



# INEQUITY IN ACCESS TO SUSTAINABLE URBAN PARKS IN SOUTH TUCSON, AZ

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## Abstract

This study highlights the poor conditions of urban parks in South Tucson, a predominantly Hispanic area, and provides actionable solutions for enhancing equity in urban park access and quality. This was done by comparing the parks in the study area to the parks in East Tucson, an area predominantly Caucasian. The samples were selected using stratified random sampling. The case study method was used to make a comparison between three parks in south Tucson, namely Santa Rosa, Mirasol, and Ormsby Parks, and those in East Tucson, namely Roy P. Drachmann Agua, Morris K. Udall, and Michael Perry Parks. Findings show that parks in east Tucson had more amenities, were better maintained, were larger, and had a higher proportion of green spaces and more facilities than those in south Tucson. The author recommends that park authorities ensure that the parks in South Tucson are well-maintained and have enough amenities and green spaces to meet the needs of the residents. Also, the residents should collaborate to identify park development priorities to ensure they have a voice in creating sustainable parks in their communities. Lastly, the principles of environmental justice should be included as a criterion for the distribution and maintenance of public parks for underserved populations.

## Keywords

Equity, Environmental justice, Urban Parks

## 1. Introduction

Urban parks are a significant contributor to the aesthetic quality of an area. They are economically, socially, and environmentally beneficial to urban areas. Despite their usefulness, some populations do not have parks that can benefit them in these roles. This study highlights the poor conditions of urban parks in South Tucson, a predominantly Hispanic area, and provides actionable solutions for enhancing equity in urban park access and quality. Urban parks foster a community's well-being, environmental sustainability, and public health (Jennings & Bankole, 2019). They promote public health by mitigating urban heat and flood hazards; they enhance property values, host community social activities, and foster residents' sense of belonging and place (Robinson et al., 2022). However, their benefits are not equitably distributed among the Hispanic population in South Tucson.

Underserved populations often face systemic inequities in accessing public amenities, including well-maintained and equipped urban parks (Zhang et al., 2021). This disparity can lead to decreased opportunities for physical activities and weakened social cohesion (Jennings & Bankole, 2019). South Tucson, an area with the city's highest Hispanic population, has faced many challenges with ecological issues. The parks in this area are less well-maintained and have fewer amenities, broken equipment, litter, and inadequate lighting than parks in other parts with the Caucasian population. Also, many residents report limited usage of local parks due to safety concerns, lack of facilities, and poor maintenance (Cole et al., 2021; Cross, 2023). Historical disinvestment and systemic neglect in predominantly Hispanic areas are identified as key factors contributing to the inequities (Cole et al., 2021; Cross, 2023)

A growing body of research shows that areas with a Caucasian population have better-quality parks than other races. Various studies have highlighted disparities in green space accessibility across different urban populations (Robinson et al., 2023; Bao et al., 2023). Access to urban parks is based on income, ethno-racial characteristics, age, gender, (dis)ability, and other axes of differences (Hallum et al., 2024; Rigolon, 2016). Underserved populations typically occupy the urban core and low-income inner ring suburbs where green space is either scarce or poorly maintained (Hallum et al., 2024; Rigolon, 2018), while wealthier households often reside in

the suburban periphery where green space is abundant, well-serviced, and well-maintained (Hallum et al., 2024; Sefsk et al., 2019; Rigolon, 2018)

A substantial body of research articulates the multiple contributions of urban green spaces to human health and well-being (Larson et al., 2016; Jennings & Bankole, 2019; Aleman et al., 2023). These green spaces provide ecosystem services that support human welfare in multiple ways [(Jennings et al., 2016). For example, studies of specific neighborhoods and cities imply that proximity to and use of urban green space is positively associated with physical activity levels and cardiovascular health populations (Robinson et al., 2022). Parks and green spaces also support vegetation that contributes to physical health by reducing heat effects (Aram, 2019) and regulating air and water pollution. The lack of appropriate spaces for physical activity may play a significant role in the high rates of chronic diseases and obesity in the target population. According to research, about 42% of Hispanic adults and 22% of Hispanic children are obese (Sanyolu et al., 2019) as compared to 32% and 14% (Sanyaolu et al., 2019) of their white counterparts; similarly, Hispanics are 1.7 times more likely than whites to be diagnosed with diabetes. (Sanyolu et al. 2019)

This justifies the availability of sustainable parks in this area and for other underserved populations with similar challenges. The study, therefore, aims to compare the condition of selected parks in South and East Tucson. It also aims to shed light on the systemic challenges underserved populations face and provide actionable solutions for enhancing equity in urban park access and quality. The objectives of the study are:

1. Compare three (3) parks in south Tucson, namely Santa Rosa, Mirasol, and Ormsby Parks, to those in East Tucson, namely Roy P. Drachman Agua, Morris K. Udall, and Michael Perry Parks.
2. Make recommendations for equity in park access in underserved populations.

## 2. Methodology

Case studies were conducted on all selected parks on November 11th and 17th, 2022. This method was considered appropriate based on its utility as a linkage between theory and practice. Samples were collected in the study area using stratified random sampling. The method was used to select samples that are a presentation of the population. This approach consisted of dividing the parent population into two mutually exclusive geospatial strata (South and North and East Tucson), followed by a random selection of parks from each of the two strata. The stratified random sampling method increased sampling efficiency and minimized sample selection bias by narrowing the difference between different types of parks. The study consisted of a detailed examination of each park, including existing amenities, vegetation, and size.

## 3. Findings

Below are the findings from the studies conducted in the selected parks.

### East Tucson Parks

**i. Roy P. Drachman Agua:** A 101-acre park (Pima County, 2016). There is a large water body, diverse wildlife, and lush vegetation, such as large palm trees, fully mature mesquite trees, and a wide-open grass area. The entrance to the park is a paved road with abundant parking. Amenities found at the park include hiking trails, ponds, large grass areas, historic sites, shops, and restrooms, as shown in Fig. 1



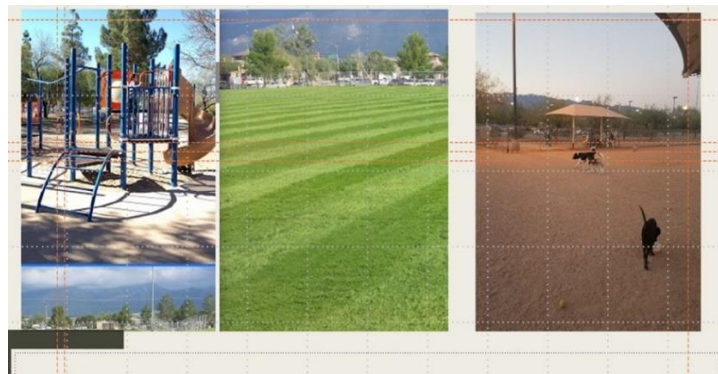
**Fig. 1. Amenities at Roy P. Drachman Agua Park (From left to right hiking trails, ponds, large grass areas, historic sites, shops, and restrooms) Source: Fieldwork**

**ii. Morris K. Udall Park:** A 173-acre park (Pima County, 2016). It is the largest park on the east side of Tucson. Amenities found at the park include open fields, picnic areas, and the K. Udall Recreation Center, which has amenities such as a weight room, cardiovascular equipment, indoor walking track, handball/racquetball courts, billiard tables, dance room, meeting rooms, a gym ( Fig. 2a)



**Fig. 2a. Amenities at Morris K. Udall Park ( from left to right playgrounds, picnic center, outdoor walk station) Source: Fieldwork**

Others include playgrounds, green spaces, and a dog park ( Fig. 2b)



**Fig. 2b Amenities at Morris K. Udall Park ( from left to right playgrounds, green spaces, and dog park) Source: Fieldwork.**

Others not shown in the pictures include basketball, volleyball, badminton, pickleball, tennis courts, sand volleyball courts, horseshoe pit, bocce courts, and three walking paths.

**iii. Michael Perry Park:** A 35-acre Park on Tucson's east side. ( City of Tucson, 2024 ) The park has a Children's Memorial Garden. It connects to Pantano River Park, a part of " The Loop"- an ongoing project of Pima County that will eventually be 131 miles of car-free paths around metropolitan Tucson (Michael Perry Park, 2024). Amenities found at the park include playgrounds, open spaces, picnic areas, basketball courts, and barns ( Fig. 3)

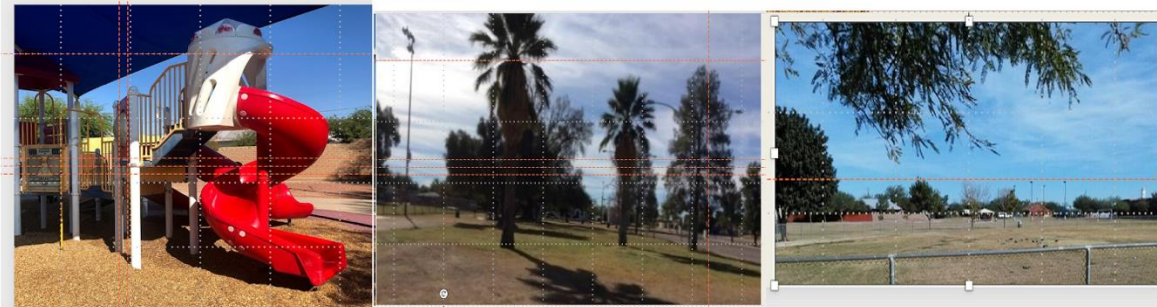


**Fig 3 Michael Perry Park (from left to right playgrounds, open spaces, picnic center, basketball court, and barns Source: Fieldwork**



## South Tucson Parks

- i. **Santa Rosa Park:** A 10.8-acre Park (Pima County, 2016) located on the south side of Tucson. Amenities at the park include a children's playground, open spaces, and a tennis court (Fig. 4)



**Fig 4 Santa Rosa Park (from left to right playgrounds, open space, and tennis court )**  
Source: Fieldwork

- ii. **Mirasol Park:** A 5.6-acre park (Pima County, 2016). Amenities at the park include open spaces, a ramada, a picnic area, and a playground



**Fig 5 Mirasol Park: (from left to right open spaces, and playgrounds) Source: Fieldwork**

- iii. **Ormsby Park** A 4.84-acre (Pima County, 2016) rectangle-shaped park (Pima County, 2016). Amenities found at the park include open spaces and a basketball court (Fig 6 )



**Fig 6 Ormsby Park (from left to right open space, and playground) Source: Fieldwork**

## **4 Discussion**

Findings from the selected parks in East Tucson show that the parks in the area, namely Roy P. Drachman Agua, Morris K. Udall, and Michael Perry Parks, are larger, have more vegetation and amenities, and are better maintained, while those in South Tucson, namely Santa Rosa, Mirasol, and Ormsby Parks. The results highlight significant disparities in the distribution and maintenance of urban parks in South Tucson. The inequities can largely be attributed to broader systemic issues, such as historical disinvestment and a lack of representation in municipal decision-making processes. These findings justify the need for targeted interventions and policies to address the inequitable distribution of urban amenities in the area and other underserved populations.

## **5 Conclusion**

Addressing inequities in the distribution and maintenance of urban parks is critical for ensuring that all residents, particularly the Hispanic population of South Tucson, can enjoy the benefits of well-maintained green spaces and live in healthy communities. Concerted efforts and inclusive policies can create more equitable and vibrant urban environments. Parks have the prospects of creating livable spaces. Taking critical steps to invest in them will be beneficial to communities.

## **6 Recommendations**

The author recommends that park authorities should ensure that the parks in South Tucson are well maintained and have enough amenities and green spaces to meet the needs of the residents. Also, the residents should collaborate to identify park development priorities to ensure they have a voice in creating sustainable parks in their communities. Lastly, it is crucial that future research continues to explore the intricate dynamics of urban inequity, as this is essential for advocating sustainable, inclusive urban development.

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