Methodology, and FAQ.” The Trust for Public Land. Accessed September 12, 2020. https://www.tpl.org/parkserve/about.

119 City of Pasadena, Houston Parks Board, ArcGIS Online, Houston Galveston Area Council, TxDOT,US Census American Community Survey 2013-2017 5 year data

120 City of Pasadena, Houston Parks Board, ArcGIS Online, Houston Galveston Area Council, TxDOT,US Census American Community Survey 2013-2017 5 year data

121 US Census American Community Survey 2013-2017 5-year data, Center for Disease Control, United States Department of Agriculture, City of Pasadena, NCAR, 2015 Federal Emergency Management Agency National Flood Hazard Layer, Houston Area Council District, 2018 Natural Resources Conservation Service, Texas Water Development Board Water Quality by Well, Landsat 8 OLI/TIRS C1 Level-1 United States Geological Survey, Texas Commission on Environmental Quality, National Oceanic and Atmospheric Administration, 2019 Texas Parks and Wildlife Department Wetlands, Texas Commission on Environmental Quality Stream Segments, City of Houston, Houston Galveston Area Council, City of Pasadena Public Works, iNaturalist Data, Houston Parks Board, ArcGIS Online, Texas Department of Transportation.

122 May, Melissa. “NRPA Park Metrics Replaces NRPA Areas and Facilities Standards | Research | Parks and Recreation Magazine | NRPA,” October 31, 2019. https://www.nrpa.org/parks-recreation-magazine/2019/november/nrpa-park-metrics-replaces-outdated-nrpa-areas-and-facilities-standards/.

123 City of Pasadena, Harris County Flood Control District, Internal conversations with the Core Team

124 City of Pasadena, Houston Parks Board, Internal conversations with the Core Team

125 City of Pasadena, TxDOT, Safe Routes Pasadena, 2018.

126 US Department of Health. “Physical Activity Guidelines for Americans,” 2008. https://health.gov/paguidelines/pdf/paguide.pdf. Taylor, Denise. “Physical Activity Is Medicine for Older Adults.” Postgraduate Medical Journal 90, no. 1059 (January 1, 2014): 26–32. https://doi.org/10.1136/postgradmedj-2012-131366.

127 AOSSM. “The Benefits of Playing Sports Aren’t Just Physical!” News & Events | Health.gov, May 30, 2012. https://health.gov/news/blog/2012/05/the-benefits-of-playing-sports-arent-just-physical/. Malm, Christer, Johan Jakobsson, and Andreas Isaksson. “Physical Activity and Sports—Real Health Benefits: A Review with Insight into the

Public Health of Sweden." Sports 7, no. 5 (May 23, 2019). https://doi.org/10.3390/sports7050127. Eime, Rochelle M., Janet A. Young, Jack T. Harvey, Melanie J. Charity, and Warren R. Payne. "A Systematic Review of the Psychological and Social Benefits of Participation in Sport for Children and Adolescents: Informing Development of a Conceptual Model of Health through Sport." International Journal of Behavioral Nutrition and Physical Activity 10, no. 1 (August 15, 2013): 98. https://doi.org/10.1186/1479-5868-10-98.

128 Chase, Nancy, Xuemei Sui, and Steven Blair. "Swimming and All-Cause Mortality Risk Compared With Running, Walking, and Sedentary Habits in Men." International Journal of Aquatic Research and Education 2, no. 3 (August 1, 2008). https://doi.org/10.25035/ijare.02.03.03.

129 Floyd, Myron F., Jason N. Bocarro, William R. Smith, Perver K. Baran, Robin C. Moore, Nilda G. Cosco, Michael B. Edwards, Luis J. Suau, and Kunsheng Fang. "Park-Based Physical Activity Among Children and Adolescents." American Journal of Preventive Medicine 41, no. 3 (September 1, 2011): 258–65. https://doi.org/10.1016/j.amepre.2011.04.013.

130 Lee, Bo-Ae, and Deuk-Ja Oh. "The Effects of Aquatic Exercise on Body Composition, Physical Fitness, and Vascular Compliance of Obese Elementary Students." Journal of Exercise Rehabilitation 10, no. 3 (June 30, 2014): 184–90. https://doi.org/10.12965/jer.140115.

131 Helliwell, John, Richard Layard, Jeffrey Sachs, and Jan-Emmanuel De Neve. "World Happiness Report 2020." New York: Sustainable Development Solutions Network. Accessed September 14, 2020. http://worldhappiness.report/. Wheeler, Benedict W., Mathew White, Will Stahl-Timmins, and Michael H. Depledge. "Does Living by the Coast Improve Health and Wellbeing?" Health & Place 18, no. 5 (September 1, 2012): 1198–1201. https://doi.org/10.1016/j.healthplace.2012.06.015. Amoly, Elmira, Payam Dadvand, Joan Forns, Mónica López-Vicente, Xavier Basagaña, Jordi Julvez, Mar Alvarez-Pedrerol, Mark J. Nieuwenhuijsen, and Jordi Sunyer. "Green and Blue Spaces and Behavioral Development in Barcelona Schoolchildren: The BREATHE Project." Environmental Health Perspectives 122, no. 12 (December 2014): 1351–58. https://doi.org/10.1289/ehp.1408215.

132 Brown, Helen Elizabeth, Natalie Pearson, Rock E. Braithwaite, Wendy J. Brown, and Stuart J. H. Biddle. "Physical Activity Interventions and Depression in Children and Adolescents : A Systematic Review and Meta-Analysis." Sports Medicine (Auckland, N.Z.) 43, no. 3 (March 2013): 195–206. https://doi.org/10.1007/s40279-012-0015-8. Gordon, Paul M., Samuel J. Zizzi, and Jeff Pauline. "Use of a Community Trail Among New and Habitual Exercisers: A Preliminary Assessment." Preventing Chronic Disease 1, no. 4 (September 15, 2004). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1277951/.

133 Helliwell, John, Richard Layard, Jeffrey Sachs, and Jan-Emmanuel De Neve. "World Happiness Report 2020." New York: Sustainable Development Solutions Network. Accessed September 14, 2020. http://worldhappiness.report/. Wheeler, Benedict W., Mathew White, Will Stahl-Timmins, and Michael H. Depledge. "Does Living by the Coast Improve Health and Wellbeing?" Health & Place 18, no. 5 (September 1, 2012): 1198–1201. https://doi.org/10.1016/j.healthplace.2012.06.015. Amoly, Elmira, Payam Dadvand, Joan Forns, Mónica López-Vicente, Xavier Basagaña, Jordi Julvez, Mar Alvarez-Pedrerol, Mark J. Nieuwenhuijsen, and Jordi Sunyer. "Green and Blue Spaces and Behavioral Development in Barcelona Schoolchildren: The BREATHE Project." Environmental Health Perspectives 122, no. 12 (December 2014): 1351–58. https://doi.org/10.1289/ehp.1408215.

134 Rådsten Ekman, Maria, Peter Lundén, and Mats E. Nilsson. "Similarity and Pleasantness Assessments of Water-Fountain Sounds Recorded in Urban Public Spaces." The Journal of the Acoustical Society of America 138, no. 5 (November 1, 2015): 3043–52. https://doi.org/10.1121/1.4934956.

135 Beyer, Kirsten M. M., Andrea Kaltenbach, Aniko Szabo, Sandra Bogar, F. Javier Nieto, and Kristen M. Malecki. "Exposure to Neighborhood Green Space and Mental Health: Evidence from the Survey of the Health of Wisconsin." International Journal of Environmental Research and Public Health 11, no. 3 (March 2014): 3453–72. https://doi.org/10.3390/ijerph110303453. Hedblom, Marcus, Bengt Gunnarsson, Behzad Iravani, Igor Knez, Martin Schaefer, Pontus Thorsson, and Johan N. Lundström. "Reduction of Physiological Stress by Urban Green Space in a Multisensory Virtual Experiment." Scientific Reports 9, no. 1 (July 12, 2019): 10113. https://doi.org/10.1038/s41598-019-46099-7.

136 Boyce, P. R., N. H. Eklund, B. J. Hamilton, and L. D. Bruno. "Perceptions of Safety at Night in Different Lighting Conditions:" International Journal of Lighting Research and Technology, August 18, 2016. https://doi.org/10.1177/096032710003200205.

137 Björk, Jonas, Jonas Ardö, Emilie Stroh, Håkan Lövkvist, Per-Olof Ostergren, and Maria Albin. "Road Traffic Noise in Southern Sweden and Its Relation to Annoyance, Disturbance of Daily Activities and Health." Scandinavian Journal of Work, Environment & Health 32, no. 5 (October 2006): 392–401. https://doi.org/10.5271/sjweh.1035. Stephen Stansfeld, Mary Haines, and Bernadette Brown. "Noise and Health in the Urban Environment." Reviews on Environmental Health 15, no. 1–2 (January 1, 2000): 43–82. https://doi.org/10.1515/REVEH.2000.15.1-2.43.

138 Paulsen, Derek J. "Crime and Planning: Building Socially Sustainable Communities." Routledge & CRC Press, 2013. https://www.routledge.com/Crime-and-Planning-Building-Socially-Sustainable-Communities/Paulsen-PhD/p/book/9781439871669.

139 Kawachi, I., and L. F. Berkman. "Social Ties and Mental Health." Journal of Urban Health: Bulletin of the New York Academy of Medicine 78, no. 3 (September 2001): 458–67. https://doi.org/10.1093/jurban/78.3.458. Maas, Jolanda, Sonja M. E. van Dillen, Robert A. Verheij, and Peter P. Groenewegen. "Social Contacts as a Possible Mechanism behind the Relation between Green Space and Health." Health & Place 15, no. 2 (June 2009): 586–95. https://doi.org/10.1016/j.healthplace.2008.09.006.

140 Ulmer, Jared M., Kathleen L. Wolf, Desiree R. Backman, Raymond L. Tretheway, Cynthia JA Blain, Jarlath PM O'Neil-Dunne, and Lawrence D. Frank. "Multiple Health Benefits of Urban Tree Canopy: The Mounting Evidence for a Green Prescription." Health & Place. 2016. 42: 54-62. 42 (2016): 54–62. https://doi.org/10.1016/j.healthplace.2016.08.011.

141 Coley, Rebekah Levine, William C. Sullivan, and Frances E. Kuo. "Where Does Community Grow?: The Social Context Created by Nature in Urban Public Housing." Environment and Behavior 29, no. 4 (July 1, 1997): 468–94. https://doi.org/10.1177/001391659702900402.

142 Egli, Victoria, Melody Oliver, and El-Shadan Tautolo. "The Development of a Model of Community Garden Benefits to Wellbeing." Preventive Medicine Reports 3 (June 1, 2016): 348–52. https://doi.org/10.1016/j.pmedr.2016.04.005.

143 Peters, Karin, Birgit Elands, and Arjen Buijs. "Social Interactions in Urban Parks: Stimulating Social Cohesion?" Urban Forestry & Urban Greening, Special section on "Forest recreation and nature tourism," 9, no. 2 (January 1, 2010): 93–100. https://doi.org/10.1016/j.ufug.2009.11.003.

144 Coley, Rebekah Levine, William C. Sullivan, and Frances E. Kuo. "Where Does Community Grow?: The Social Context Created by Nature in Urban Public Housing." Environment and Behavior 29, no. 4 (July 1, 1997): 468–94. https://doi.org/10.1177/001391659702900402.

145 Berman, Marc G., Ethan Kross, Katherine M. Krpan, Mary K. Askren, Aleah Burson, Patricia J. Deldin, Stephen Kaplan, Lindsey Sherdell, Ian H. Gotlib, and John Jonides. “Interacting with Nature Improves Cognition and Affect for Individuals with Depression.” Journal of Affective Disorders 140, no. 3 (November 2012): 300–305. https://doi.org/10.1016/j.jad.2012.03.012. McDonald, Rob, Lida Aljabar, Craig Aubuchon, Howard G. Birnbaum, Chris Chandler, Bill Toomey, Jad Daley, Warren Jimenez, Joel Paque, and Matt Zeiper. “Funding Trees for Health: An Analysis of Finance and Policy Actions to Enable Tree Planting for Public Health.” The Nature Conservancy, The Trust for Public Land, Analysis Group, n.d. https://thought-leadership-production.s3.amazonaws.com/2017/09/19/15/24/13/b408e102-561f-4116-822c-2265b4fdc079/Trees4Health_FINAL.pdf.

146 Akbari, H, M Pomerantz, and H Taha. “Cool Surfaces and Shade Trees to Reduce Energy Use and Improve Air Quality in Urban Areas.” Solar Energy, Urban Environment, 70, no. 3 (January 1, 2001): 295–310. https://doi.org/10.1016/S0038-092X(00)00089-X.

147 Akbari, H, M Pomerantz, and H Taha. “Cool Surfaces and Shade Trees to Reduce Energy Use and Improve Air Quality in Urban Areas.” Solar Energy, Urban Environment, 70, no. 3 (January 1, 2001): 295–310. https://doi.org/10.1016/S0038-092X(00)00089-X.

148 Milojevic, Ai, Ben Armstrong, and Paul Wilkinson. “Mental Health Impacts of Flooding: A Controlled Interrupted Time Series Analysis of Prescribing Data in England.” Journal of Epidemiology and Community Health 71, no. 10 (2017): 970–73. https://doi.org/10.1136/jech-2017-208899.

149 US Department of Energy. “Idling Reduction for Personal Vehicles,” n.d. https://afdc.energy.gov/files/u/publication/idling_personal_vehicles.pdf.

150 Jiang, Xu-Qin, Xiao-Dong Mei, and Di Feng "Air pollution and chronic airway diseases: what should people know and do?" Journal of Thoracic Disease (January 8):31-40. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4740163/

151 U.S Environmental Protection Agency. "Best Practices for Reducing Near-Road Pollution Exposure at Schools" (November 2015)https://rems.ed.gov/docs/Mobile_docs/EPA_Reducing-Near-Road-Pollution-Schools.pdf

152 Hitchcock, G., Vedrenne, M. (2014). Cycling and Urban Air Quality: A Study of European Experiences. European Cyclists Federation, 5-34. https://ecf.com/files/150119-Cycling-and-Urban-Air-Quality-A-study-of-European-Experiences_web.pdf Stansfeld, Stephen A., and Mark P. Matheson. “Noise Pollution: Non-Auditory Effects on Health.” British Medical Bulletin 68 (2003): 243–57. https://doi.org/10.1093/bmb/ldg033. Rundle, Andrew G. and Steven B Heymsfield "Can walkable urban design play a role in reducing the incidence of obesity-related conditions?" Journal of the American Medical Association (February 2018): 2175-2177 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5793858/

153 Sandifer, Paul A., Ariana E. Sutton-Grier, and Bethney P. Ward. “Exploring Connections among Nature, Biodiversity, Ecosystem Services, and Human Health and Well-Being: Opportunities to Enhance Health and Biodiversity Conservation.” Ecosystem Services 12 (April 1, 2015): 1–15. https://doi.org/10.1016/j.ecoser.2014.12.007. Wood, Emma, Alice Harsant, Martin Dallimer, Anna Cronin de Chavez, Rosemary R. C. McEachan, and Christopher Hassall. “Not All Green Space Is Created Equal: Biodiversity Predicts Psychological Restorative Benefits From Urban Green Space.” Frontiers in Psychology 9 (2018). https://doi.org/10.3389/fpsyg.2018.02320.

154 Lowry, C.A., J.H. Hollis, A. de Vries, B. Pan, L.R. Brunet, J.R.F. Hunt, J.F.R. Paton, et al. “Identification of an Immune-Responsive Mesolimbocortical Serotonergic System: Potential Role in Regulation of Emotional Behavior.” Neuroscience 146, no. 2–5 (May 11, 2007): 756–72. https://doi.org/10.1016/j.neuroscience.2007.01.067.

155 Milojevic, Ai, Ben Armstrong, and Paul Wilkinson. “Mental Health Impacts of Flooding: A Controlled Interrupted Time Series Analysis of Prescribing Data in England.” Journal of Epidemiology and Community Health 71, no. 10 (2017): 970–73. https://doi.org/10.1136/jech-2017-208899. Helliwell, John, Richard Layard, Jeffrey Sachs, and Jan-Emmanuel De Neve. “World Happiness Report 2020.” New York: Sustainable Development Solutions Network. Accessed September 14, 2020. http://worldhappiness.report/.

156 Milojevic, Ai, Ben Armstrong, and Paul Wilkinson. “Mental Health Impacts of Flooding: A Controlled Interrupted Time Series Analysis of Prescribing Data in England.” Journal of Epidemiology and Community Health 71, no. 10 (2017): 970–73. https://doi.org/10.1136/jech-2017-208899. Thompson Coon, J., Boddy, K., Stein, K., Whear, R., Barton, J., & Depledge, M. H. (2011). Does participating in physical activity in outdoor natural environments have a greater effect on physical and mental wellbeing than physical activity indoors? A systematic review. Environmental science & technology, 45(5), 1761-1772.

157 Ulrich, R. S. “View through a Window May Influence Recovery from Surgery.” Science (New York, N.Y.) 224, no. 4647 (April 27, 1984): 420–21. Jo, Hyunju, Chorong Song, and Yoshifumi Miyazaki. “Physiological Benefits of Viewing Nature: A Systematic Review of Indoor Experiments.” International Journal of Environmental Research and Public Health 16, no. 23 (December 2019). https://doi.org/10.3390/ijerph16234739.