

**Denying Community Goal-Scoring Opportunity: Examining the Relationship Between Soccer Playfield Accessibility with Geospatial and Socioeconomic Inequality for the African Diaspora in Rainier Valley**

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## Abstract

Soccer is an activity that captivates billions of people across the globe and ranks as the most-popular sport in the City of Seattle. Despite its public favor throughout the region, soccer remains a sport where opportunity is inequitably distributed, especially among marginalized groups, through discriminate policy, financial barriers, and geospatial factors. This study highlights one such group, the African diaspora community, and documents their experiences of inequitable soccer playfield access in Seattle's Rainier Valley district. A cross-sectional, mixed-methods research project was designed using non-participatory observations, participatory GIS, and two semi-structured interviews to answer the question: what is the relationship of soccer playfield access with geospatial and socioeconomic inequality for African diaspora communities in Rainier Valley? An analysis of existing data with findings from qualitative research supports evidence of inequitable playfield access by members of the African diaspora community, exasperated by existing policy. The denouement of this research provides four recommendations, at the discretion of the City of Seattle and Washington State Legislature, that foster equitable soccer playfield access for marginalized populations through policy amendments, strategic facility development, and additional data collection. Future considerations should continue to validate the experiences of underrepresented playfield users which allow stakeholders to make pragmatic and informed decisions that expand equitable soccer playfield access.

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## 1. Introduction

The Scottish football manager, Bill Shankly, was notably asked whether soccer was a matter of life and death. His response: it was *more important* than that. These feelings expressed by Shankly are sentimental among a nearly majority of people across the globe and provide evidence that supports soccer as the world's most popular sport (Bar-On, 2014). *La Joga Bonito* or “the beautiful game” made famous by Brazil's Pelé truly transcends country borders, belief systems, ethnic groups, language, socioeconomic boundaries, and even conflict. The International Association Football Federation (FIFA) World Cup of 2022 had 5.95 billion engagements across a range of media platforms and devices, including the roughly 1.5 billion that watched the final match between Argentina and France (FIFA, 2023). This suggests that over 1 in 8 people on planet Earth watched Lionel Messi and Argentina defeat the defending champions, France. Whether through the FIFA World Cup, youth organization, professional clubs, or pick-up games at the local park: the game of soccer is played and observed on every continent (*David Beckham For the Love of the Game*, 2015).

One such place that soccer can be found in abundance is Seattle, where it ranks as the top sport among both boys and girls (Project Play, 2019). Despite its popularity in the Emerald City, soccer remains a sport where opportunity is distributed inequitably. From the “pay to play” component of soccer leagues to the composition (e.g. grass, turf) and location of playfields in a neighborhood (Washington State Recreation and Conservation Office, 2022), to historical policy that dictated where playfields would be built (Forward Thrust Committee, 1980). Lack of opportunity to play the world's most popular sport only exacerbates the growing issue of inactivity among youth and adults in Washington state, a problem that is more frequent among immigrants, low-income families, and both girls and

youth of color (Washington State Recreation and Conservation Office, 2022). In Seattle, socioeconomic status is correlated with outcomes related to physical activity and sports participation as children from medium and high-affluence families were three times as likely to meet physical activity recommendations compared to children from low-affluence families (Tandon et al., 2021). Soccer not only provides a medium for physical activity, it fosters a sense of welcome and familiarity, acting as a “social glue” for communities (Bar-On, 2014). The sport is akin to a religion and its playfield is the sanctuary: a place where families, friends, and entire communities gather for a common purpose. A place to break a sweat, make memories, and momentarily put life’s worry on the bench.

If we hold true the metaphor that soccer is a religion, then the African diaspora are some of the most dedicated and involved parishioners. It is a sport that is embedded into the culture and engrossed by both men and women (Fraser, 2009). African immigrants, and their soccer culture, have come to Seattle where the African diaspora community ranks top 10 nationwide in African immigrant population on a county level (*U.S. Immigrant Population by State and County*, 2014) and across a metropolitan area (*U.S. Immigrant Population by Metropolitan Area*, 2013), with most settling in Rainier Valley (Aileen Balahadia Consultation, 2016). Among the requests from their communities, one desire expressed involves soccer field access and utilization (Aileen Balahadia Consultation, 2016). Making soccer field access more equitable is both relevant to and recommended by the African diaspora community.

Prior studies include evidence of socioeconomic inequality in playfield accessibility (Moore et al., 2008; Rigolon & Flohr, 2014). However, the previous research fails to include narratives that magnify the insight of experiences by marginalized populations, especially the African diaspora, as they attempt to utilize these recreational spaces used for soccer.

This study attempts to address the gap by answering the question: what is the relationship between soccer playfield access with geospatial and socioeconomic inequality for African diaspora communities in Rainier Valley? The question is imperative to understanding the geospatial and socioeconomic dimensions that make playfield access inequitable. To answer this question, a cross-sectional, mixed-methods research project was designed to analyze geospatial and socioeconomic data with qualitative data gained from observations, participatory GIS, and interviews. The research design contributes to the shortcomings of past studies while providing key qualitative data from the target population. Currently, Seattle is concerned of issues regarding playfield (and soccer field) access, as evidenced by the State of Play Report of 2019, creation of the King County Play Equity Coalition, the Physical Activity Task Force Report of 2022 (sponsored by the Washington State Reservation and Conservation Office), and the RAVE Foundation (of the Seattle Sounders) committed to building 26 small soccer fields that make access equitable and strengthen communities. Findings of this report are used to develop policy recommendations for key stakeholders that make soccer playfield access more equitable for marginalized communities. Background information and key literature is reviewed in the following section. The subsequent chapter describes the research methodology followed by data analysis and findings. The conclusion and recommendation sections of the research appear last in order.

## 2. Background and Literature Review

### Background

Comprehending the relationship of soccer field accessibility in Rainier Valley for African diaspora communities, and the socioeconomic and geospatial inequalities they face, must first begin with the history and development of soccer fields across the city of Seattle. For most playfields, conception started with the Forward Thrust campaign. In February of 1968, voters participating in a special election approved seven propositions totaling \$333.9 million, making Forward Thrust initiatives the largest, per capita, public improvement project in the United States for its time (Forward Thrust Committee, 1980). Proposition 6: Parks and Recreation, totaling \$118 million, was approved by nearly two-thirds of King County voters during the special election, making it the single-largest public improvement project in the nation at the time and affirming voter belief in the importance of preserving green spaces (Forward Thrust Committee, 1973). From 1968 through 1976, the Forward Thrust program led to the development of 4,900 park acres and the completion of the 65,000-seat capacity Kingdome (Forward Thrust Committee, 1976). The initial voter-approved \$118 million for Parks and Recreation increased to \$186.6 million from investment interest and matching funds, allowing more than 300 parks (including 60 soccer-football fields) to be acquired or developed (Forward Thrust Committee, 1980). Three such playfields, designated as sites for this research, were supported by Forward Thrust and are found across Rainier Valley: Genesee, Brighton, and Rainier Beach playfields. With an acquisition price of \$963,000, no other playfield supported by Forward Thrust would cost more than Rainier Beach (Forward Thrust Committee, 1973).

Despite targeted efforts by the Forward Thrust campaign, playfield utilization hinges on geographic and socioeconomic factors. The access to outlets for sports and physical activity are dispersed inequitably, as are the potential benefits that come with participating in them (Tandon et al., 2021). Opportunities to access physical activity resources differ by community, socioeconomic status, and race (Centers for Disease Control and Prevention, n.d.) while recreational facilities are distributed inequitably for low-income populations (Moore et al., 2008). It is a problem that is more frequent among immigrants, low-income families, and both girls and youth of color (Washington State Recreation and Conservation Office, 2022). In south King County, the infrastructure is inadequate, reflective of both fewer green spaces and less-integrated transit networks (Project Play, 2019). Of the 358 designated soccer fields in the state of Washington, only 28% are composed of turf or a synthetic material while 20% have lights, significantly impacting the days and times these fields can be used (Washington State Recreation and Conservation Office, 2022). With fewer playfields and parks in their neighborhoods, communities in south King County experience inequitable access to these spaces as compared with the rest of the region (Project Play, 2019).

Securing playfields for free that can host unplanned activities is challenging with high demand for paid programming (Project Play, 2019). Scheduled field time in Seattle for rectangular-field sports nearly doubled from roughly 26,500 hours in 2006 to over 50,000 in 2018 (Project Play, 2019). The current process for reserving access to playfields should also be amended as it acts as a barrier that prevents underserved populations from accessing these facilities (Project Play, 2019). Navigating park and school reservation systems are time-consuming, befogging, and often English-only (Washington State Recreation and Conservation Office, 2022). These factors disadvantage certain communities and

exacerbates issues of access and misuse of power (Washington State Recreation and Conservation Office, 2022). Inequitable access to sport, stemming from barriers of cost, transportation, and language, can be mitigated through funding, policy support, and private-public collaboration (Tandon et al., 2021).

Additionally, formulating altruistic connections between school districts, parks departments, and their communities is advised by the Washington State Recreation and Conservation Office. School spaces offer the greatest potential for bettering equitable access, but traditionally are the most underused (Washington State Recreation and Conservation Office, 2022). California, Utah, and Hawaii have adopted policy that designate public schools as civic center hubs, allowing local communities to openly use these spaces before and after school hours (Washington State Recreation and Conservation Office, 2022). Tacoma Public School playfields are open to community members and only closed during scheduled practices and games (Washington State Recreation and Conservation Office, 2022). Data from the Trust for Public Land suggests that if every public schoolyard were available for community use in the United States, 20 million people (one-fifth the population) would have increased access to a safe space for physical activity and be within a 10-minute walk to these facilities (“Our Schoolyard Pledge,” n.d.). Expanding access to existing resources is more economical and cost-effective than constructing new facilities (ChangeLab Solutions, 2018).

## Literature Review

The African diaspora of Rainier Valley can be traced back to policy changes in the United States during the latter half of the 20<sup>th</sup> century. The Immigration and Nationality Act of 1965, the Refugee Act of 1980, and the Immigration Act of 1990 all significantly expanded opportunities for immigrants and refugees coming from sub-Saharan Africa (Batalova, 2022). Of the over 2 million immigrants from Africa that resided in the United States between 2017-2021, 3 percent lived in Washington state (*U.S. Immigrant Population by State and County*, 2014). King County ranks 9<sup>th</sup> among all U.S. counties in population of African immigrants and 6<sup>th</sup> in the concentration of the metro area (Seattle-Tacoma-Bellevue) population composed of African immigrants (*U.S. Immigrant Population by Metropolitan Area*, 2013).

Based on the American Community Survey, data suggests that 1.9 percent of Seattle residents between 2006-2010 spoke an African language at home (Aileen Balahadia Consultation, 2016). The specific neighborhoods in Seattle with the highest concentration of African language speakers are all found in Rainier Valley: Brighton, Rainier Beach, and Rainier Vista (Aileen Balahadia Consultation, 2016). This same region has the highest disadvantages and priority as it relates to socioeconomic, racial, and health outcomes (*Racial and Social Equity Composite Index Current*, n.d.).

Soccer is the most popular game among the African diaspora and ingrained into the culture with most men and women having played or interacted with the sport during their lifetime (Fraser, 2009). In Seattle, East African communities have expressed desire for an indoor soccer field that could be utilized by the community as a safe space for physical activity (Aileen Balahadia Consultation, 2016). Providing opportunity for equitable soccer

field accessibility is inherently relevant and suggested by the African diaspora members as an aspiration for their community.

Access to playfields and recreational facilities can be defined as, “the ability to access and enjoy parks with significant play spaces” (Rigolon & Flohr, 2014). In some places, younger people have been shown to have significantly less access to play if they reside in low-income or ethnically diverse neighborhoods.

### 3. Methodology

This study incorporates a cross-sectional, mixed-methods approach using data pragmatically, meeting various members of (and in) the community, such as those in Rainier Valley that face obstacles associated with inequitable soccer playfield access. A cross-sectional design suits the research objectives because the focus is on African diaspora community members and their current relationship to the soccer fields within their geographical proximity (Tashakkori & Teddlie, 2021). The three soccer playfields where qualitative data collection took place are: Genesee, Brighton, and Rainier Beach. These three playfields were selected because they are the only parks facilities in Rainier Valley both developed from the Forward Thrust initiatives and designated for hosting soccer. The playfields are also spread out across the region with Genesee located towards the northern boundary of Rainier Valley and Rainier Beach sitting near the southern boundary. The study population may also include other residents of Rainier Valley and extend beyond into cities south of Seattle, such as Tukwila and SeaTac, that host African diaspora communities. Analysis of existing geospatial data and participatory GIS (PGIS) mapping is used to contextualize the community and soccer playfields. Sources of prior data come from the City of Seattle Racial and Social Equity Index and the Washington State Athletic Fields and Facilities Inventory while current data collected comes from interview responses and observations at playfields.

#### Data

Geospatial and socioeconomic data is first collected from the City of Seattle's Racial and Social Equity Index (RSEI) and the Washington State Recreation and Conservation

Office's Athletic Fields and Facilities Inventory (*Athletic Fields and Facilities Inventory*, n.d.). The Racial and Social Equity Index measures disadvantages across three categories: racial (persons of color, English language learners, foreign born), socioeconomic (income below 200 percent of poverty level, holds less than a bachelor's degree), and health (e.g. no leisure-time for physical activity, obesity, asthma). The Athletic Fields and Facilities Inventory documents parks and schools that possess an athletic field, what the field is used for (e.g. soccer, baseball, multi-purpose), and other variables such as walkability and current use policies. Participants involved in the study will be recruited directly from the three playfields (Genesee, Brighton, and Rainier Beach) using non-probability sampling while strategic coordination with the Congolese Integration Network (CIN) of Seattle will allow for direct communication with members and organizations of the African diaspora community in Rainier Valley and the greater-Seattle area.

### **Public Participation GIS/Participatory GIS**

Using mixed-methods research approach for qualitative GIS allows results from differing data points to be compared and contrasted with one another (Cope & Jung, 2009). Maps and spatial data can be used as an overhead layer that can be compared with the qualitative data found by speaking with individuals within the research area. Visualization can be used to transpose qualitative data into quantitative data. New understandings can be developed when a studied phenomenon is visualized in combination with other patterns and disconnects (Cope & Jung, 2009).

Participatory GIS (PGIS) invites local knowledge to be created from the research process and succeeds traditional GIS in its ability to represent the needs, hopes, and desires of local communities, especially those that are marginalized (Jung, 2013). Mapping can be

done through a variety of mediums, including physical and digital maps. Using GIS, community members can build their own knowledge base that represents their needs and references (Elwood, 2009; Jung, 2013). Questions on inequitable soccer playfield access can be answered by members of the African diaspora community through PGIS. It welcomes participants to contribute to the visualization of this issue and generates pragmatic discussion on the mapping process as it develops.

Counter-mapping is a transformative technique that allows underrepresented and marginalized groups to challenge current mapping and data. This research can apply counter-mapping through asking African diaspora community members which soccer fields they use, comparing the results with present data on soccer field access. Currently, not much information is known about these users of playfields and how they experience inequitable access. Public participation GIS (PPGIS) invites communities to contribute to the mapping and planning process by sharing these experiences (Cope & Jung, 2009). Like counter-mapping, PPGIS fosters innovative representation by giving communities the ability to provide their perspective to the existing literature and data.

PGIS mapping was conducted through nine African diaspora users from Brighton Playfield by having them indicate on a map of Seattle which soccer playfields they use and the general area where they live. Soccer ball stickers and black ink pens were given to participants to indicate which soccer playfields on the map they used and a relative area where they reside. Notes were taken on discussions held by participants during the activity, most notably about residences and playfields that were not pictured on the map. PGIS mapping took place at Brighton Playfield due to its frequent use of soccer by African diaspora members. The nine participants were chosen because they fit the criteria of being African diaspora members and regular users of a soccer playfield in Rainier Valley.

## **Observations and Interviews**

The System for Observing Play and Recreation in Communities (SOPARC) was utilized to confirm access to play for African diaspora communities at Genesee, Brighton, and Rainier Beach playfields through observational data collection. Using a coding form, observations were made about the gender, age, ethnicity, and activity level of playfield users at each of the three parks (Genesee was divided between the upper and lower playfields). The playfields were graded on whether or not they were accessible (not locked or rented to others), usable (suitable weather, field is not in poor condition), equipped (removeable soccer balls available), supervised (presence of coaches, officials, etc.), and organized (scheduled activity e.g., practices, games). The day of the week and the time of day are also documented. Observations were made for at least one hour at each playfield site. Notes were also recorded to describe the events and activities taking place. Observational data collected provides qualitative data that corroborates other data on playfield accessibility. Information regarding park users and the contexts in which they engage in physical activity are necessary for policy makers to facilitate equitable accessibility (McKenzie et al., 2006).

Non-participatory observation and two semi-structured interviews with African diaspora playfield users provided the bulk of qualitative data. Observations were conducted at three soccer playfields (Genesee, Brighton, Rainier Beach) with both interviews taking place at Brighton Playfield. The first interview subject was a soccer coach and the second interview subject was a participant of a weekly pick-up soccer game. The length of interviews ranged from ~10 – 15 minutes. Questions from the semi-structured interviews gauged the importance of soccer to respondents and barriers they face in accessing soccer playfields. Sampling for interviews included a “stratified-purposeful snowball” approach

where subgroups may form (soccer players and teams, local communities, those that can and cannot use the field, those that do and do not express desire to use fields) based off the recommendations from discussions with both interview participants. Answers to interview questions were recorded solely through pen and paper:

1. How often do you access and/or use a soccer field per week? (answers from teams compared with Parks and Recreation field reservation data; if respondent claims to have little to no use of field, ask if they desire to use it more, ask for reasons they can't e.g. transport, availability, schedule conflict)
2. Where do you access soccer fields? Which soccer fields do you use? (bring map and items that let participants identify on a map where they play e.g. stickers, markers)
3. What does soccer mean to you and why is it important for you and/or your family to access and/or use the soccer fields? (e.g. familiar activity/hobby, physical exercise, bonding with family/friends) (i.e., What does soccer mean to you? Why is it important?)
4. Is there anyone else you can recommend the principal investigator should ask about this study?

Data collected is utilized to explain the phenomena of soccer playfield inequality for the subgroups, especially those of the African diaspora community. From interview responses and observational notes, significant statements were coded and grouped into thematic categories using Creswell's template for phenomenological analysis (Creswell, 2007). These significant statements were categorized into four themes that clarify "what" experience occurred (e.g. soccer playfield inaccessibility) and "how" it was experienced by the target population. A composite description from both elements can be combined to convey the culminating facet of inequitable soccer playfield access.

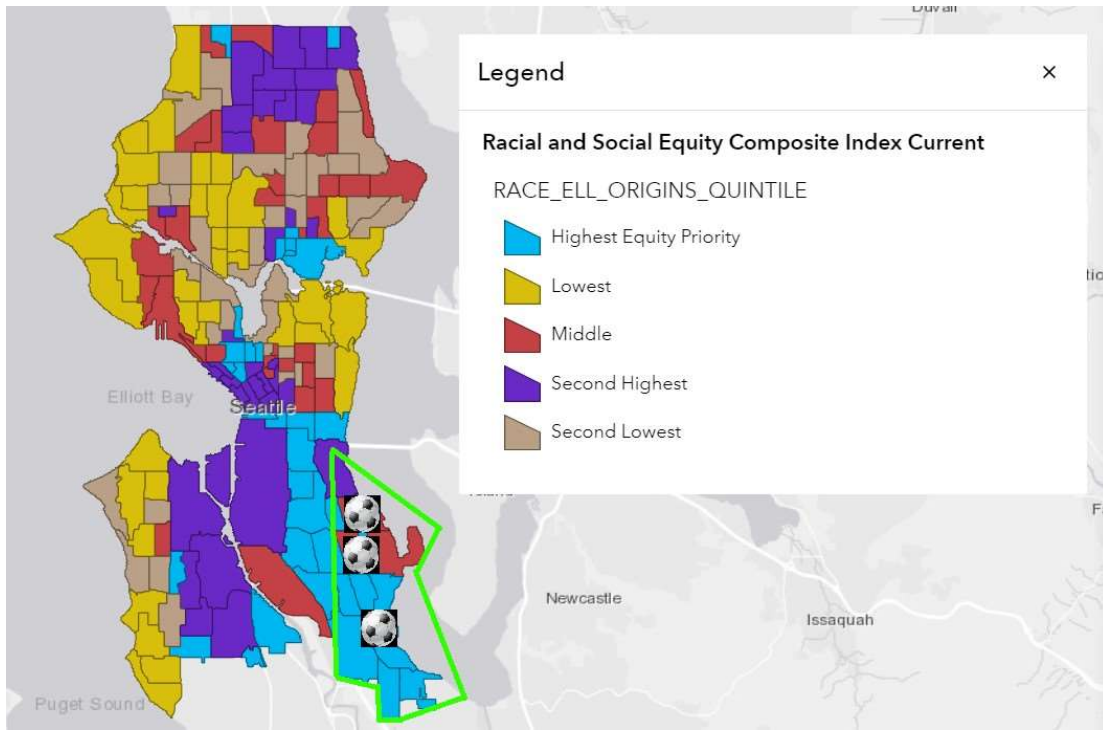
Limitations included time to conduct research and sampling errors, such as the difference between this study's developed statistic and the population parameter. Measurement errors may also be observed for interview questions which are limited in the responses given, the validity of the responses, and whether they are reflective on the entire population of Rainier Valley. Systematic observational data collection is hindered by its laborious methods and requires proper practice and assessment, including visiting target areas to rehearse coding prior to formal data collection. Codes are not 100 percent accurate and someone that is observed as ethnically Black may not always identify with the African diaspora community. Identifying change and necessity of a specific policy recommendation may also be difficult to confirm. As with cross-sectional studies, outcomes are not guaranteed to be representative of the greater population because of sampling bias.

#### 4. Analysis and Outcomes

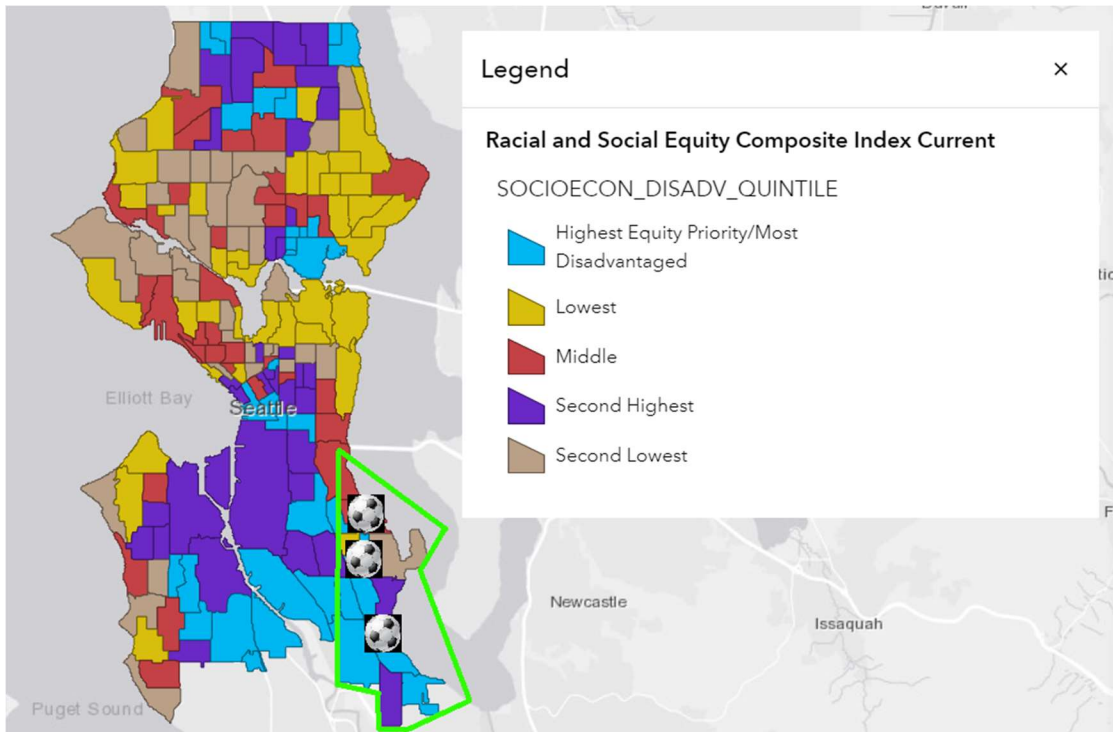
##### Outcomes from Geospatial and Socioeconomic Analysis

The Racial and Social Equity Index (RSEI) of the City of Seattle found that the census tracts where Brighton and Rainier Beach playfields are located fell within the highest disadvantaged quintile when measuring for racial disadvantage (*Racial and Social Equity Composite Index Current*, n.d.). Genesee playfield is in a census tract that fell within the middle quintile. These results can be observed on Figure 1. The RSEI's socioeconomic disadvantage measure yielded the same results: Brighton and Rainier Beach playfields fell within the highest disadvantaged quintile while Genesee playfield is in the middle quintile. Figure 2 shows the results of the socioeconomic disadvantage metric. Measurements for the RSEI's health disadvantage found all three playfields situated in the highest disadvantaged quintile, as shown in Figure 3. Playfields are identified by a soccer ball image on the figures below where the northernmost ball is Genesee and the southernmost ball is Rainier Beach. An approximate boundary for the region of Rainier Valley is demarcated in light-green.

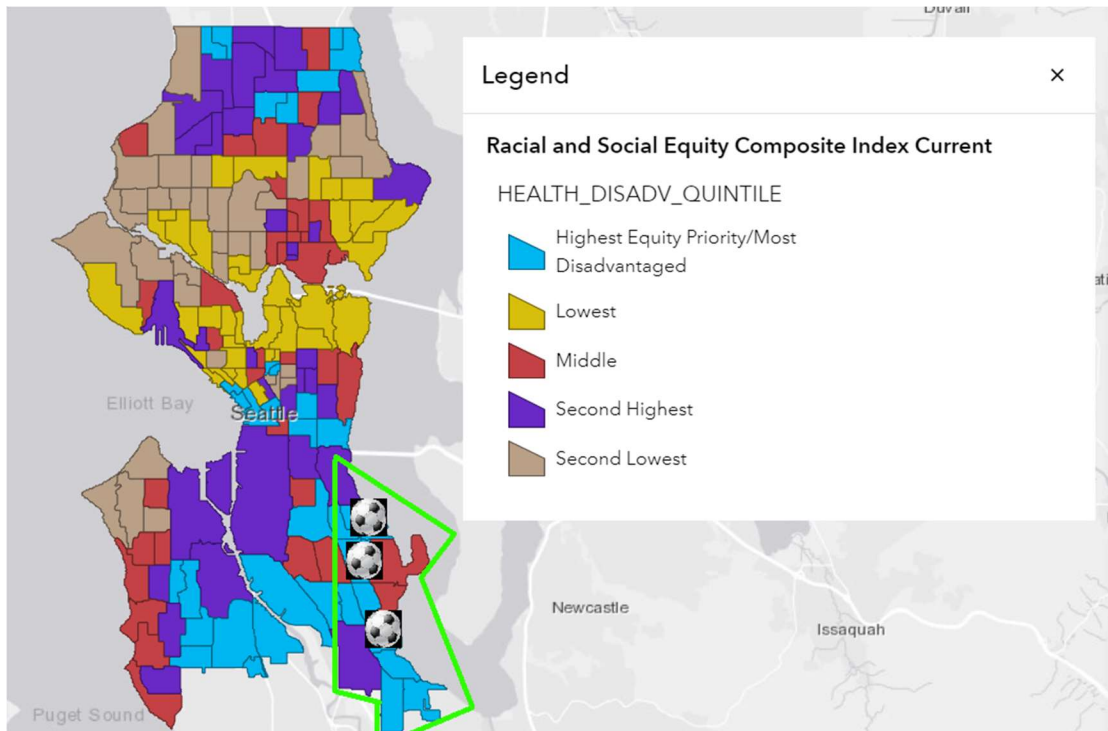
**Figure 1.** RSEI Racial Disadvantage Metric



**Figure 2.** RSEI Socioeconomic Disadvantage Metric



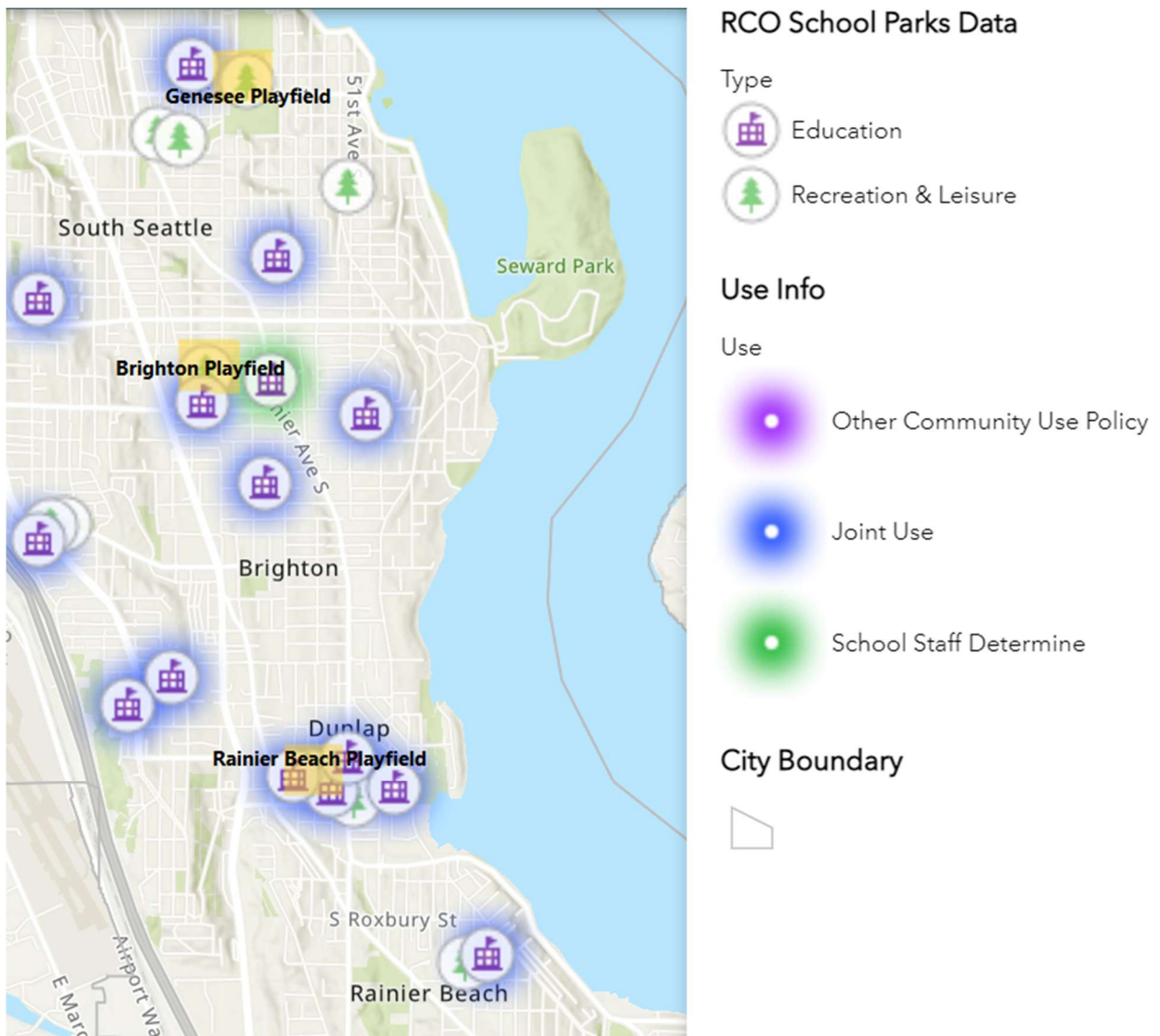
**Figure 3.** RSEI Health Disadvantage Metric



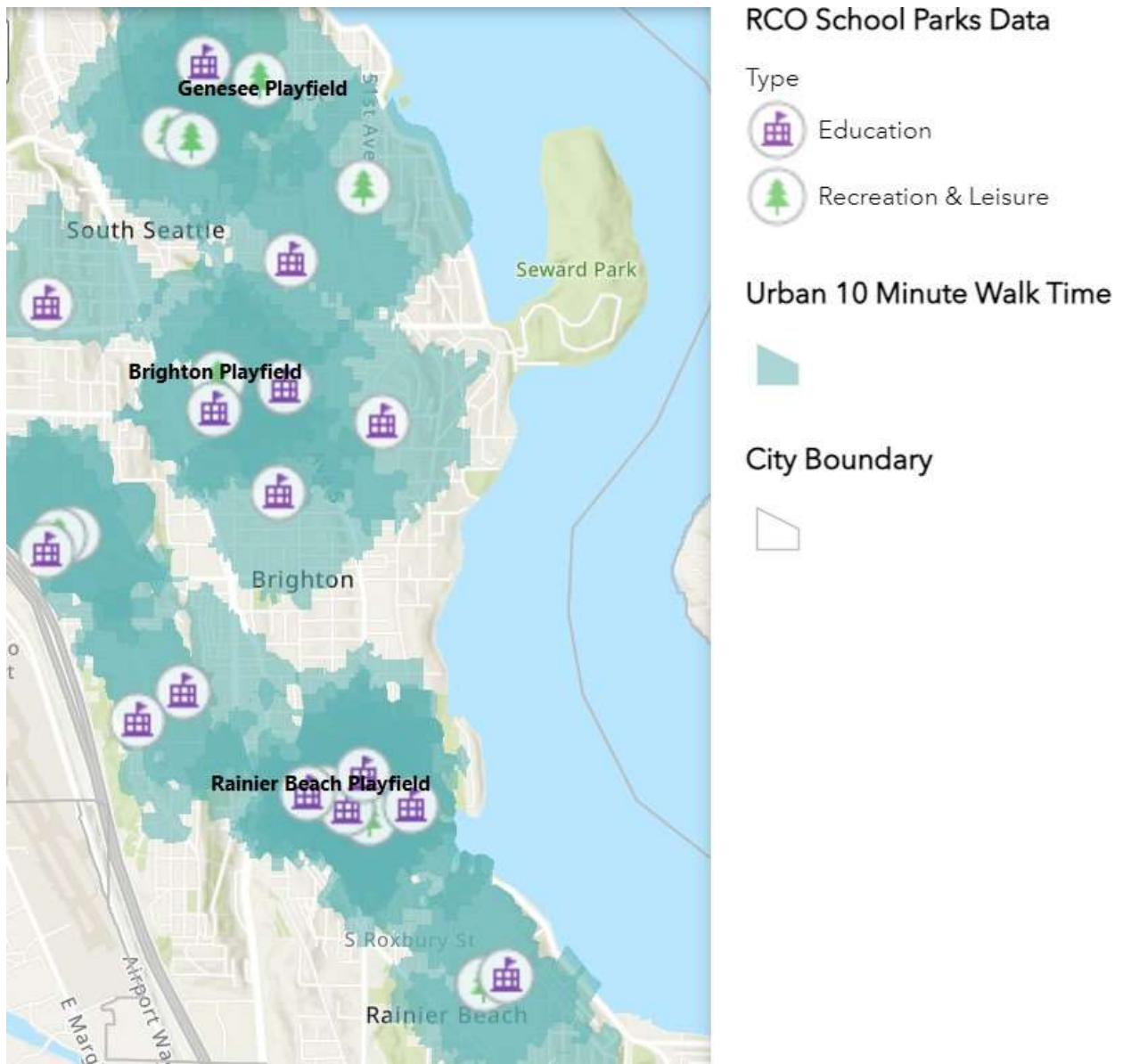
The Athletic Fields and Facilities Inventory confirmed that the only playfields in Rainier Valley that contained soccer goals were Genesee, Brighton, Rainier Beach, and Lakewood Playground, though the latter was not founded from the Forward Thrust initiatives. All but one school in Rainier Valley has a Joint Use policy imposed, meaning a formal agreement between the schools and the City of Seattle or King County to allow for shared use of the facilities. However, only two schools in Rainier Valley have soccer goals for use and both are located on the north and south margins of the region: Franklin and Rainier Beach high schools. Parks are inequitably distributed with the majority located near Genesee Playfield and the northern region of Rainier Valley. The facilities in the southern region are concentrated in the neighborhood of Dunlap near Rainier Beach

Playfield and high school. The result is a rift in playfield access where large gaps north and south of Rainier Beach Playfield exist that have beyond a 10-minute walk to athletic fields and facilities. Figure 4 shows the schools and parks in Rainier Valley, with Genesee, Brighton, and Rainier Beach playfields highlighted in yellow and labeled. Figure 5 highlights 10-minute walk times to fields and facilities within Rainier Valley with the same three playfields labeled.

**Figure 4.** Athletic Fields and Facilities Inventory for Rainier Valley with policy use info



**Figure 5.** Athletic Fields and Facilities Inventory for Rainier Valley with walkability overlay



### **Outcomes from Non-participatory Observations**

Non-participatory observations were collected during 15 site visits at Genesee, Brighton, and Rainier Beach playfields from June 1 – July 6 using the SOPARC method. Observations were coded and transposed into a spreadsheet. The mean for each coded variable was calculated to provide evidence for the average user of each playfield during the

span of data collection. In addition, the total number of users and average number of users per site visit was recorded. Results are displayed in Table 1.

Brighton playfield hosted the most users on average (65.8) and in total (329). Even when combining the results of the lower and upper fields of Genesee, the average number of playfield users for all of Genesee (34) is still nearly less than half the average number of users at Brighton playfield. The average user at Brighton playfield was male, an adult or teenager, ethnically Black, and engaging in vigorous activity. It was the only research site where the average user was Black whereas the average users at each of the other playfields were White. The most underutilized playfield was Rainier Beach and was often observed unused.

**Table 1.** Average playfield users observed at Genesee, Brighton, and Rainier Beach ( $n = 470$ ).

Playfield	Gender Sample Mean	Age Sample Mean	Ethnicity Sample Mean	Activity Level Sample Mean	Number of Observations*	Total Number of Users	Average Number of Users
Genesee Lower	Male	Adult	White	Vigorous	3	48	16
Genesee Upper	Male	Adult	White	Vigorous	2	54	27
Brighton	Male	Adult/Teenager	Black	Vigorous	5	329	65.8
Rainier Beach**	Female	Child/Adult	White	Sedentary	2	39	19.5
	Male	Teenager	White	Vigorous			

\*Some playfields, like Genesee Upper and Rainier Beach, were observed without anyone using the playfields, thus leading to zero observations recorded.

\*\*Mean result is limited because Rainier Beach only observed play twice.

Table 2 shows an index that was developed to measure whether a playfield was accessible, usable, equipped, and had both artificial turf and lights. A “Yes” answer received a “1” while “No” received a “0” score. A complete index of 1.0 equates to a playfield that is fully accessible, usable, equipped, and has both artificial turf and lights. Calculating the

indexes for all three playfield sites shows a disparity between Rainier Beach and the other two parks: it is the only playfield to not have artificial turf and lights.

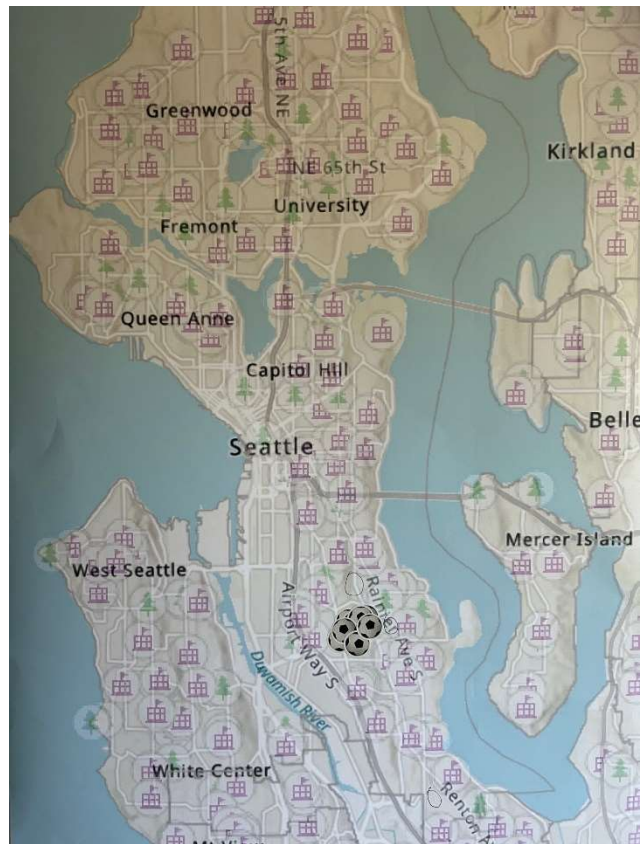
**Table 2.** Playfield Opportunity Index

Playfield	Accessible	Usable	Equipped	Artificial Turf	Lights	Playfield Opportunity Index Score
Genesee	1	1	0	1	1	0.8
Brighton	1	1	0	1	1	0.8
Rainier Beach	1	1	0	0	0	0.4

### **Outcomes from PGIS**

The nine African diaspora community members that were observed at Brighton Playfield indicated with soccer ball stickers that the only playfield they used on the map (Figure 6) was Brighton Playfield. The map showed schools and parks from the Washington State Recreation and Conservation Office’s Athletic Fields and Facilities Inventory located in the City of Seattle with schools designated with purple icons and parks with green. While they were encouraged to indicate any playfields on the map that they used, Brighton was the only playfield accessible on the map for these users. Other playfields frequented by the participants were not within the City of Seattle and therefore not pictured on the map, such as Valley Ridge Playfield in SeaTac. The players assisted with indicating where they lived on the map by circling with a black pen. Some lived nearby and others came from SeaTac and Tukwila, both not pictured on the map. The PGIS participants elaborated that they continued to use Brighton Playfield because they almost always had access to enough space for hosting their small-sided pick-up games. Their games would occur on the same day each week, so those interested could arrive with the expectation that they would be playing soccer.

**Figure 6.** Results of PGIS Mapping Activity



### **Thematic Outcomes**

A total of four themes were developed from analysis of observations, notes from two interviews, and the PGIS activity that elicit the essence of the experience for African diaspora community members accessing soccer playfields.

i. **Inaccessibility**

“We never rent the playfields and just use the outside space. It would be nice to use the main field and goals, but they are never available when we play.” Interview Subject 2

A constant drum beat that reverberated through all data collection was playfield inaccessibility for the African diaspora community. The two interview subjects discussed the system of renting playfields as a hinderance for fully accessing these spaces. The first interview subject mentioned that the financial cost to rent fields and process for submitting rental forms act as road blocks. The “pay-to-play” nature of reserving playfields is a challenge that becomes compounded when factoring in the multiple days needed for practice and games across age levels. The process for reserving playfields is not intuitive for non-native English language learners. Other policies, such as historical-use that allows the same teams to rent the same fields each year, add another layer of difficulty with securing playfields for the coach and his teams to access. He elaborated that because they were a newer team, they were not afforded the same playfield access as those with historical-use. The second interview subject, a Brighton Playfield user that plays pick-up games on the south end of the field, echoed a similar experience. Their group never pays money to rent the playfield because the cost is too high. Instead, they use whatever space is still available at Brighton to play their pick-up games. The playfield is most-often reserved when they use it, as shown in Figure 7.

**Figure 7.** Users at Brighton Playfield play soccer while ultimate frisbee teams use the reserved main field:  
photo taken by the Author, July 2023



Observational data collected support the details that emerged from both interviews. More than once, both the upper and lower playfields at Genesee were rented to organized games, such as adult soccer and ultimate frisbee. At Rainier Beach Playfield, the soccer goals are locked up to a chain link fence along the south end of the space, rendering them completely inaccessible, as per Figure 8. Brighton Playfield was observed open (i.e., no reservations) only once during the entire span of data collection, which occurred during a holiday weekend (Fourth of July) that may have explained the lack of renters. On all other days, ~80 percent of the field was rented and used. On one occasion, the organization

renting Brighton Playfield was Eastside Preparatory, a private school based in Kirkland roughly 14 miles away. It is evidence of outside organizations monopolizing the local playfield and preventing nearby communities from equitable access.

**Figure 8.** Inaccessible soccer goals at Rainier Beach Playfield: photo taken by the Author, July 2023



Although Brighton Playfield was often rented, African diaspora community members were able to use any unused section of the playfield for kicking the soccer ball and playing pick-up games, even if it meant being limited to the outer margins of the space. Despite creative efforts to use these unoccupied spaces at Brighton, contention between African diaspora soccer players and organizations renting the playfield occurred on more than one occasion. The first instance came from children of the African diaspora kicking the soccer ball in the center of the field while a youth baseball game was being played on the south end of the field, seen in Figure 9. When the children would kick the ball near the

outfield, adult coaches would bark at them to move out of their space. During another site visit at Brighton, the group of adult African diaspora users that held pick-up soccer games contended for space with the ultimate frisbee league renting the main playfield. The ultimate frisbee players pushed a soccer goal out of the boundaries they designated for their game. The soccer goal, now protruding into the space used for the pick-up soccer, was pushed back into the ultimate frisbee game by the soccer players. This resulted in a frustrating exchange between ultimate frisbee and soccer players, with the ultimate frisbee players affirming that they rented the space, so they had the right to remove the soccer goal.

**Figure 9.** African diaspora children play soccer while a baseball game finishes at Brighton Playfield; photo taken by the Author, June 2023.



Another mention of accessibility came from both interview subjects in their desire to use other facilities available for soccer, such as schools. They discussed that sometimes schools have playfields with soccer goals, but the ability to use them is limited. “The schools around me are either locked or used by one of their teams,” recalled the second interview subject. With varying facility use policies, some schools lock access to their playfields regularly during all or certain times of the year. Other times, school playfields are available but still subject to those that can reserve the space, preventing local community members from using these facilities. According to the Athletic Fields and Facilities Inventory, Franklin and Rainier Beach High Schools employ a joint-use policy, meaning their playfields should be available for public use when not reserved for school use and other events. However, the enacted policy may not always reflect the current situation as some school facilities remain locked despite their joint-use policy designation.

ii. **Underrepresentation by Race and Gender**

Lack of representation of the African diaspora community at these playfields became an additional theme that came from data collection. The first interview subject discussed how he was one of the few coaches that predominately worked with youth from the African diaspora and remarked that there were not many doing what he did. While many children of the African diaspora were observed playing soccer at Brighton Playfield, none were being coached or affiliated with a formal team. Rather, free play and pick-up games were more common. The same site visit that saw adult coaches for a youth baseball game yelling at Black children kicking a soccer ball found no Black participants in the baseball game. An unintended scene of segregation was observed.

Marginalization of African diaspora groups is an outcome from their lack of representation among organizations renting the playfields, exasperating the inequitable access they face. Genesee Playfield observed three Black users across five site visits, equating to 2.9 percent of the playfield user population. According to 2020 King County demographic data, the Black population in the census tract that contains Genesee Playfield is 19.6 percent (*Seattle- Race and Segregation Maps by Census Tracts 1940-2020*, n.d.) and the population that speaks an African language at home is 5.8 percent (Aileen Balahadia Consultation, 2016). While the average playfield user at Brighton was ethnically Black, only four (~3.7 percent) were identified as participating in formal, organized team activities across the five site visits. The Black population is 22.5 percent in this census tract (*Seattle- Race and Segregation Maps by Census Tracts 1940-2020*, n.d.) and 8.4 percent speak an African language at home (Aileen Balahadia Consultation, 2016). African diaspora users at Brighton were quite literally marginalized to using the peripheral spaces of the playfield. At Rainier Beach Playfield, the average user was ethnically White while members of the African diaspora were often observed using the adjacent playground facility, not the playfield. Census tract data for where Rainier Beach playfield is located found that the Black population is 28.1 percent (*Seattle- Race and Segregation Maps by Census Tracts 1940-2020*, n.d.) and those who speak an African language at home represent 12.9 percent (Aileen Balahadia Consultation, 2016).

Additionally, a lack of representation exists with female users of the playfields. Observations confirmed that male playfield users overwhelmingly outnumbered their female counterparts. Playfield users with the least representation were ethnically Black females. Across all site visits and 470 users observed, only eight (1.7 percent) were Black

females. None belonged to nor participated in organized play of teams that had reserved a playfield.

iii. **Physical Activity Opportunity**

The ability in which a playfield can host athletic and recreational activities became a theme that was noted across all forms of data collections. For the second interview subject, soccer was an important part of their life and enjoys playing for the exercise benefits it provides. As per the Racial and Social Equity Index, adults with no leisure-time for physical activity account for ~20 percent of the population in the census tracts where Genesee, Brighton, and Rainier Beach playfields are located (*Racial and Social Equity Composite Index Current*, n.d.). The first interview subject discussed how it was important for kids to play soccer because many do not fulfill daily recommendations for exercise and physical activity.

Soccer was the most popular sport observed across all playfields, especially for the African diaspora users, but other sports were also observed being played. Brighton Playfield had the most diverse lineup: in addition to soccer, other observed sports include baseball, ultimate frisbee, football, and cricket. While Genesee Playfield has some of the same amenities, such as artificial turf and lights, the advantage of Brighton comes from larger field dimensions and additional field amenities. On the north and south ends of the playfield are lines, bases, and backstops for baseball and softball games. The larger field dimensions allow for multiple sports and activities to take place at once, even if part of the playfield is rented. This may be one factor that explains the heavy usage of Brighton compared to the other playfields.

The first interview subject also mentioned that the playfield he and his teams use for practice and games need to be usable. While he has small, collapsible soccer goals to use, field conditions need to be suitable. Natural grass fields in Seattle require regular maintenance to be continuously suitable for play. Though rain and mud do not always prevent users from playing on a field, overusing a muddy field can be expensive and time-consuming to repair. Lights are also crucial to allow for use when the playfield is dark, especially during times of the year when the sun sets earlier. Rainier Beach Playfield, as per the Playfield Opportunity Index, lacks both artificial turf and lights. These are two needed resources that, with their absence, severely inhibits use of the playfield.

iv. **Building Community**

“Middle school is where temptation can grow for negative activities, so it’s important for them [the youth] to be involved with soccer early-on. I make kids focus on school, discipline, and good behavior if they want to play...it’s not just about being good footballers, but positive contributors to their communities.” Interview Subject 1

The final theme to emerge revolved around the meaning of community to African diaspora members and the role soccer plays. Most African cultures emphasize a collective approach to daily life and the challenges that come with it. Community relationships are unified and extensive. The African proverb says that, “it takes a village to raise a child,” but it also takes a village to *coach* a child.

One such way that relationships in a community are developed is through soccer. From the first interview subject’s perspective, the kids he coaches belong to the next

generation: they are the future leaders and decision makers. Soccer is a way to instill beneficial traits that allow them to become constructive community members. There is a concern by the coach that youth in the 10-13 age range are susceptible to negative influences. Soccer is an alternative.

For the second interview subject, soccer is a way to make new friends and bring together different groups of people to have fun. He shared that some players in their pick-up games came from different regions within Somalia, Ethiopia, Eritrea, the Democratic Republic of Congo, and Kenya. As evidenced by the PGIS activity on Figure 5, these players also came from different regions within Seattle, King County, and the state of Washington. The communal power soccer holds unifies individuals across cultural and geographic boundaries.

It is entirely possible to not play soccer and still be affected by the community feature it brings. During the first site visit to Brighton Playfield, a set of bleachers on the sideline of the playfield were entirely occupied by youth of the African diaspora. It became apparent, through their interactions and communication, that the youth on the bleachers were friends with some of the playfield users engaging in a pick-up soccer game. A few would leave the bleachers to play for a couple sessions before returning to the sideline. This observation supports the idea that soccer playfields are not limited to athletic opportunity, but provide a community hub where all age levels, genders, and ethnic backgrounds are welcome.

Analysis of the data collected from the mixed-methods research approach confirmed both the benefits of soccer for African diaspora communities and the obstacles they face towards equitable playfield access. The opportunity to play soccer is imperative to receiving associated health benefits. It provides a sense of community and strengthens bonds

between various groups of people, some that normally would not have interacted with one another. Soccer is beloved by African diaspora members and has eased the challenges of acculturating to Seattle and King County for those that came from outside the United States. Playfields become a significant place for the community to congregate. However, these positive outcomes are put into jeopardy from inequitable access and representation of playfields.

## 5. Conclusions

This study sought to examine the gap of knowledge related to soccer playfield accessibility for the African diaspora community when considering geospatial and socioeconomic inequalities. A mixed-methods approach was used to curate existing data and compare it with findings from qualitative data collection. Data analysis supports evidence that members of the African diaspora do face challenges in accessing soccer playfields from both a geospatial and socioeconomic perspective. Existing policy exasperates the problem and change is necessary to make playfield access equitable.

Geospatially, the entire region of Rainier Valley lacks equitable access to playfields compared with other regions within Seattle and King County (Project Play, 2019). Genesee, Brighton, and Rainier Beach playfields, together with Franklin and Rainier Beach high schools and Lakewood Playground, make up the available soccer playfields. As Genesee is composed of two playfields, that equates to seven playfields available for the entire Rainier Valley region. For reference, Magnusson Park sits north of downtown Seattle and has seven soccer playfields available within a recreation area. The PGIS activity found participants that lived as far as Tukwila and SeaTac frequenting Brighton Playfield because of its availability, meaning there are not enough accessible playfields in neighborhoods. This bolsters the claim that south King County has fewer green spaces and less availability for recreation opportunity (Project Play, 2019).

Socioeconomic data supports prior studies that found lower-affluent families are less likely to meet physical activity recommendations (Tandon et al., 2021) and have access to parks (Rigolon & Flohr, 2014). The Racial and Social Equity Index confirms that Rainier Valley is one of the most disadvantaged regions in Seattle, including when only factoring

for socioeconomic disadvantages (*Racial and Social Equity Composite Index Current*, n.d.). Previous literature found immigrants and people of color have inequitable access to recreational facilities (Washington State Recreation and Conservation Office, 2022). The “pay to play” component of reserving playfields, and the current process in which playfields are reserved, prevents local communities from using these facilities in their own neighborhood (Project Play, 2019). This was confirmed through data collection as African diaspora members were underrepresented in organized teams that reserved the playfields in their own neighborhoods. Both interview subjects expressed having difficulties with the reservation system and the financial challenges it brings. Those that were able to access the playfields were confined to using the marginal spaces without access to available soccer goals. At Genesee and Rainier Beach playfields, members of the African diaspora were rarely seen using the playfields despite accounting for significant percentages of the census tract population.

The relationship soccer has with the African diaspora is significant: it acts as an extension of the collective ideology shared among many African cultures by promoting community and *ubuntu*, the Bantu philosophy meaning, “I am who I am because of who we all are.” As per the first interview subject, soccer is a foundation that develops positive contributors to their respective communities. It is a familiar activity and was observed as the most popular sport not just for African diaspora members, but all park users across site visits, backing previous research about soccer’s popularity in Seattle (Fraser, 2009; Project Play, 2019). Playfields were observed as a space where communities gather: participating in soccer or other sports was not a requirement, especially for youth. The playfields were transformed to hosting activities beyond sports, such as extensive conversations between large groups of friends that gathered on the sideline. These observations affirmed the desire

of the African diaspora to have a safe space in their community available for play (Aileen Balahadia Consultation, 2016). Soccer continues to act as a “social glue” for countless communities, especially in Seattle.

Future research considerations include community-based participatory research with organizations affiliated with African diaspora members to understand more about their hopes and needs with playfield accessibility. Such partnerships are transferrable across other underrepresented and marginalized groups of playfield users. Continued work would include robust survey results, more semi-structured interviews, and additional PGIS research to provide more insight into playfield users that face inequitable access. Lastly, schools or districts that recently adopted joint-use policies for their facilities, or are designated as community hubs, should be a focus for gauging equitable playfield access.

## 6. Recommendations

Based on the findings developed from data collection and analysis, including previous literature and studies, this research lists four recommendations that promote equitable playfield accessibility for the African diaspora community in Rainier Valley. Although this research focuses on the African diaspora community, the outcomes of these recommendations benefit other marginalized communities in the region.

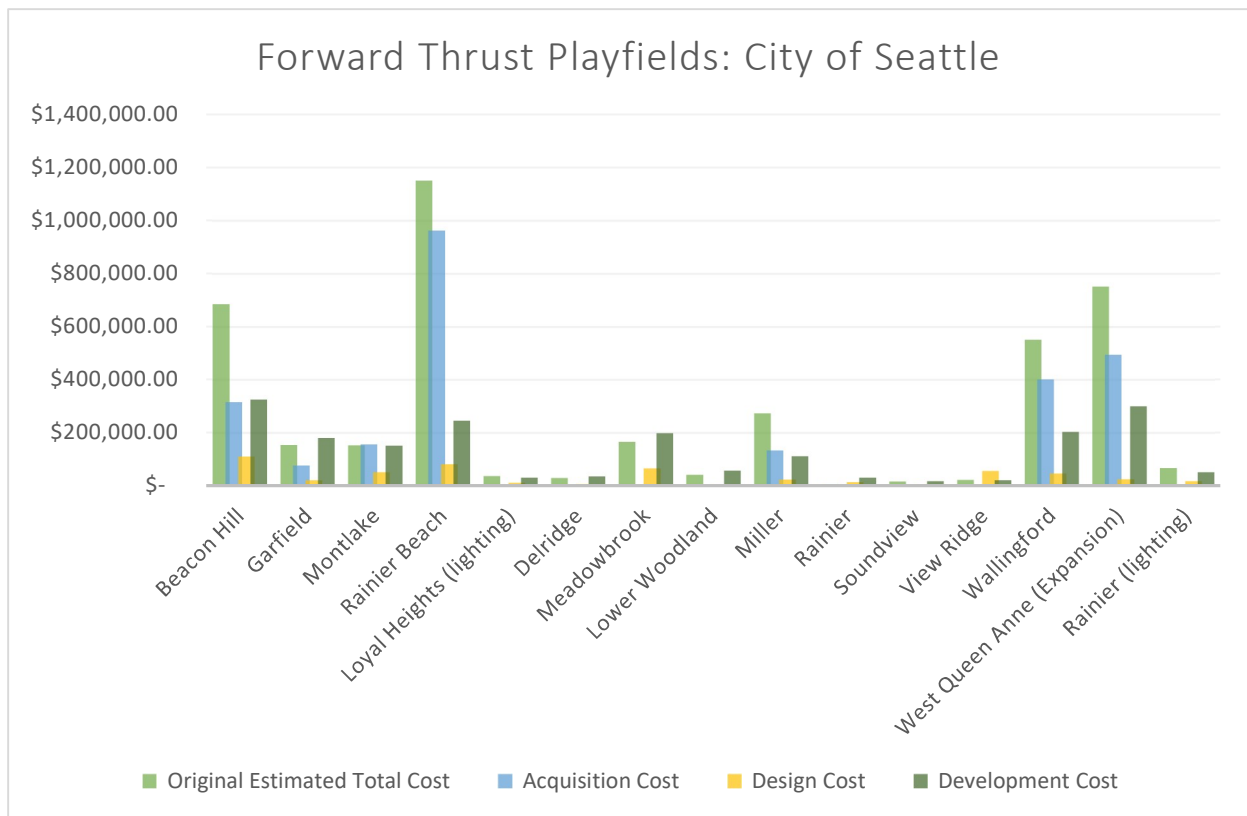
### **Prioritize playfield development and renovation in highly disadvantaged regions**

The City of Seattle, and relevant stakeholders, should prioritize playfield development and renovation in highly disadvantaged regions, many that host African diaspora populations. Improvements to the type and quality of available resources in existing parks, through policy intervention, reduces inequitable access for minority and lower socioeconomic populations while increasing their levels of physical activity (Moore et al., 2008). Rainier Beach Playfield, and the surrounding community, would benefit from such improvements.

During the Forward Thrust Initiatives, no other playfield had a higher estimated cost than Rainier Beach at \$1.28 million, as seen in Figure 10 (Forward Thrust Committee, 1980). Additionally, no other playfield had a higher acquisition cost than Rainier Beach at \$963,000, the next closest being the West Queen Anne playfield expansion at \$493,000 (Forward Thrust Committee, 1980). Today, Rainier Beach Playfield lacks adequate resources for accessible play (e.g., available soccer goals, artificial turf, lighting) and is situated in a highly disadvantaged census tract, as per the Racial and Social Equity Index (*Racial and Social Equity Composite Index Current*, n.d.). It is implored that the

investments made from the Forward Thrust era do not go to waste. Recently, the City of Seattle and the Seattle Mariners partnered to renovate Rainier Playfield, a park near Genesee Playfield that is outfitted to host baseball and softball games (*MLB, Mariners Partner up to Renovate Rainier Playfield*, n.d.). The City of Seattle, their Parks and Recreation department, and the Seattle Sounder’s RAVE Foundation, should look no further than Rainier Beach Playfield for similar improvement projects.

**Figure 10.** Varying costs of playfields from Forward Thrust initiatives



**Designate schools as community hubs available to the public**

It is recommended that the State of Washington Legislature propose a new bill that would establish all schools as community hubs and ensure that they be made available, year-round, to the public. African diaspora community members reported difficulties in

accessing soccer playfields at school facilities. Data supports that making these spaces available to the public can provide physical activity opportunities to a significant percentage of the population as more playfields would be within a 10-minute walk (“Our Schoolyard Pledge,” n.d.). It is a cost-efficient approach because it does not require hefty acquisition and development expenses. Echoing the first recommendation of the Physical Activity Task Force Report, the adopted policy should mirror the similar statutes found in states such as California, Utah, and Hawaii where all public school grounds are “civic centers” available for community use (Washington State Recreation and Conservation Office, 2022). Likewise, financial incentives should be put into place for schools that adopt such policies. These measures would immediately provide African diaspora communities, and other underrepresented groups, with equitable playfield access.

### **Administer a survey to gather additional data on playfield users**

Understanding playfield users through the distribution of a survey provides a statistical data set where further analysis could yield significant evidence confirming inequitable access for marginalized populations, such as those of the African diaspora. Survey questions can be shared with participants using a QR code for feasible electronic access, rather than relying on pen and paper for collecting results. It is strongly advised that translations of the survey are made available and preliminary research is necessary to confirm potential languages used by the target population. Responses to the survey provides information that helps to contextualize the relationship between African diaspora community members, soccer playfield access, and the significance of soccer in their life. To demonstrate an example of this recommendation, a survey was developed in both electronic and paper formats that collects “yes-no” answers and responses graded along a Likert scale:

Answer “Yes” or “No” to the following three questions:

1. Do you live in Rainier Valley?
2. Is your household income below 200% of the poverty level? ([Include relevant household size and monetary thresholds](#) so participants know if they should answer 'yes' or 'no')
3. Do you speak any African languages at home?

On a scale of 1 – 5 where 1=strongly disagree and 5=strongly agree, what number corresponds with the following five statements:

4. Soccer is an important part of my life.
5. I can use the soccer fields in my neighborhood when I want.
6. It is easy for me to travel to or access a soccer field.
7. There are not enough soccer fields in my neighborhood.
8. Schools should be available for recreational use by the public.

If sufficient survey results (greater than or equal to 100) have been obtained, a statistical model can be developed that measures feelings about soccer and level of access for those living in Rainier Valley that speak an African language at home. This model could provide statistical evidence for inequitable soccer playfield access experienced by African diaspora community members and allow stakeholders, such as the City of Seattle, to make informed decisions that make playfield access more equitable.

### **Reform “pay to play” access for playfields and facilities**

The City of Seattle Parks and Recreation Superintendent is called upon to, in accordance with Chapter 3.02 of the municipal code, amend the rules and regulations of using and reserving playfields. The “pay to play” component of playfield access prevents underserved populations, such as the African diaspora community, from using these spaces.

The same issues occur from the current permit system, as it is often English-only and marginalizes groups vying to reserve these playfields (Project Play, 2019; Washington State Recreation and Conservation Office, 2022). As per Seattle Municipal Code 18.12.040, the Parks and Recreation Superintendent has the authority to make changes that provide equitable access to playfields (Title 18 - PARKS AND RECREATION | Municipal Code | Seattle, WA | Municode Library, n.d.). The four amendments this report recommends are:

- Open-play policy
- Update permit system
- Prioritize underrepresented users
- Eliminate historical-use policy

If implemented, an open-play policy would designate periods at playfields where reservations could not be submitted, generally a one-two hour window during one or more days of the week. Without the need to reserve the playfield, this would immediately benefit African diaspora communities that have difficulty fully accessing playfields, such as those observed at Brighton. Organizations, such as Friends of Athletic Fields, could continue their efforts to inform the public about available playfields, free to use, across Seattle and the Puget Sound.

The permit system requires significant updates to meet the demands of the African diaspora and other underserved populations. Comparable to other City of Seattle communication, multiple language translations should be offered for the playfield permit, making the system more equitable. The process for submitting a permit should be made more intuitive and mobile-friendly, such as using a phone application or Google form to submit permit requests and check real-time reservation schedules.

Playfield reservations should be prioritized for underrepresented users of playfields, such as the African diaspora community (especially girls) or low-income populations. Permit fee waivers could be made available to those that meet a needs-based assessment. Teams and organizations that support underserved populations in playfield access would be incentivized. This response would reduce the “pay to play” component of playfield access while simultaneously promoting the inclusion of groups, such as those of the African diaspora and girls, that have been excluded.

Finally, all historical-use policy should be formally prohibited. The benefits of providing some teams with the same playfields each year do not outweigh the harm it causes by excluding other groups. Such policies are inherently inequitable as it prevents newer teams and clubs from accessing playfields, sometimes within their own neighborhood. Teams with historical-use inadvertently monopolize playfields from their own communities. The elimination of such policy fosters equitable playfield access.

## Bibliography

- Aileen Balahadia Consultation. (2016). *Voices of Seattle's East African Communities*.  
[https://www.seattle.gov/documents/Departments/OIRA/2016\\_OIRA\\_09\\_EastAfrican  
Report\\_FINAL.pdf](https://www.seattle.gov/documents/Departments/OIRA/2016_OIRA_09_EastAfrican_Report_FINAL.pdf)
- Athletic Fields and Facilities Inventory*. (n.d.). Retrieved February 15, 2023, from  
[https://wa-  
rco.maps.arcgis.com/apps/webappviewer/index.html?id=0947b69ee5a1403092c4381f  
14f07a3d](https://warcountry.maps.arcgis.com/apps/webappviewer/index.html?id=0947b69ee5a1403092c4381f14f07a3d)
- Bar-On, T. (2014). *The world through soccer: The cultural impact of a global sport*. The  
Rowman & Littlefield Publishing Group.
- Batalova, J. B. J. L. and J. (2022, May 10). *Sub-Saharan African Immigrants in the United  
States*. Migrationpolicy.Org. [https://www.migrationpolicy.org/article/sub-saharan-  
african-immigrants-united-states](https://www.migrationpolicy.org/article/sub-saharan-african-immigrants-united-states)
- Centers for Disease Control and Prevention. (n.d.). *A practitioner's guide for advancing  
health equity: Community strategies* (p. 4).
- ChangeLab Solutions. (2018). *Shared Use Playbook* (p. 23).
- Cope, M., & Jung, J.-K. (2009). Qualitative Geographic Information Systems. In  
*International Encyclopedia of Human Geography* (pp. 143–147). Elsevier.  
<https://doi.org/10.1016/B978-0-08-102295-5.10605-5>
- Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five  
approaches* (Second). Sage Publications.
- David Beckham For the Love of the Game*. (2015). BBC Worldwide.  
<https://video.alexanderstreet.com/watch/david-beckham-for-the-love-of-the-game>

- Elwood, S. (2009). Geographic Information Systems; Public Participation. In A. Kobayashi (Ed.), *International Encyclopedia of Human Geography (Second Edition)* (pp. 63–68). Elsevier. <https://doi.org/10.1016/B978-0-08-102295-5.10556-6>
- FIFA. (2023). *One Month On: 5 billion engaged with the FIFA World Cup Qatar 2022™*. <https://www.fifa.com/tournaments/mens/worldcup/qatar2022/news/origin1904-p.cxm.fifa.comone-month-on-5-billion-engaged-with-the-fifa-world-cup-qatar-2022-tm>
- Forward Thrust Committee. (1973). *Forward Thrust Progress Report, 1973* (p. 30). Forward Thrust Committee.
- Forward Thrust Committee. (1976). *Forward Thrust Progress Report, 1976* (p. 31). Forward Thrust Committee.
- Forward Thrust Committee. (1980). *Final Forward Thrust Progress Report, 1980* (p. 96). Forward Thrust Committee.
- Fraser, S. (2009). *Soccer Africa!* Pearson South Africa.
- Jung, J.-K. (2013). Critical GIS Twenty Years After Friday Harbor Meeting: Critical Intervention to Epistemology, Ontology, Methodology, and the Social Implication of GIS. *Journal of the Association of Korean Geographers*, 2(2), 199–215. <https://doi.org/10.25202/JAKG.2.2.6>
- McKenzie, T. L., Cohen, D. A., Sehgal, A., Williamson, S., & Golinelli, D. (2006). System for Observing Play and Recreation in Communities (SOPARC): Reliability and Feasibility Measures. *Journal of Physical Activity & Health*, 3 Suppl 1, S208–S222.
- MLB, *Mariners partner up to renovate Rainier Playfield*. (n.d.). MLB.Com. Retrieved July 18, 2023, from <https://www.mlb.com/news/mariners-mlb-all-star-legacy-initiative-rainier-playfield-renovation>

- Moore, L. V., Diez Roux, A. V., Evenson, K. R., McGinn, A. P., & Brines, S. J. (2008). Availability of Recreational Resources in Minority and Low Socioeconomic Status Areas. *American Journal of Preventive Medicine*, 34(1), 16–22.  
<https://doi.org/10.1016/j.amepre.2007.09.021>
- Our Schoolyard Pledge. (n.d.). *Trust for Public Land*. Retrieved April 25, 2023, from <https://www.tpl.org/community-schoolyards-report-2021>
- Project Play. (2019). *State of Play Seattle-King County* (p. 49). Aspen Institute Sports & Society Program.
- Racial and Social Equity Composite Index Current*. (n.d.). Retrieved May 13, 2023, from <https://data-seattlecitygis.opendata.arcgis.com/maps/SeattleCityGIS::racial-and-social-equity-composite-index-current>
- Rigolon, A., & Flohr, T. L. (2014). Access to Parks for Youth as an Environmental Justice Issue: Access Inequalities and Possible Solutions. *Buildings*, 4(2), Article 2.  
<https://doi.org/10.3390/buildings4020069>
- Seattle- race and segregation maps by census tracts 1940-2020*. (n.d.). Tableau Software. Retrieved July 15, 2023, from [https://public.tableau.com/views/Seattle-segregation1940-2020largescreen/Story1940-2020?:embed=y&:showVizHome=no&:host\\_url=https%3A%2F%2Fpublic.tableau.com%2F&:embed\\_code\\_version=3&:tabs=no&:toolbar=yes&:animate\\_transition=yes&:display\\_static\\_image=yes&:display\\_spinner=no&:display\\_overlay=yes&:display\\_count=yes&:language=en-US&publish=yes&:loadOrderID=0](https://public.tableau.com/views/Seattle-segregation1940-2020largescreen/Story1940-2020?:embed=y&:showVizHome=no&:host_url=https%3A%2F%2Fpublic.tableau.com%2F&:embed_code_version=3&:tabs=no&:toolbar=yes&:animate_transition=yes&:display_static_image=yes&:display_spinner=no&:display_overlay=yes&:display_count=yes&:language=en-US&publish=yes&:loadOrderID=0)
- Tandon, P. S., Kroshus, E., Olsen, K., Garrett, K., Qu, P., & McCleery, J. (2021). Socioeconomic Inequities in Youth Participation in Physical Activity and Sports. *International Journal of Environmental Research and Public Health*, 18(13), Article 13. <https://doi.org/10.3390/ijerph18136946>

Tashakkori, A., & Teddlie, C. (2021). *SAGE Handbook of Mixed Methods in Social & Behavioral Research*. SAGE Publications.

Title 18—PARKS AND RECREATION | Municipal Code | Seattle, WA | Municode Library. Retrieved November 5, 2022, from [https://library.municode.com/wa/seattle/codes/municipal\\_code?nodeId=TIT18PARE\\_CH18.12PACO\\_SUBCHAPTER\\_VIIUSRE\\_18.12.280DIPR](https://library.municode.com/wa/seattle/codes/municipal_code?nodeId=TIT18PARE_CH18.12PACO_SUBCHAPTER_VIIUSRE_18.12.280DIPR)

*U.S. Immigrant Population by Metropolitan Area*. (2013, November 20).

Migrationpolicy.Org. <https://www.migrationpolicy.org/programs/data-hub/charts/us-immigrant-population-metropolitan-area>

*U.S. Immigrant Population by State and County*. (2014, February 4). Migrationpolicy.Org.

<https://www.migrationpolicy.org/programs/data-hub/charts/us-immigrant-population-state-and-county>

Washington State Recreation and Conservation Office. (2022). *Physical Activity Task Force*

*Report* (p. 48). <https://rco.wa.gov/wp-content/uploads/2022/02/PhysicalActivityTaskForceReport.pdf>