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Development Fees and Park Equity in Los Angeles

Alessandro Rigolon  Christopher Giamarino  Jon Christensen

ABSTRACT

Problem, research strategy, and findings: Parks are inequitably distributed in many U.S. cities, and policies and planning initiatives around the country have sought to rectify these inequities. In this study, we examined whether one such initiative, a policy change in development fees for parks in Los Angeles (CA), achieved its equity goals. Specifically, the changed Park Fees Ordinance loosened the distance requirements between developments where fees are collected and parks where fees can be invested to create opportunities to spend funds in disadvantaged neighborhoods with little development. We examined whether disadvantaged communities received more park fees after the policy change in 2017. We found no significant equity gains based on socioeconomic status, some gains for non-Hispanic Black people, but some losses for Latinx people. We attribute these findings to a lack of equity criteria in the policy, political pressures, capital renovations to address deferred maintenance, and geographic limitations in where funds can be spent. We also found that Los Angeles seemed to have taken advantage of the increased geographic flexibility in the changed policy, although a lack of data linking fee-generating developments to fee-receiving parks limited the certainty of this finding.

Takeaway for practice: Park fees are not a panacea to advance park equity. Yet park fee policies could include measurable equity criteria to help direct some funds to disadvantaged park-poor communities while leaving some funds to the discretion of elected officials. Also, cities should have transparent data about the generation and distribution of park fees.

Keywords: environmental justice, green space, impact fees, parks, policy evaluation

In the United States and globally, parks are unevenly distributed across socioeconomic and racial/ethnic lines (Wolch et al., 2014). Several literature reviews have shown that on average, low-income people and people of color have access to parks that are smaller, more crowded, have fewer amenities, are less well maintained, and experience more violence than those of privileged groups (Rigolon, 2016; Rigolon et al., 2018; Schüle et al., 2019; Wolch et al., 2014). Although some city case studies have found no associations between park proximity and disadvantage (see Williams et al., 2020), recent research has shown that systemic mechanisms such as residential segregation and redlining have contributed to inequities in park acreage (Boone et al., 2009; Nardone et al., 2021; Rigolon & Németh, 2021). Framed as environmental injustices, these inequities are concerning due to the benefits that parks provide for public health (particularly for low-income people), ecosystem services, and climate-change mitigation (Boone et al., 2009; Rigolon et al., 2021; Wolch et al., 2014).

Park equity advocates, planners, and policymakers have sought to address inequities in access to parks (Anguelovski, 2015; Rigolon, 2019; Yañez et al., 2021).

These efforts have included plans that prioritize new parks in low-income communities of color and policies that dedicate substantial funding for projects in such communities (Anguelovski, 2015; City Parks Alliance, 2020; Eldridge et al., 2019; Rigolon, 2019; Yañez et al., 2021). Specifically, these initiatives use a “compensatory equity” approach in distributing park funding, wherein demographic groups with the least access to parks and highest need get more funding, seeking to achieve equal park access in the long term (Crompton & West, 2008, p. 38).

One such effort in Los Angeles (CA) is the city’s modified Park Fees Ordinance, requiring real estate developers to contribute money or land for parks (City of Los Angeles, 2022). Adopted in 2017, the modified ordinance sought to bring more park funding to disadvantaged neighborhoods by allowing greater geographic leeway in where the city can invest collected fees (City of Los Angeles, 2022; Spivack et al., 2014). Yet the modified policy does not dedicate any funds to disadvantaged areas.

Despite growing interest in this topic, research on park equity initiatives such as Los Angeles’s Park Fees Ordinance has been limited. Two studies on

environmental bonds in California have shown that including equity criteria in policies is necessary to achieve compensatory equity outcomes (Christensen, 2019; Davies et al., 2019). Other work has shown that delegating the provision of parks to nonprofits has mixed equity outcomes (Cheng et al., 2022; Joassart-Marcelli et al., 2011; Rigolon, 2019).

In this study, we assessed the impacts of Los Angeles's updated Park Fees Ordinance, asking whether increasing the geographic flexibility where collected funds can be spent resulted in more equitable outcomes. Our first objective was *to evaluate whether the modified park fees policy resulted in more park investment in low-income and racially/ethnically minoritized neighborhoods than the previous version of the policy*. As part of this objective, we also examined why the policy change has or has not resulted in equity gains. Our second objective was *to study whether Los Angeles has taken advantage of the increased flexibility of spending park fees farther away from the development where they originated after the policy change*.

In this article, we first provide some background about development fees and their equity implications. We then present our methods, which principally involved comparing where park investment was distributed across seven fiscal years *before* and *after* the 2017 equity-motivated change to the park fees policy. We then present our results, showing that Los Angeles seems to have taken advantage of the increased flexibility to allocate park funding farther away from fee-generating developments. However, the policy change has resulted in limited equity gains, with some improvements for Black residents, but additional disadvantages for Latinx residents, and no significant gains related to socioeconomic status. These results can be explained by the lack of equity requirements in the policy, political pressures, capital renovations to address deferred maintenance, and geographic limitations in where fees can be invested. We conclude by recommending policy development that prioritizes equitable outcomes and enables transparent tracking of funds.

Background: Park Funding and Equity

Funding for municipal parks in the United States declined considerably between the 1970s and the early 1990s, in part due to changes in political attitudes favoring smaller government, rebounding in the 1990s, and dipping again with the 2008 recession (Crompton & Kaczynski, 2003; Pincetl, 2003; Pitas et al., 2017). Annual budgets for parks mostly cover operations and maintenance, leaving relatively little money for capital improvements (Rigolon & Németh, 2021; Zou & Crompton, 2020). This limited availability of capital improvement funds hinders cities' capacity to address park inequities

by building or improving parks in disadvantaged communities (Rigolon & Németh, 2021). Thus, public agencies have recently developed policies to generate park funding for capital improvement projects in disadvantaged communities via increased sales or property taxes, environmental bonds, and development fees (City Parks Alliance, 2020; Eldridge et al., 2019; Yañez et al., 2021).

Development Fees for Parks: A Possible Tool for Park Equity?

Development fee ordinances generally require residential and commercial developers to pay fees based on the number of units or square footage of a project (Burge et al., 2013; Crompton, 2020; Lederman & Wachs, 2016; Mathur, 2016). Development fees have generated money for parks, housing, transportation, and sewer systems (Crompton, 2020; Landis et al., 2001; Mathur & Smith, 2013; Nelson et al., 2008). In some cases, developers have the option to donate land for parks instead of paying fees, but this rarely occurs in expensive real-estate markets (Crompton, 2020; Harnik & Yaffe, 2005). In 2021, 32% of the 90 largest U.S. cities had adopted park fees or parkland dedication ordinances in 2021 (Crompton, 2020).

A common type of development fee for parks in the United States is an *impact fee*, which is intended to mitigate the increased burden that new development places on public amenities (Crompton, 2020; Harnik & Yaffe, 2005; Mathur, 2016; Nelson et al., 2009). As such, in some states, the adoption of impact fee ordinances requires studies estimating the burden that new development will put on existing infrastructure, and quantifying its cost (Raetz et al., 2019). Another type of exaction is a parkland dedication requirement for new subdivisions, which often also allows developers to pay in-lieu fees, such as in California's Quimby Act (Crompton, 2020; Raetz et al., 2019). Table 1 provides a summary of the terms we use to describe development fees for parks.

Based on several Supreme Court rulings, development fees such as impact fees and in-lieu fees need to adhere to two main principles (Crompton, 2010, 2020; Mathur, 2013; Nelson et al., 2009; Raetz et al., 2019). First, the *rough proportionality* principle requires that fees should be equivalent to the funds that cities and counties would have to pay to provide park services to the new residents of proposed developments (Crompton, 2010, 2020; Mathur, 2013; Nelson et al., 2009; Raetz et al., 2019). Second, the *nexus principle* states that fees paid or land dedicated for a development should be spent near the development (Crompton, 2010; Nelson et al., 2009; Raetz et al., 2019). Courts have ruled that fees generated by a new development must benefit the residents of the development

Table 1. Glossary of development fees for parks.

Term	Description
Development fees	Fees charged to developers building residential and commercial buildings as a condition for the release of a building permit. Fees can be used for parks, housing, transportation, and other amenities.
Park fees	A type of development fee used to pay for parks (including land acquisition, new park construction, and/or park improvements). They include impact fees for parks, in-lieu fees for parks, and park development fees (see more below).
Impact fees	A type of development fee meant to mitigate the increased burden that new residential or commercial development brings to public amenities. In some states, creating impact fee ordinances requires demonstrating that the amount charged is equivalent to the burden brought by new development on public amenities.
In-lieu fees	A type of development fee, in-lieu fees give developers the option to pay a certain amount of money instead of dedicating land for public amenities (e.g., parks, schools). California's Quimby Act in-lieu fees are one of these development fees for parks.
Park development fees	A type of park fee meant to pay for the construction of new parks. Park development fees often complement parkland dedication requirements or in-lieu fees: The latter are often meant to acquire land, the former to develop a park on such land.
Los Angeles's Park Fees Ordinance	The Park Fees Ordinance that went into effect in 2017. See "Los Angeles's Modified Park Fees Ordinance" for more details.

Sources: (Crompton, 2020; Harnik & Yaffe, 2005; Mathur, 2016; Raetz et al., 2019).

and, in some instances, forbade cities from using these funds in other neighborhoods (Crompton, 2010). Therefore, many park fee ordinances establish radii around fee-generating developments where such fees can be spent, generally ranging between 0.5 to 2 miles for neighborhood parks, with larger radii for regional parks (Crompton, 2010; Harnik & Yaffe, 2005).

The nexus principle has significant equity implications: If the maximum distance between fee-generating developments and fee-receiving parks is relatively small (e.g., 1 mile), and if most developments occur in relatively affluent areas, park fees cannot be used for parks in disadvantaged communities (Rigolon, 2016; Spivack et al., 2014; Wolch et al., 2005). Disadvantaged neighborhoods with little real estate development would not obtain park investments from such a policy. Furthermore, the nexus principle limits cities' capacity to use development fees to build new parks due to the high cost of acquiring land and developing a park; thus, park fees are mostly used to improve existing parks (Harnik & Yaffe, 2005; Reibel et al., 2021).

In sum, efforts to use development fees to address park inequities might clash with the nexus principle. In most states, park fees cannot be used to build or improve parks in disadvantaged areas unless developments occurred in those areas. However, a 2013 California state law enabled local governments to spend Quimby Act in-lieu fees outside of the neighborhoods where they were collected, and it required that funds be spent in areas with less than 3 acres of parkland per 1,000 residents (Assembly Bill No. 1,359, 2013). This opened the door to distributing in-lieu fees using a compensatory equity approach in California.

Contributions

Our study makes four contributions to the literature on park equity and development fees. First, to our knowledge, this is the first study that evaluates whether park fee policies intended to direct more funds to disadvantaged areas have achieved their goals. Second, we show that expanding the geographic areas where park fees can be spent without specifying equity criteria might not be sufficient to achieve compensatory equity goals, echoing similar findings for environmental bonds (Davies et al., 2019). Third, we highlight the interconnected roles of political pressure, capital renovations due to deferred maintenance, and limitations associated with the nexus principle to explain the small equity gains after the Park Fees Ordinance change, casting some doubt on whether park fees can play a role to advance park equity. Fourth, we show that cities might take advantage of increasing the maximum distances between fee-generating developments and fee-receiving parks, suggesting an appetite for relaxing provisions related to the nexus principle (Crompton, 2010; Harnik & Yaffe, 2005).

Research Design and Methods

We used a longitudinal research design to address our two main objectives (equity and geography analysis), followed by key informant interviews, document analysis, and additional quantitative analyses to explain the results of our equity analysis. This work focused on Los Angeles's modified Park Fees Ordinance.

Los Angeles's Modified Park Fees Ordinance

A 1965 state law known as the Quimby Act enabled California cities and counties to impose developer exactions focused on parks and defined parameters for such exactions (Crompton, 2020). The City of Los Angeles adopted a local Quimby ordinance in 1971 and applied it to subdivisions, including new single-family neighborhoods and new condominiums (Spivack et al., 2014). Because the Quimby ordinance only applied to subdivisions, land or in-lieu fees collected via this policy were mostly generated on the outskirts of the city, and most of the funds had to be spent in relatively affluent White communities due to the nexus principle (Spivack et al., 2014; Wolch et al., 2005). Thus, the Quimby Act contributed to worsening park inequities because few funds were made available in disadvantaged, built-out communities (Spivack et al., 2014; Wolch et al., 2005). To partially address this issue, the City of Los Angeles passed the Zone Change Park Fee (or Finn fee) in 1985, which applied to multifamily developments that require a zoning change to be built (Spivack et al., 2014).

Despite these additional fees, equity advocates and city audits identified several issues with Los Angeles's park fees (City of Los Angeles, 2016; Spivack et al., 2014). First, a large percentage of collected fees was not spent, with \$129 million available in 2008. Second, in line with the nexus principle, the Los Angeles Quimby and Finn ordinances forced the city to spend collected fees within 2 miles of where they were generated. Third, the city did not have criteria to prioritize the location of park investments. Fourth, developers building multifamily housing on sites already zoned for such housing did not have to pay fees. All these limitations made it difficult to direct money to disadvantaged neighborhoods not experiencing development, a particularly significant issue due to the city's substantial park inequities (Loukaitou-Sideris & Sideris, 2009; Spivack et al., 2014; Wolch et al., 2005).

Given these issues, a nonprofit coalition advocated for changes in Los Angeles's park fees to move toward park equity by directing more funding to park-poor, disadvantaged neighborhoods (Prevention Institute, 2017; Spivack et al., 2014). These park equity efforts align with a "compensatory equity" approach to funding distribution (Crompton & West, 2008, p. 38). Despite opposition from community organizations in wealthy neighborhoods (Walton, 2016), elected officials directed staff to study changes to the ordinance (City of Los Angeles, 2016).

Modifications in the Park Fees Ordinance went into effect in February 2017 (City of Los Angeles, 2016, 2022). First, the city added a new impact fee that applied to most non-subdivision residential projects (with exceptions for affordable housing developments) and increased the rates of existing park fees applied to

residential subdivisions (i.e., Quimby Act in-lieu and Finn fees). Together, these fees were consolidated under the term *park fees*. Second, the maximum distances between fee-generating developments and fee-receiving parks were increased from 0.5 to 2 miles for neighborhood parks, from 2 to 5 miles for community parks, and up to 10 miles for regional parks. Third, the city committed to making data available describing park fee collection and expenditures every fiscal year.

As stated in the study leading to the ordinance change, the change was intended to achieve equity goals in the city's general plan regarding "equitable access to parks" (City of Los Angeles, 2016, p. 30). Yet despite efforts by equity advocates, the revised ordinance did not dedicate part of the park fees to disadvantaged communities (City of Los Angeles, 2016; Ordinance No. 184505, 2016).

Data and Analyses

EQUITY ANALYSIS (OBJECTIVE 1)

We compiled a comprehensive data set describing fee-generating developments, fee-receiving parks, and demographic characteristics and built environment characteristics at the census tract level (see Table 2 for descriptions and data sources). We gathered data about developments and park-fees expenses for seven fiscal years (FY), from FY2014–2015 to FY2020–2021. FY2014–2015 and 2015–2016 represent years before the policy change; FY2016–2017 is the year when the policy changed (February 2017); and FY2017–2018 through FY2020–2021 are after the policy change. Compiling data about fee-generating developments and park investments involved lengthy archival research and data cleaning, suggesting that in their current form, available data are hard to use by professional planners, policy advocates, and researchers (see Technical Appendix A). We geolocated developments and park investments using ArcGIS Pro and computed several of the variables listed in Table 2 (see Technical Appendix A).

An important distinction in our data set is between dynamic and static variables (see Table 2). Dynamic variables are those that varied every fiscal year, and they describe how park fees that are generated and invested changed year after year. For example, a given census tract might have received a park fee investment in FY2015–2016 but not in FY2018–2019. Static variables are those that did not vary during the seven fiscal years we studied. They include built environment variables such as a census tract's distance from downtown and demographic variables. For the latter, although demographics are likely to have changed between 2014 and 2021 in some neighborhoods, we used static values from the American Community Survey for 2015–2019 because this data set did not capture well changes

Table 2. Variables and data sources for the equity analysis.

Variable name	Description	Time	Data source
Fees collected	Park fees collected within a census tract in a fiscal year	Dynamic	Park Fee annual reports and Recreation and Park Commission meeting minutes and reports
Park investment within a half-mile	Binary variable describing whether park fees were invested within a half-mile of a tract boundary in a fiscal year	Dynamic	Same as above
Park investment amount within a half-mile	Dollar amount of park fees invested within a half-mile of a tract boundary in a fiscal year	Dynamic	Same as above
Park investment top quartile within a half-mile	Binary variable describing whether, in a fiscal year, a park fee amount in the top quartile of that year was invested within a half-mile of a tract boundary	Dynamic	Same as above
Park investment for new park construction within a half-mile	Binary variable describing whether park fees were invested to create a new park or add new facilities to existing parks within a half-mile of a tract boundary in a fiscal year	Dynamic	Same as above
Fiscal year	Fiscal year when fees were generated and invested. 2014–2015 = 0, 2015–2016 = 1, ... 2020–2021 = 6	Dynamic	N/A
Income	Median household income	Static	American Community Survey (Raglin, 2022)
Percentage college	Percentage of people aged 25+ with a college degree	Static	American Community Survey
Percentage non-Hispanic White	Percentage of non-Hispanic White residents	Static	American Community Survey
Percentage non-Hispanic Black	Percentage of non-Hispanic Black residents	Static	American Community Survey
Percentage Latinx	Percentage of Latinx (Hispanic or Latino origin) residents	Static	American Community Survey
Percentage non-Hispanic Asian	Percentage of non-Hispanic Asian residents	Static	American Community Survey
Percentage multifamily housing	Percentage of multifamily housing units	Static	American Community Survey
Existing park	The census tract is within a half-mile of an existing park	Static	City of Los Angeles (City of Los Angeles, n.d.)
Acres of parks per 1,000 residents	Park acres within a census tract divided by residents in that census tract, multiplied by 1,000	Static	City of Los Angeles
Distance from downtown	Distance of a tract from downtown Los Angeles in miles (centroid to centroid)	Static	City of Los Angeles
Distance from the Los Angeles River	Distance of a tract from the Los Angeles River in miles (centroid to line)	Static	City of Los Angeles

Notes: All these variables were measured at the census tract level. *Dynamic* variables vary by fiscal year; *static* variables do not. All American Community Survey data describes data collected in 2015–2019.

within a relatively short time such as 2014–2021 (Raglin, 2022).

For the equity analysis, we examined how the socioeconomic status, racial/ethnic compositions, and park acreage per 1,000 people of tracts that did and did not receive park investment within a half-mile changed over time. We used the half-mile threshold as a measure of walking access to parks and local investment (The Trust for Public Land, 2023). We plotted the values of key demographic variables over time (income, percentage college, percentage non-Hispanic White, percentage non-Hispanic Black, percentage Latinx, and percentage non-Hispanic Asian) and park acreage per 1,000 people (a measure of park provision) based on whether census tracts received park investment within a half-mile of their boundaries for each fiscal year. If the 2017 ordinance change resulted in equity gains, we would expect to see, for example, that the income of tracts with park investment was lower than the income of tracts without park investment after 2017.

Whereas plotting these variables over time indicates whether disadvantaged communities were benefiting from the park fees policy change, decisions about where to allocate park fees are shaped by a few factors that need to be considered. Most of such fees are invested in existing parks (Reibel et al., 2021). Also, the nexus principle still applied after the policy change, and tracts that generated more park fees might see more park investment. Moreover, Los Angeles invested park funds near downtown and the Los Angeles River as part of urban redevelopment initiatives (García & Mok, 2017).

To account for the potential confounding effect of variables shaping where park investment might occur, we created plots of the estimated marginal means for the six demographic variables of interest (e.g., income, percentage Latinx) and park acreage per 1,000 people over time classified based on whether tracts received park fee investments within a half-mile in any given fiscal year. Estimated marginal means accounted for control variables (e.g., park fees generated, existing park within a half-mile) through regression analysis. For example, for income, we regressed income in each census tract as a function of fiscal year, park investment during each fiscal year, an interaction term between fiscal year and park investment, park fees generated each fiscal year, and other variables (see [Technical Appendix B](#)). Then, to examine whether the demographics and park acreage per 1,000 people of tracts receiving and not receiving park investment changed significantly over time (and especially after the 2017 policy change), we ran Tukey-adjusted pairwise comparisons between the estimated marginal means of the key demographics of interest (see [Technical Appendix B](#)). For example, we compared whether there was a statistically significant difference between the estimated marginal means of

income for tracts with and without park investment, examining changes before and after the policy change in 2017.

We also conducted these analyses with two more variables describing park investment: investments in the top quartile of the dollar amount spent each fiscal year (to model the most significant park investments), and investments used for new park construction (e.g., to acquire land, develop land into new parks, and add new facilities to existing parks).

EXPLAINING THE EQUITY IMPACTS OF THE POLICY CHANGE (OBJECTIVE 1)

We collected and analyzed further quantitative data, policy documents, and accounts from local news media to help explain the results of the equity analysis. Specifically, we searched for city policies regarding the distribution of park fees and for articles in local media (e.g., newspapers) about park projects funded through park fees, identifying about a dozen relevant documents. We also geolocated fee-generating developments and fee-receiving parks within each of the 15 city council districts in Los Angeles to examine whether local politics might have played a role in how park fees were distributed. In addition, we estimated the percentage of projects funded via park fees that were primarily intended for capital renovations to address deferred maintenance (e.g., replacing the roof of a recreation center). We also interviewed six professionals with direct or indirect knowledge of how decisions about the allocation of park fees were made in Los Angeles (e.g., city council and park agency staff). We asked questions about such decision-making processes, transcribed the interviews, and analyzed the transcripts via content analysis. We describe these processes in more detail in [Technical Appendix C](#).

GEOGRAPHIC ANALYSIS (OBJECTIVE 2)

Using data collected for the equity analysis, we built a similar data set with parks as the unit of analysis to understand whether Los Angeles had taken advantage of the increased geographic flexibility provided by the 2017 policy change. We used parks as the unit of analysis because data from the City of Los Angeles did not include a unique identifier for fees generated in each development that would have enabled us to identify the parks where those fees were spent.

To estimate this factor, we calculated the average distance between each park and the closest five fee-generating developments for each fiscal year. Given the continued application of the nexus principle after the policy change (though with loosened distances), we used these average distances to approximate how far funds might have traveled between fee-generating developments and fee-receiving parks.

Like the equity analysis, we plotted the estimated marginal means of the average distance between each park and the closest five developments per fiscal year, classifying parks based on whether they received a park investment or not in any given fiscal year. If the city took advantage of the increased flexibility provided by the policy change, we would expect the average distance for parks without investment to decline and the average distance for parks with investment to remain approximately the same, or at least the first to decline faster than the second. We expected these two trends because the policy change expanded the types of developments paying park fees, which could increase the number of developments paying fees, resulting in a shorter average distance between fee-generating developments and fee-receiving parks.

The estimated marginal means of the average distances between parks and developments over time controlled for park type (e.g., neighborhood vs. regional), built environment characteristics (e.g., downtown distance), and demographic characteristics (see [Technical Appendix D](#)). We also ran Tukey-adjusted pairwise comparisons between the estimated marginal means of the average park development distances year over year for parks with and without investment (see [Technical Appendix D](#)).

Methodological Limitations

First, as noted, available data did not allow us to track in which parks the fees generated by developments were spent. This limitation has implications for the geographic analysis: Because we could not calculate the exact distance between where fees were generated and where they were spent, we computed the average distance between each park and the closest five fee-generating developments (assuming that funds would be spent in the closest park to each development). Among parks receiving investment, the average development-park distances for different park types mostly followed trends in the maximum radii in the ordinance (from smaller to larger), suggesting that the proxy we used could be an effective measure: 919 m for pocket, 1,872 m for neighborhood, 2,520 m for community, and 1,613 m for regional parks.

Second, our analyses did not consider the amenities included in each park, and the presence of certain amenities might matter for one's decision to visit a park (Loukaitou-Sideris & Sideris, 2009). Future research could address this limitation by measuring the dollar amount invested for amenities in each park over time. Third, we used a half-mile as a measure of walking access to parks and local investment, and although walking is a popular mode of accessing parks, many park visitors drive to such green spaces (Cohen et al., 2019; Loukaitou-Sideris

& Sideris, 2009). Fourth, additional interviews could have provided further information about park fee allocation decisions, but given the few actors with relevant knowledge and the political nature of such decisions, it was difficult to recruit more participants. Nevertheless, high corroboration among the interviews gave us confidence in the information gained.

Results: Few Equity Gains but Increased Geographic Flexibility

Descriptive statistics showed significant variations in park fees collected and invested year over year. Specifically, Los Angeles saw a 605% increase in the number of residential developments paying park fees between FY2014–2015 and FY2020–2021, with a 114% 1-year increase after the policy change in 2017, which required nearly all developments to pay such fees. In terms of dollar amount of fees generated, [Figure 1](#) shows a gradual increase in fees generated and spent between FY2014–2015 and FY2016–2017 (the year of the policy change), followed by a decline and stabilization in the three following years and a spike in FY2020–2021. Overall, the dollars generated increased 220% between FY2014–2015 and FY2020–2021. Further, the average fees generated during the seven fiscal years studied (approximately \$28 million) exceeded the average fees spent (approximately \$23 million) because the city had carryover funds year over year. Also, 40 (8%) of Los Angeles's 487 parks received park fees each fiscal year, on average. [Figure 2](#) shows the spatial distribution of fees generated and spent over time, and the descriptive statistics for other variables are presented in [Technical Appendix E](#).

The Policy Change Had Limited Impacts on Equity

Our analysis showed that the 2017 change in Los Angeles's Park Fees Ordinance did not result in equity gains that advocates had hoped for (see [Figure 3](#) for observed values over time). Specifically, when focusing on all park investments before and after the ordinance change, we found no notable changes for socioeconomic status (income and percentage college), percentage non-Hispanic White, percentage non-Hispanic Asian, and park acreage per 1,000 people. We found increased investments in areas with larger shares of non-Hispanic Black residents after the policy change but decreased investments in tracts with higher percentages of Latinx residents after the policy change.

The plots of the estimated marginal means ([Figure 4](#)), which adjust for several potential confounders that influence the location of park investment, generally confirmed trends in the observed values ([Figure 3](#)). [Figure 4](#) shows

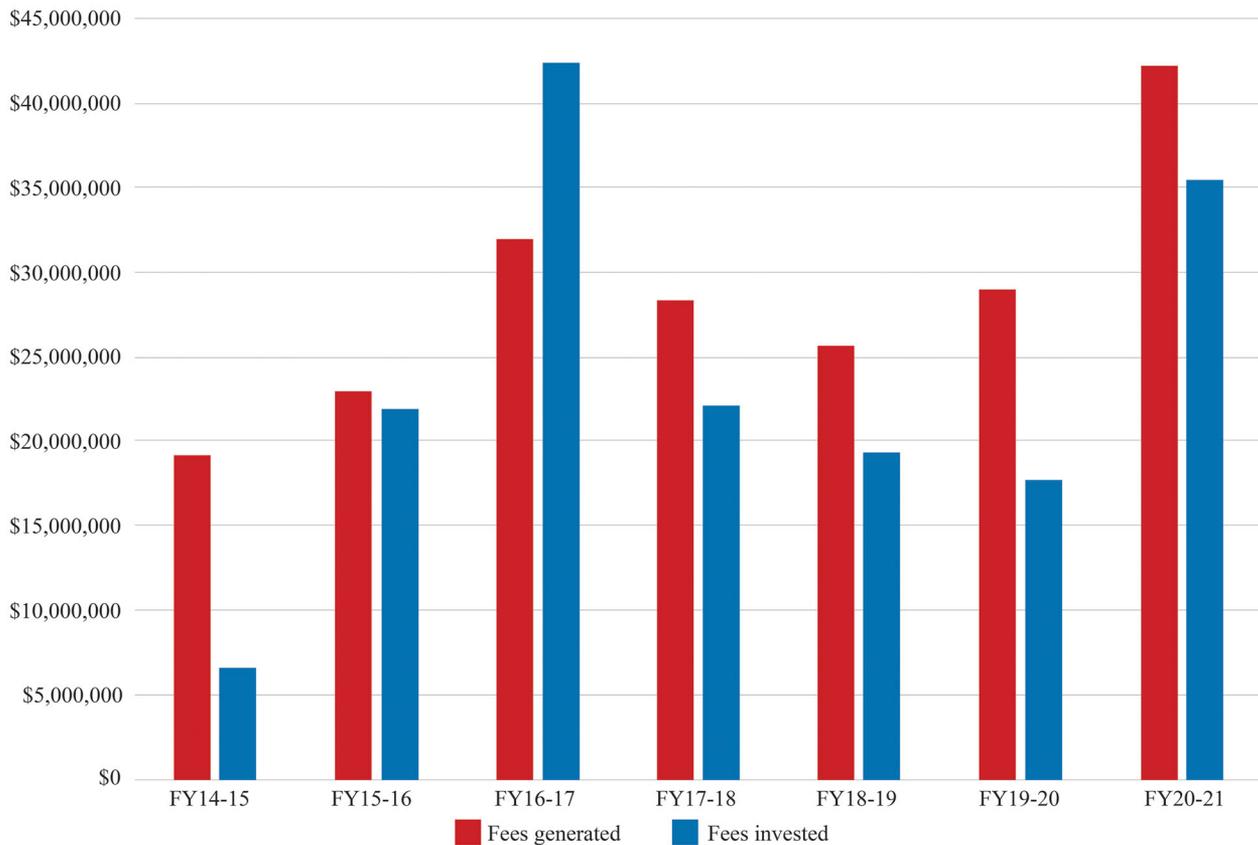


Figure 1. Park fees generated and park fees invested over the seven fiscal years.

that estimated marginal means for income, percentage college, percentage non-Hispanic White, and percentage non-Hispanic Asian were rarely significantly different in any given fiscal year between tracts that received and did not receive park investment.

For percentage non-Hispanic Black, tracts receiving park investment had a smaller estimated share of non-Hispanic Black residents than those that did receive investment in FY2014–2015 through FY2016–2017 ($p < .001$). Yet starting in FY2017–2018 (after the policy change), that statistically significant difference disappeared, suggesting that tracts with larger shares of non-Hispanic Black residents may have gained more park investment due to the policy change.

Figure 4 also shows that the policy change may have led to inequitable outcomes for Latinx residents. After the policy change in FY2016–2017, the estimated percentage of Latinx residents in tracts receiving park investment declined, whereas that percentage in tracts without investment increased. In FY2018–2019, the estimated percentage of Latinx residents in tracts without park investment (48%) was statistically significantly higher than that percentage for tracts with park investment (42%, $p < .001$; see Figure 4 and Technical Appendix F).

The results for the top quartile of dollars invested each fiscal year, and for new park construction, showed similar patterns to those for all park investments (see Technical Appendix F). The most notable difference is that the equity gains made by non-Hispanic Black residents after the 2017 policy change for any park investment were attenuated when considering the top quartile of dollars invested. Specifically, non-Hispanic Black residents made some gains in the fiscal year after the policy change (FY2017–2018), but in FY2019–2020, tracts with top quartile investments had significantly lower shares of Black residents than those without such investments ($p < .05$). We observed a similar pattern for non-Hispanic Asian and Latinx residents, wherein in FY2019–2020 tracts with top quartile investments had significantly lower shares of Asian and Latinx residents than those without such investments ($p < .05$ and $p < .001$).

Los Angeles Partially Took Advantage of the Increased Geographic Flexibility

Our results suggest that the city used the increased flexibility in where park fees can be spent allowed by the 2017 policy change. Specifically, after FY2016–2017,

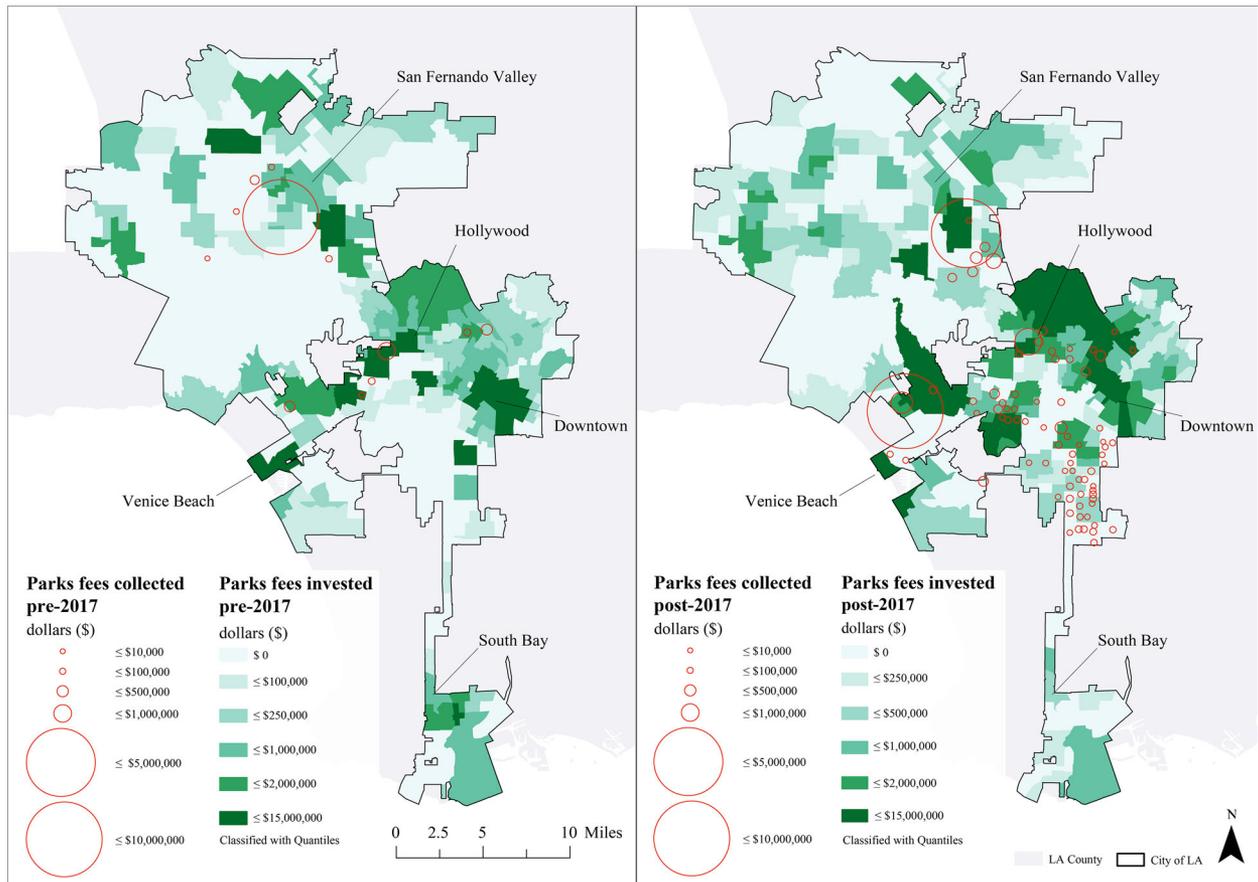


Figure 2. Location of fee-generating developments and fee-receiving parks before (left) and after (right) the Park Fees Ordinance change in 2017.

the estimated marginal means of the average distance between parks and the closest five developments decreased significantly for parks that did not receive investment, but not for parks with investment (see [Technical Appendix G](#)). For parks that did not receive investment, the estimated average distance decreased significantly between FY2016–2017 and FY2017–2018, FY2016–2017 and FY2018–2019, FY2016–2017 and FY2019–2020, and FY2016–2017 and FY2020–2021 ($p < .001$ for all pairwise comparisons). For parks that received investment, the estimated average distance did not change significantly between FY2016–2017 and FY2017–2018, FY2016–2017 and FY2018–2019, and FY2016–2017 and FY2019–2020, but it decreased significantly between FY2016–2017 and FY2020–2021 ($p < .01$). We interpreted these results as the city taking advantage of the increased flexibility of the modified policy because if the policy had not had an impact on where park fees are spent, the estimated average distances for parks with and without investment would have varied over time in similar ways.

Figure 5 shows that the estimated average park-development distance for parks without investments

decreased by approximately 1,100 m between FY2016–2017 and FY2017–2018 ($p < .001$), whereas that decrease was only 700 m for parks with investments ($p > .05$). A sensitivity analysis conducted with the average distance between parks and the closest 10 fee-generating developments showed similar results (see [Technical Appendix G](#)).

Reasons Why the Changes in the Park Fees Ordinance Did Not Result in Equity Gains

Through additional analyses, we found that the very limited equity gains related to the modified Park Fees Ordinance might be attributed to a lack of equity criteria in the ordinance, political pressures, capital renovations to address deferred maintenance, and geographic limitations on where fees could be spent. [Table 3](#) provides a selection of quotations illustrating such explanations, and [Technical Appendix H](#) presents additional evidence.

LACK OF EQUITY CRITERIA

Interviewees suggested that the absence of equity criteria in the revised Park Fees Ordinance might help

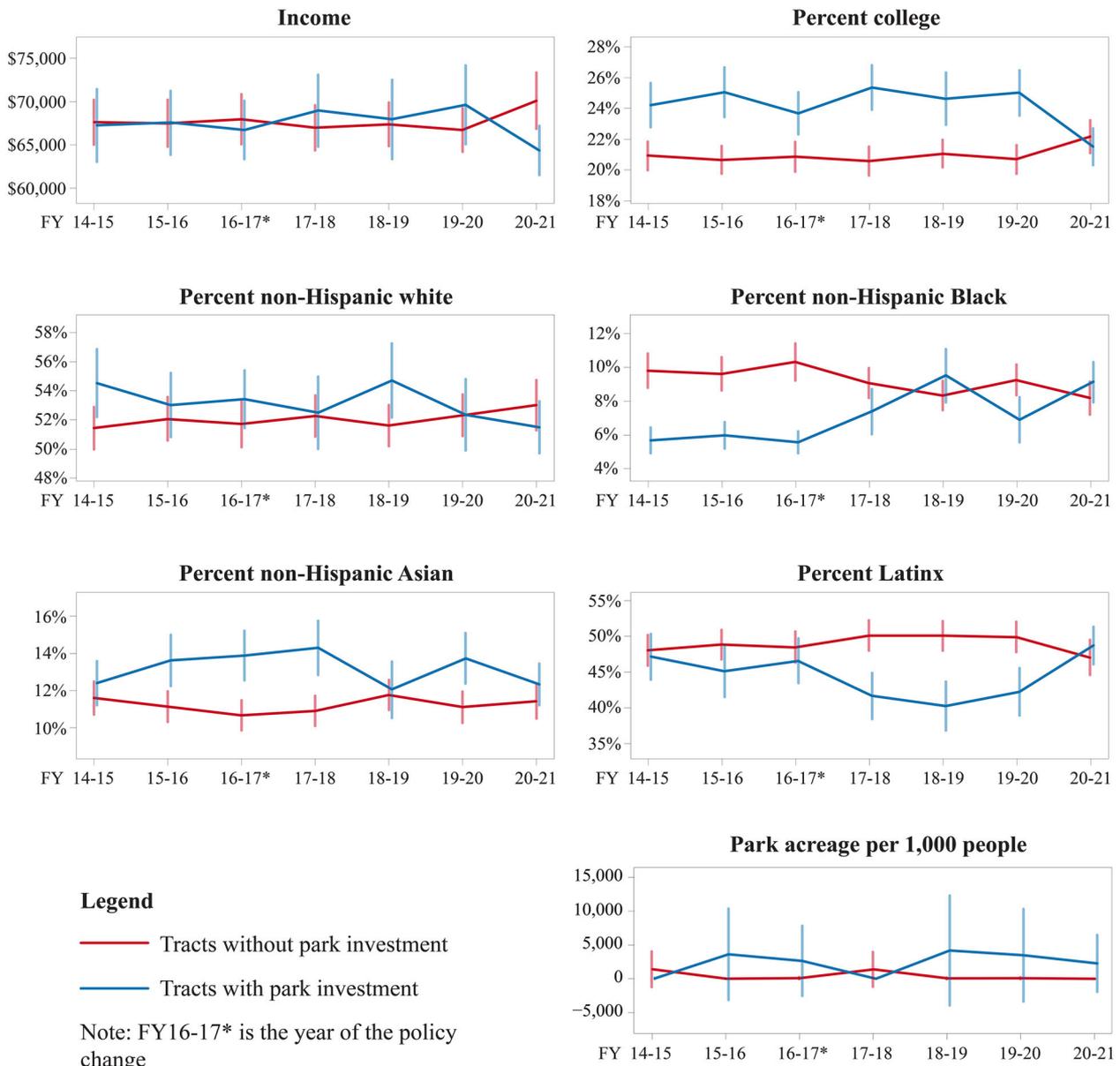


Figure 3. Observed values for six demographic variables and park acreage per 1,000 people based on whether census tracts received or did not receive a park investment nearby over seven fiscal years. The vertical bars show the 95% confidence intervals in the means of each demographic variable.

explain the limited equity gains after the ordinance change (see Table 3 for quotations). The Los Angeles Recreation and Parks Commission, which makes decisions about the allocation of park fees, does not have an equity framework or a formal process that considers equity to guide its decisions. The lack of equity criteria in Los Angeles’s Park Fees Ordinance has left the door open for political pressures and other priorities, such as deferred maintenance (see more below). To address this issue, several interviewees suggested the possibility of setting aside a percentage of park fees to be distributed

through equity criteria while leaving another percentage of park fees to the discretion of city Department of Recreation and Parks staff, elected officials, and the commission.

POLITICAL PRESSURES

Interviewees noted that, due in part to the lack of equity criteria, city council members sought to retain park fees generated in their districts for projects in their districts, and thus political power shaped decisions about park fee allocations (see Table 3 for quotes). Media accounts

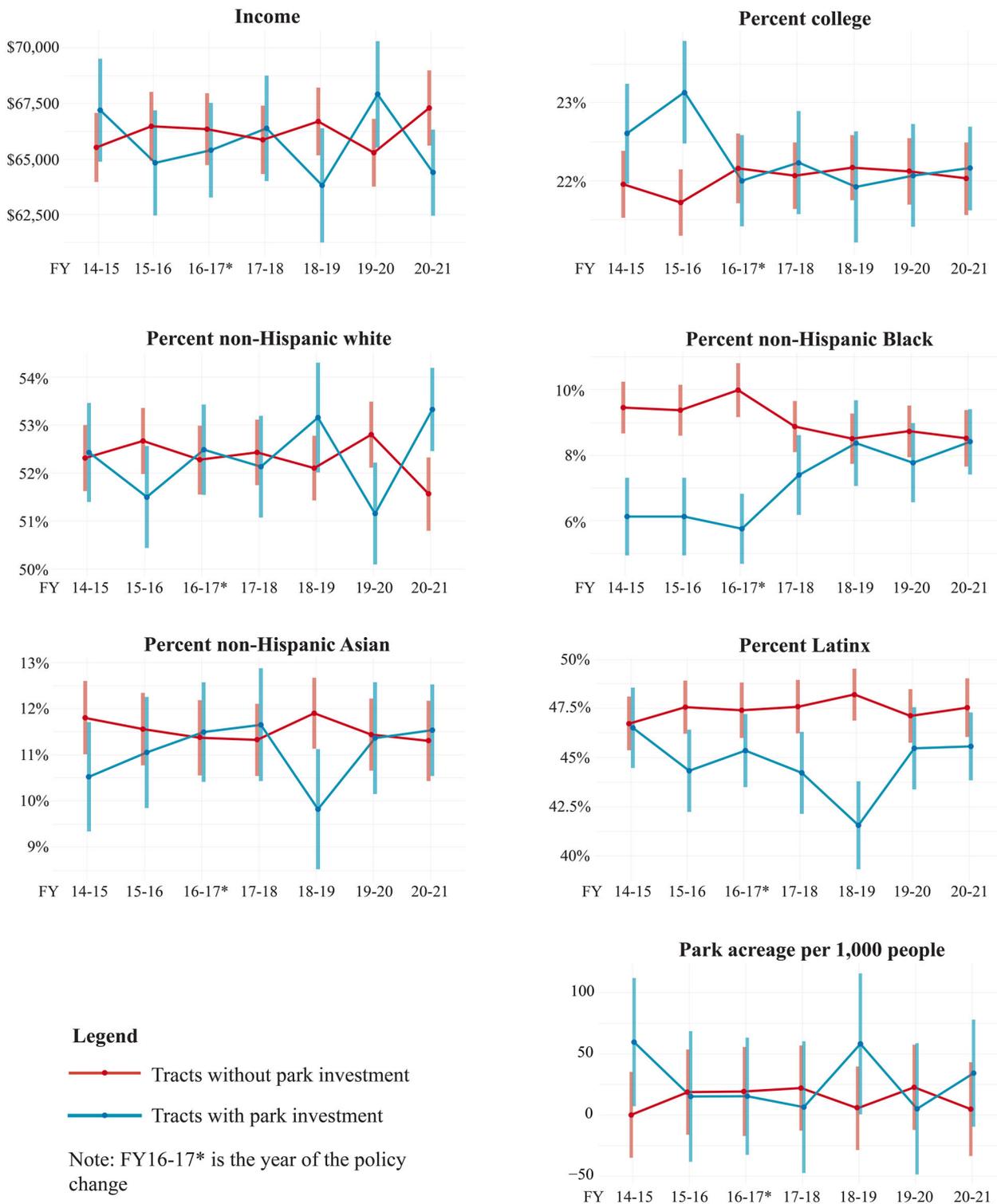
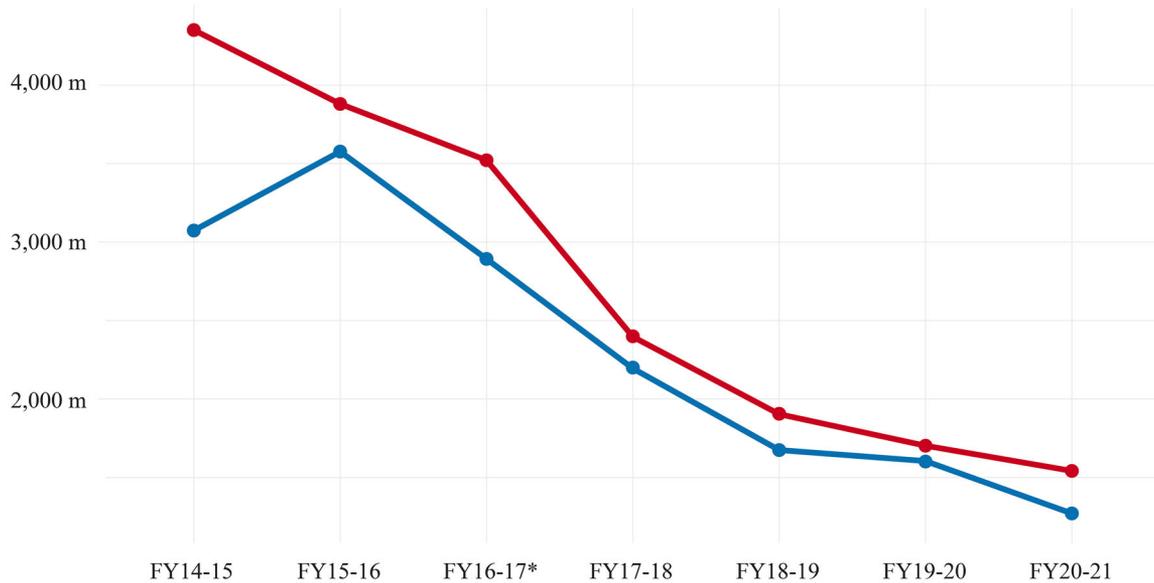


Figure 4. Estimated marginal means for six demographic variables and park acreage per 1,000 people based on whether census tracts received or did not receive a park investment nearby over seven fiscal years. The vertical bars show the 95% confidence intervals. The estimated marginal means control for variables described in [Technical Appendix B](#).

(Circling the News, 2020; Hyman, 2007; Kim, 2014; Los Angeles Downtown News, 2015) and official city documents (City of Los Angeles, 2020) confirmed that city council members played a key role in decisions about

park fee investments. Further, interviews and media accounts suggested that elected officials might have made some allocation decisions to build a “pet project,” for example (Los Angeles Downtown News, 2016, n.p.),



Legend

- Tracts without park investments
- Tracts with park investments

Note: FY16-17* is the year of the policy change

Figure 5. Estimated marginal means of the average distance between parks and the closest five fee-generating developments categorized based on whether census tracts received or did not receive a park investment nearby over seven fiscal years. The estimated marginal means control for variables described in [Technical Appendix D](#).

whereas others were linked to requests they heard from vocal constituents.

Interviewees also reported that, as part of an “unofficial policy,” funds generated in any given district were generally spent in the same district. This may also be due in part to the maximum radii in the ordinance (see [Table 3](#) for quotations). Indeed, we found a strong Pearson correlation between the fees generated and the fees invested in each of the 15 council districts ($r = 0.86$; see [Technical Appendix H](#)). As a result, interviews and media accounts (Hymon, 2007) suggested that wealthier council districts tended to collect and hoard more park fees than lower-income council districts with little development, creating a system of *haves* and *have nots*. Some interviewees suggested that these disparities were also linked to power differentials between community organizations in high-income neighborhoods and such organizations in disadvantaged areas. Although retaining fees generated in each district for projects in the same district followed the “benefit principle” or a “market equity” approach in resource allocation (West & Crompton, 2008, p. 49), that creates a substantial barrier to the use of park fees to advance compensatory park equity.

DEFERRED MAINTENANCE NEEDS

Evidence from interviews and quantitative data on the types of projects funded via park fees suggested that the Recreation and Parks Commission may have prioritized capital renovation projects to address deferred maintenance issues (e.g., replacing a deteriorated playground) over other projects (e.g., new park construction). Specifically, interviewees noted that the Department of Recreation and Parks had priority lists with parks that needed facilities replaced because deferred maintenance rendered such facilities unusable and unsafe (see [Table 3](#) for quotations). Also, projects to address deferred maintenance comprised many fee-funded projects every fiscal year, ranging between 62% in FY2019–2020 to 84% in FY2015–2016, with an overall average of 73%. These investments sought to address the Department of Recreation and Parks’s \$2.1 billion deferred maintenance backlog (City of Los Angeles, 2018).

Interviewees explained that, in the context of chronically underfunded parks, the large percentage of park fees used for projects addressing deferred maintenance issues limited the city’s ability to invest park fees in park-poor, disadvantaged neighborhoods.

Table 3. Selection of interview quotations illustrating the explanations for the lack of equity gains after the Park Fees Ordinance change.

Explanation	Quotes
Lack of equity criteria	<ul style="list-style-type: none"> • “There isn’t an application system and there isn’t a tracker [for park fees]. And there isn’t a checklist that says, ‘Is the project in a community that doesn’t have enough parks?’” (Nonprofit staffer) • [Equity] “is not baked into the process to allocate fees.” (City council staffer) • “We don’t have an equity index to use when we’re deciding where we’re going to put funds.” (Park agency staffer)
Political pressures	<ul style="list-style-type: none"> • “Another issue is the council member discretion. So if you have a development project in a district that’s generating Quimby fees, you’re going to want to use that in that district.” (Nonprofit staffer) • “If [a decision] goes to the [Rec and Parks] commission, we [city council office] have significant influence. We could call in there, and if we wanted it to go to a certain project, it would.” (City council staffer) • “It’s all evaluated based on the need of that specific council district, whatever the new shiny goal is for that section of the city.” (Park agency staffer) • “They [park fees] stay in the district that they are collected in.” (City council staffer)
Deferred maintenance needs	<ul style="list-style-type: none"> • “Sometimes these [park fee] projects are on a long list of repairs that Rec and Parks is working on, and those fees will go to support the maintenance or replacement of those amenities.” (Nonprofit staffer) • “You probably aren’t going to see equity gains because a lot of that [park fee] money is going towards maintenance.” (City council staffer) • “Sometimes there are improvements that are identified by maintenance staff and or construction staff that are health and safety issues ... things that need to be fixed or fire safety programs.” (Park agency staffer)
Geographic limitations	<ul style="list-style-type: none"> • [Disadvantaged areas] “do not get park fees because of the geographic limitations. They [park fees] stay adjacent. Places that don’t receive a lot of Quimby fees are communities that don’t have a lot of development and aren’t adjacent to downtown.” (Nonprofit staffer) • “Especially in communities that are park poor ... within a 2-mile radius [of developments], there may not be that many parks.” (Nonprofit staffer) • “There’s a lot of structural problems when it comes to park equity. A lot of the development, the high-profile development, is in wealthier parts of the city: The west side, downtown Hollywood. So in our [lower-income city council] district, most of our development that we get is, we get a lot of affordable housing, and then we get like industrial projects. So it’s not like stuff where it would develop a high amount of Quimby fees.” (City council staffer)

Note: More interview quotes are included in [Technical Appendix H](#).

GEOGRAPHIC LIMITATIONS

According to interviewees, even after the ordinance change, the maximum radii around fee-generating developments where park fees could be spent still limited the city’s capacity to invest fees in disadvantaged communities (see [Table 3](#) for quotations). This is because such communities do not see much market-rate development (that generates park fees) and instead may see more construction of affordable housing projects (that do not generate fees). This issue is notable for neighborhood parks, for which the maximum radius was the smallest (2 miles). This is a particularly significant issue because approximately 45% of the parks funded via park fees in our study period were classified as neighborhood parks.

Our analysis of the interviews also suggested that the four explanations have overlaps (see [Technical Appendix H](#)). For instance, the limited radius where funds for neighborhood parks can be spent (2 miles) might help elected officials justify their choice of keeping park fees in the city council district where they are generated. Also, the lack of equity criteria might make it easier for city council members and well-heeled community groups to secure park fees.

Policy Implications

The results of our study have implications for the design and implementation of development fee ordinances that aim to achieve equity outcomes, including fees

focused on parks, transportation, and other public services.

Implement Measurable Equity Criteria While Considering the Political Landscape and the Nexus Principle

Increasing geographic radii, as the modified Park Fees Ordinance in Los Angeles did, may not be sufficient to achieve equity outcomes. Thus, wherever allowed by state law and wherever inequities in public service provision exist, a percentage of the development fees collected in a city could be allocated based on objective equity criteria (Nicholas et al., 1991). Wherever allowed by state law (as in California), in-lieu fee ordinances could prioritize areas with limited park acreage (e.g., less than 3 acres per 1,000 residents), parks with few amenities, and below-average median household incomes. Impact fee ordinances, which must demonstrate impact mitigation, could prioritize spending fees within the lowest-income and most park-poor areas within the maximum radius allowable. In addition, recognizing the desire of elected officials to have some discretion, the remaining percentage of development fees could be allocated with more flexibility based on city council office requests.

Los Angeles could also consider loosening the 2-mile maximum radius for neighborhood parks to have the flexibility of moving funds collected in wealthy areas experiencing significant development to disadvantaged communities with little construction. As noted, doing so would clash with city council member deference, but introducing equity criteria to distribute a share of the park fees could help overcome such political pressures.

Integrate Development Fees with Other Funding Sources

Due to significant deferred maintenance needs and chronic underfunding of park departments, park fees might need to be integrated with other larger funding sources (e.g., environmental bonds) to significantly advance park equity. Thus, park fees alone are not a panacea to rectify park inequities.

Enhance Transparency

Unlike the current data-tracking system in Los Angeles, cities could create unique identifiers for park fees generated in each development, which would disclose in which parks specific fees are invested. This would increase the transparency of decisions about where park fees are invested. Further, cities could create data dashboards where residents and advocates can easily access, sort, and visualize park fee data. This could

increase the public's understanding of whether fees are distributed based on a "compensatory equity" framework, other definitions of equity, or other priorities (see Crompton & West, 2008, p. 38).

Conclusion

We studied whether changes in Los Angeles's Park Fees Ordinance, which allowed increased flexibility in how park fees are spent, resulted in more equitable outcomes. We found that, although Los Angeles has taken advantage of greater geographic flexibility where park fees can be spent, the policy change resulted in very limited equity gains. Specifically, after the policy change in 2017, non-Hispanic Black residents were no longer at a disadvantage in terms of park fees received, but Latinx residents experienced additional disadvantage, and people of low socioeconomic status did not experience any gains. Furthermore, the equity gains experienced by non-Hispanic Black residents were attenuated when only considering the largest investments.

Our findings suggest that the lack of equity gains from Los Angeles's modified Park Fees Ordinance is due to four main factors. First, the modified Park Fees Ordinance did not include measurable equity criteria describing where funds should be spent, and previous studies have shown the importance of such criteria to achieve equitable outcomes (Christensen, 2019; Davies et al., 2019). Second, city council members exert significant power in the allocation of park fees: Fees generated in a district tend to be spent in the same district. Third, most park fee investments went to capital replacement projects addressing deferred maintenance issues, limiting the city's capacity to build new parks in disadvantaged neighborhoods. Fourth, the maximum radius around fee-generating developments for neighborhood parks (2 miles) limited the city's ability to move money from wealthier neighborhoods experiencing significant development to disadvantaged areas with little development. The practice of investing funds generated in a council district within the same district exacerbated this issue. Besides the explanations that emerged in the interviews, the lack of equity gains might also be due to the relatively small time that elapsed after the policy change (4 years of data), and in that time frame, institutional inertia might have prevented significant change from happening (see Munck af Rosenschöld et al., 2014).

Like research on development fees for transportation (Mathur & Smith, 2013), we found that park fees may not improve equity outcomes without equity criteria to distribute funds. Also, efforts to use park fees to achieve park equity may clash with the nexus principle directing many local governments to spend fees close to where they are generated, which may not

be areas of highest need (Crompton, 2010; Harnik & Yaffe, 2005). In hindsight, the hope among advocates that the park fees reform would result in equity gains (see Prevention Institute, 2017; Spivack et al., 2014) might have been exaggerated due to underestimating the limitations imposed by the institutional context of policy implementation, especially the power of city council members and deferred maintenance needs. Despite these issues, we believe that planners, policy-makers, and park equity advocates could design park fee ordinances that provide more benefits for park-poor, disadvantaged communities.

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SUPPLEMENTAL MATERIAL

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REFERENCES

Anguelovski, I. (2015). Tactical developments for achieving just and sustainable neighborhoods: The role of community-based coalitions and bottom-to-bottom networks in street, technical, and funder activism. *Environment and Planning C: Government and Policy*, 33(4), 703–725. <https://doi.org/10.1068/c12347>

Assembly Bill No. 1359. (2013). *Testimony of State of California*. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB1359

Boone, C. G., Buckley, G. L., Grove, J. M., & Sister, C. (2009). Parks and people: An environmental justice inquiry in Baltimore, Maryland. *Annals of the Association of American Geographers*, 99(4), 767–787. <https://doi.org/10.1080/00045600903102949>

Burge, G. S., Trosper, T. L., Nelson, A. C., Juergensmeyer, J. C., & Nicholas, J. C. (2013). Can development impact fees help mitigate urban sprawl? *Journal of the American Planning Association*, 79(3), 235–248. <https://doi.org/10.1080/01944363.2014.901116>

Cheng, Y. D., Yang, L. K., & Deng, S. (2022). Nonprofit density and distributional equity in public service provision: Exploring racial/ethnic disparities in public park access across U.S. cities. *Public Administration Review*, 82(3), 473–486. <https://doi.org/10.1111/puar.13465>

Christensen, J. (2019). *Striving for equity in public investments in water in California: An analysis of Prop 1 implementation*. UCLA Institute of the Environment and Sustainability.

Circling the News. (2020). Quimby funds remain elusive, frustrating Palisadians who want to build a dog park here. *Circling the News*. <https://www.circlingthenews.com/quimby-funds-remain-elusive-frustrating-palisadians-who-want-to-build-a-dog-park-here/>

City of Los Angeles (n.d.). *Los Angeles GeoHub*. City of Los Angeles. <https://geohub.lacity.org/>

City of Los Angeles. (2016). *Department of City Planning recommendation report: Case number CPC-2015-2328-CA-GPA*. <http://planning.lacity.org/ordinances/docs/parksdedication/QuimbyFinal.pdf>

City of Los Angeles. (2018). *Parks condition assessment report*. July 2018. [https://www.laparks.org/sites/default/files/planning/Parks Condition Assessment Report-July2018%20EntireReport%29-Optimized.pdf](https://www.laparks.org/sites/default/files/planning/Parks%20Condition%20Assessment%20Report-July2018%20EntireReport%29-Optimized.pdf)

City of Los Angeles. (2020). *Quimby/park fees collection and allocation*. [https://www.laparks.org/sites/default/files/pdf/commissioner/2020/jun04/Park Fee %26QuimbyReport Back.pdf](https://www.laparks.org/sites/default/files/pdf/commissioner/2020/jun04/Park%20Fee%26QuimbyReport%20Back.pdf)

City of Los Angeles. (2022). *Park fees*. <https://www.laparks.org/planning/park-fees>

City Parks Alliance. (2020). *Investing in equitable urban park systems: Case studies + recommendations*. City Parks Alliance.

Cohen, D. A., Han, B., Park, S., Williamson, S., & Derosé, K. P. (2019). Differences in park use and park-based physical activity among residents of low-income neighborhoods by age group and gender. *Journal of Aging and Physical Activity*, 27(3), 334–342. <https://doi.org/10.1123/japa.2018-0032>

Crompton, J. L. (2010). An analysis of parkland dedication ordinances in Texas. *Journal of Park and Recreation Administration*, 28(1), 70–102.

Crompton, J. L. (2020). Missing an opportunity: In an era of fiscal conservatism, why are parkland dedication and park impact fees underutilized? *Journal of Park and Recreation Administration*, 39(1), 155–170. <https://doi.org/10.18666/JPra-2020-10130>

Crompton, J. L., & Kaczynski, A. T. (2003). Trends in local park and recreation department finances and staffing from 1964–65 to 1999–2000. *Journal of Park and Recreation Administration*, 21(4), 124–144.

Crompton, J. L., & West, S. T. (2008). The role of moral philosophies, operational criteria and operational strategies in determining equitable allocation of resources for leisure services in the United States. *Leisure Studies*, 27(1), 35–58. <https://doi.org/10.1080/02614360701198048>

Davies, I. P., Christensen, J., & Kareiva, P. (2019). Assessing the flow to low-income urban areas of conservation and environmental funds approved by California's Proposition 84. *PLoS One*, 14(2), e0211925. <https://doi.org/10.1371/journal.pone.0211925>

Eldridge, M., Burrows, K., & Spauster, P. (2019). *Investing in equitable urban park systems*. Urban Institute.

García, R., & Mok, T. (2017). Whitewashing the Los Angeles River? Gentrification not gentrification. *Parks & Recreation*, September, 50–52. <https://www.nrpa.org/parks-recreation->

- magazine/2017/september/whitewashing-the-los-angeles-river-gente-fication-not-gentrification/
- Harnik, P., Yaffe, L. (2005). *Who's going to pay for this park? The role of developer exactions in the creation of new city parks*. The Trust for Public Land. <http://www.tpl.org/research/parks/ccpe.html>
- Hymon, S. (2007, October 20). Few parks, but city sits on a pile of green; L.A. has \$77 million in unspent developers fees for grassy venues. Report angers builders. *Los Angeles Times*, B.3.
- Joassart-Marcelli, P., Wolch, J. R., & Salim, Z. (2011). Building the healthy city: The role of nonprofits in creating active urban parks. *Urban Geography*, 32(5), 682–711. <https://doi.org/10.2747/0272-3638.32.5.682>
- Kim, E. (2014). City breaks ground on \$10 million park at First and Broadway. *Los Angeles Downtown News*. http://www.ladowntownnews.com/news/city-breaks-ground-on-10-million-park-at-first-and-broadway/article_26cd8ca2-dc61-11e3-a2aa-001a4bcf887a.html
- Landis, J., Larice, M., Dawson, D., & Deng, L. (2001). *Pay to play: Residential development fees in California cities and counties, 1999*. Institute of Urban and Regional Development University of California.
- Lederman, J., & Wachs, M. (2016). The growing role of transportation funding in regional habitat conservation planning. *Journal of the American Planning Association*, 82(4), 350–362. <https://doi.org/10.1080/01944363.2016.1214079>
- Loukaitou-Sideris, A., & Sideris, A. (2009). What brings children to the park? Analysis and measurement of the variables affecting children's use of parks. *Journal of the American Planning Association*, 76(1), 89–107. <https://doi.org/10.1080/01944360903418338>
- Los Angeles Downtown News. (2015). Spring Street Park problems: Follow the money. *Los Angeles Downtown News*. http://www.ladowntownnews.com/opinion/spring-street-park-problems-follow-the-money/article_10319004-dc85-11e4-b109-cf94bd1ad320.html
- Los Angeles Downtown News. (2016). Developers should pay more for park creation. But how much? *Los Angeles Downtown News*. http://www.ladowntownnews.com/opinion/developers-should-pay-more-for-park-creation-but-how-much/article_1ddd5988-243f-11e6-9fc3-2759bfe46c0d.html
- Mathur, S. (2013). Do all impact fees affect housing prices the same? *Journal of Planning Education and Research*, 33(4), 442–455. <https://doi.org/10.1177/0739456X13494241>
- Mathur, S. (2016). Designing an impact fee program to meet rational nexus principle and reduce vertical inequity: Key insights for developing countries. *Public Works Management & Policy*, 21(4), 324–345. <https://doi.org/10.1177/1087724X15624692>
- Mathur, S., & Smith, A. (2013). Transit impact fee: Enabling statutes and equity concerns. *Transportation Research Record: Journal of the Transportation Research Board*, 2346(1), 13–22. <https://doi.org/10.3141/2346-02>
- Munck af Rosenschöld, J., Rozema, J. G., & Frye-Levine, L. A. (2014). Institutional inertia and climate change: A review of the new institutionalist literature. *Wires Climate Change*, 5(5), 639–648. <https://doi.org/10.1002/wcc.292>
- Nardone, A., Rudolph, K. E., Morello-Frosch, R., & Casey, J. A. (2021). Redlines and greenspace: The relationship between historical redlining and 2010 greenspace across the United States. *Environmental Health Perspectives*, 129(1), 17006. <https://doi.org/10.1289/EHP7495>
- Nelson, A. C., Bowles, L. K., Juergensmeyer, J. C., & Nicholas, J. C. (2008). *A guide to impact fees and housing affordability*. Island Press.
- Nelson, A. C., Nicholas, J. C., & Juergensmeyer, J. C. (2009). *Impact fees: Principles and practice of proportionate-share development fees*. Routledge.
- Nicholas, J. C., Nelson, A. C., & Juergensmeyer, J. C. (1991). *A practitioner's guide to development impact fees*. American Planning Association.
- Ordinance no. 184505. (2016). *Testimony of City of Los Angeles*. http://clkrep.lacity.org/onlinedocs/2016/16-0529_ord_184505_9-13-16.pdf
- Pincetl, S. (2003). Nonprofits and park provision in Los Angeles: An exploration of the rise of governance approaches to the provision of local services. *Social Science Quarterly*, 84(4), 979–1001. <https://doi.org/10.1046/j.0038-4941.2003.08404019.x>
- Pitas, N. A., Barrett, A. G., & Mowen, A. J. (2017). Trends in local park and recreation department finances and staffing in the early twenty-first century. *Journal of Park and Recreation Administration*, 35(3), 20–34. <https://doi.org/10.18666/JPra-2017-V35-I3-7712>
- Prevention Institute. (2017). *Putting land use policy to work for health equity*. <https://www.preventioninstitute.org/blog/putting-land-use-policy-work-health-equity>
- Raetz, H., Garcia, D., Decker, N., Kneebone, E., Reid, C., & Galante, C. (2019). *Residential impact fees in California: Current practices and policy considerations to improve implementation of fees governed by the Mitigation Fee Act*. Turner Center, University of California, Berkeley.
- Raglin, D. (2022). *Period estimates in the American Community Survey*. U.S. Census Bureau. <https://www.census.gov/newsroom/blogs/random-samplings/2022/03/period-estimates-american-community-survey.html>
- Reibel, M., Rigolon, A., & Rocha, A. (2021). Follow the money: Do gentrifying and at-risk neighborhoods attract more park spending? *Journal of Urban Affairs*. Advance online publication. <https://doi.org/10.1080/07352166.2021.1886857>
- Rigolon, A. (2016). A complex landscape of inequity in access to urban parks: A literature review. *Landscape and Urban Planning*, 153, 160–169. <https://doi.org/10.1016/j.landurbplan.2016.05.017>
- Rigolon, A. (2019). Nonprofits and park equity in Los Angeles: A promising way forward for environmental justice. *Urban Geography*, 40(7), 984–1009. <https://doi.org/10.1080/02723638.2018.1511192>
- Rigolon, A., & Németh, J. (2021). What shapes uneven access to urban amenities? Thick injustice and the legacy of racial discrimination in Denver's parks. *Journal of Planning Education and Research*, 41(3), 312–325. <https://doi.org/10.1177/0739456X18789251>
- Rigolon, A., Browning, M. H. E. M., Lee, K., & Shin, S. (2018). Access to urban green space in cities of the Global South: A systematic literature review. *Urban Science*, 2(3), 67–91. <https://doi.org/10.3390/urbansci2030067>
- Rigolon, A., Browning, M. H. E. M., McAnirlin, O., & Yoon, H. (2021). Green space and health equity: A systematic review on the potential of green space to reduce health disparities. *International Journal of Environmental Research and Public Health*, 18(5), 2563. <https://doi.org/10.3390/ijerph18052563>
- Schüle, S. A., Hilz, L. K., Dreger, S., & Bolte, G. (2019). Social inequalities in environmental resources of green and blue spaces: A review of evidence in the WHO European region.

- International Journal of Environmental Research and Public Health*, 16(7), 1216. <https://doi.org/10.3390/ijerph16071216>
- Spivack, D. R., Yañez, E., Bodke, A. (2014). *Creating new urban park space in Los Angeles: An analysis of the current Quimby ordinance and recommended improvements*. Los Angeles Neighborhood Land Trust. <http://www.lanlt.org/library/CreatingNewUrbanParkSpaceInLA.pdf>
- The Trust for Public Land. (2023). *10-minute walk: Improving park and green space access*. <https://10minutewalk.org/>
- Walton, A. (2016, September 8). City Council raises fees on developers for parks: Under revamped policy, L.A. will also begin charging the builders of new apartment complexes. *Los Angeles Times*, B.3.
- West, S. T., & Crompton, J. L. (2008). A comparison of preferences and perceptions of alternate equity operationalizations. *Leisure Sciences*, 30(5), 409–428. <https://doi.org/10.1080/01490400802353109>
- Williams, T. G., Logan, T. M., Zuo, C. T., Liberman, K. D., & Guikema, S. D. (2020). Parks and safety: A comparative study of green space access and inequity in five US cities. *Landscape and Urban Planning*, 201, 103841. <https://doi.org/10.1016/j.landurbplan.2020.103841>
- Wolch, J. R., Byrne, J., & Newell, J. P. (2014). Urban green space, public health, and environmental justice: The challenge of making cities “just green enough.” *Landscape and Urban Planning*, 125, 234–244. <https://doi.org/10.1016/j.landurbplan.2014.01.017>
- Wolch, J. R., Wilson, J. P., & Fehrenbach, J. (2005). Parks and park funding in Los Angeles: An equity-mapping analysis. *Urban Geography*, 26(1), 4–35. <https://doi.org/10.2747/0272-3638.26.1.4>
- Yañez, E., Aboelata, M. J., Rigolon, A., Bennett, R. (2021). *Changing the landscape: People, parks, and power*. Prevention Institute. <https://preventioninstitute.org/publications/changing-landscape-people-parks-and-power>
- Zou, S., & Crompton, J. L. (2020). A comparison of two data sets used to measure expenditure trends for local public park and recreation services. *Journal of Park and Recreation Administration*, 39(3), 20–36. <https://doi.org/10.18666/JPra-2020-10018>