

2020 MENINO SURVEY OF MAYORS



URBAN PARKS AND THE PUBLIC REALM: EQUITY & ACCESS IN POST-COVID CITIES

SUPPORTED BY



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INTRODUCTION

Parks and open space enrich cities in significant ways. Parks provide places to recreate and play, immerse oneself in nature, and provide gathering space to meet with friends and enjoy cultural attractions. Greenspaces offer havens for wildlife, help filter water and clean air, and provide people with an important respite from city life. These and other parts of the public realm also provide valuable public spaces to join arms and voices in protest. They are the in-between spaces that help connect us.

But these spaces — whether natural or man-made — require thoughtful management and investment to function effectively. Cities have a broad array of responsibilities related to parks and open space, accountable both for the effective delivery of routine services like trash removal, as well as the maintenance and management of a wide array of physical assets from tree-lined promenades to athletic fields.

Cities have far-reaching authority over other areas in the public realm too, from sidewalks to streets — controlling both the quality of these spaces and permissible uses — and play an important function in protecting natural habitats from pollution and encroaching development, including urban wetlands, waterways, and forests. Among all these areas of the public realm, cities must also consider equity concerns, including the distribution of land and investment in it. Equally important, and often overlooked, cities need also consider whether the spaces and programming they are designing are equally welcoming to all residents.

2020 introduced completely new ways of looking at parks and open space. In the early weeks of the COVID-19 pandemic, many cities across the country closed parks, playgrounds, beaches, and hiking trails, even roping off benches and picnic tables and removing basketball nets, in an effort to rein in the spread of the poorly understood new virus. As the science improved, local and state leaders and public health experts realized the outdoors offered one of the safest places for residents to be or connect in person. Cities across the country did more than just reopen. They opened parks while closing streets to allow young people to play and families and friends to safely gather. They repurposed sidewalks and parking spaces for safer public dining. They added new bike lanes and expanded sidewalks to create more physical space for pedestrians and cyclists. And communities supported the rights of protesters who gathered in record numbers to call for racial justice in the wake of recent police violence against Blacks Americans. While mandating (or at a minimum encouraging) masks and safe physical distancing, cities were once again encouraging people to get outside.

It was in this context that we sought to interview mayors about their perceptions and priorities related to parks and open space now and in the future. Between June and August 2020, a team at Boston University completed 130 interviews with mayors of cities with populations of more than 75,000 residents as part of its annual Menino Survey of Mayors. The sample was representative of these cities, with regard to city size and demographics, and included mayors from 38 states across the US.



THE BENEFITS OF PARKS AND GREENSPACE FOR URBAN COMMUNITIES

Parks provide spaces to play, gather, and exercise, in sprawling cities to small communities. Numerous studies have established a strong linkage between parks and physical health (Sallis et al. 1997; Sallis et al, 1998; Payne et al. 1998; Bedimo-Rung et al., 2005; Kaczynski & Henderson, 2007; APHA 2013). By allowing people, particularly in dense environments, to remain active, they also help reduce depression and anxiety and enhance self-esteem and cognitive functioning (Raglin, 1990; Hull & Michael, 1995; Paluska & Schwenk, 2000; Landers & Arent, 2007; APHA, 2013), notably for children and adolescents (Biddle & Asare, 2011) and for women and older people (Godbey & Blazey, 1983; Stephens, 1988; Payne et al., 1998; Ponde & Santana, 2000; Orsega-Smith et al., 2004).

Parks and greenspace also promote human and ecosystem health by improving air and water quality and mitigating heat events and flooding in urban environments. According to the National Recreation and Park Association (NRPA), urban canopy in parks and along city streets is estimated to absorb 711,000 metric tons of air pollution and more than 90 million metric tons of carbon annually, equivalent to eliminating more than 19 million cars from the road for one year (Schottland, 2019). By transporting cleaner air from the park to the surrounding streets, the outflow of air also facilitates city ventilation to mitigate pollution (Eliasson & Upmanis, 2000). Urban trees, more generally, remove a significant amount of air pollution, enhancing air quality and thus human health (Nowak, 2006; Nowak et al, 2006; Shan et al., 2007). Parks can help combat rising temperatures from climate change and urban heat islands by creating an “oasis effect” with much cooler temperatures (David and Aljabar, 2017). Greenspace may also improve the performance of water systems by filtering groundwater, decreasing stormwater runoff, and curbing combined sewer overflows (APHA, 2013).

However, parks are not evenly distributed, nor are they all of equitable quality. Research from The Trust for Public Land shows that 100 million people in the US — nearly one in three — do not have access to a park within a 10-minute walk from their home. In urban areas, communities of color live within comparable — or in some instances superior — physical proximity to parks relative to white residents, though these spaces tend to be of lesser quality or more congested in many, though by no means all, cities (Boone, 2009; Cutts, 2009; Wen, 2013, Engelberg, 2016). The Trust’s recent report, *The Heat is On*, also found that parks serving primarily nonwhite populations are half the size and serve five times as many people as parks that serve majority white populations.¹ A number of factors influence quality, maintenance, and programming of these spaces too, including decades of systemic disinvestment.

Additionally, communities of color use parks less than their white neighbors (Wilbur et al., 2008, Byrne, 2012; Das, 2017; Pitkin-Derose, 2014; Wen, 2013), a disparity attributable to a wide array of barriers, including lack of leisure time, support from family and friends and role models, perceptions of safety, as well as caregiving responsibilities (Evenson, 2008; Wilbur, 2008). Multiple studies also highlight the role of societal racism and social exclusion in the use of public spaces: people of color may perceive certain parks to be ‘Whites-only’ and thus feel unwelcome and excluded from them. Surrounding neighborhood demographics, lack of signage in languages other than English, discrimination and fears of persecution (both personal security and as a consequence of public safety measures) all contribute to real and perceived exclusion (Byrne, 2012). A survey of low-income residents in Minneapolis found Black and foreign-born residents underutilize parks, in part because they do not feel welcome, perceive fewer health benefits, and encounter language barriers as well as programs, facilities, and schedules that do not meet their needs (Das, 2017). Uneven access, appeal, and usage may explain some health disparities across different racial groups that are not entirely caused by risk factors at the individual level (Papas et al., 2007; Rundle et al., 2008; Stark, 2014).

¹ The Trust for Public Land. 2020. A Trust for Public Land Special Report: The Heat is On. https://www.tpl.org/sites/default/files/The-Heat-is-on_A-Trust-for-Public-Land_special-report.pdf.



During the COVID-19 pandemic, parks have become sanctuaries, as one of the few available places to go away from home, with shops, restaurants, and other indoor facilities closing. There has been a surge in park visitation in cities across the country: in Erie, PA, the number of visitors at Presque Isle State Park soared 165 percent during the third week of March, compared to the same week in 2019 (TPL, 2020). Also in March, popular trails in Dallas, TX saw usage increase from 30 to 75 percent and trails in Minneapolis saw summertime levels of usage during the still-cold month (Sisson, 2020).

With precautions such as physical distancing and mask wearing, parks and greenspace can counteract some negative health effects of the pandemic by improving physical and mental health (Slater et al, 2020; Xie et al., 2020; Freeman & Eykelbosh, 2020). Parks may have acted as a protective factor, enabling physical activity that lessens damage by COVID-19, continuing to help stave off poor cardiovascular health, diabetes, obesity, and hypertension, all of which are considered to be risk factors for the disease (Sallis & Pratt, 2020). Furthermore, quarantining poses mental health risks (Brooks et al., 2020), which outdoor recreation may help to alleviate. Even the public perceives the importance of parks and open space for their physical and mental health more now than before the outbreak of COVID-19 (Lopez et al, 2020; Kleinschroth & Kowarik, 2020; Ugolini et al., 2020).

In the late spring and throughout the summer of 2020, parks and other outdoor public spaces also served as gathering places for protesters who assembled across the country to call for justice in response to police-involved homicides of Black people. Public spaces play a central role in our democracy. Activists have long made use of parks to exercise their First Amendment rights and legitimize their causes within earshot or eyesight of the public and elected officials (NPCA, 2020). Notable historic examples include the National Mall and Lafayette Square in Washington, DC, living symbols of the civil rights movement and other peaceful demonstrations (Zick, 2009; TPL, 2020). For recent protesters calling for an end to police brutality against people of color, in the midst of a pandemic, parks and public plazas played perhaps an even more significant role in providing a space to congregate.

While parks have many benefits, community leaders also have to consider potential negative consequences. They can leverage expertise, relationships, power, and resources to ensure that the new parks and investments lead to the most equitable outcomes. Park investments do not happen in a vacuum; investing in parks may influence a neighborhood's value appreciation, but by attracting new residents these investments may contribute to the

displacement of existing residents, a phenomenon known as 'green gentrification' (Anguelovski, 2016; Gould & Lewis, 2016). Communities have an opportunity to align new parks investments with anti-displacement programs, to minimize this risk.²

Where parks do exist, without proper management and oversight they may pose risks to community members by providing obscured spaces for criminal activity such as markets for drug dealers or theft. Some groups, notably women of color, are reluctant to use

spaces they deem unsafe or where they fear no one will come to their aid (Wilbur et al, 2008). Thereby, specific characteristics and planning of parks, such as the presence of recreation centers, which are frequently staffed, and playing fields and lighting, become particularly important for inviting a wide range of users and mitigating the risk of crime (Groff & McCord, 2011).

Parks have also been shown to play a role in reducing crime. Multiple studies in Philadelphia found that the conversion of previously vacant and blighted lots into maintained park space improved resident perceptions of

“Given the value derived from parks and greenspace, as well as enduring physical and social barriers and myriad costs, it is important that we understand how mayors perceive the benefits — and beneficiaries — of open space, and how they may prioritize these assets now and in the future.”

² Solomon, A. Improving River Recreation Without Gentrification in Atlanta. Next City (Sept. 18, 2020): <https://nextcity.org/daily/entry/improving-river-recreation-without-gentrification-in-atlanta>



safety and security, increased their use of outside space, and led to overall reductions in crime, gun violence, burglary, and nuisances (Branas et al., 2011, 2016, 2018). Other studies point to the potential for parks and other types of greenspace to reduce crime by increasing social interaction, community cohesion and civic pride, reducing stress and improving mental health, and providing positive outlets for young people, among other factors (Shepley, 2019).

Finally, while parks and open space are typically free and open to all, they are not free of cost. Taxpayer funding plays a critical role in preserving and maintaining these public assets, as they need ongoing maintenance and capital investments to address routine wear and meet community needs. Many are also vulnerable to multiple threats, including extreme weather events like hurricanes, drought and flooding, fire, as well as invasive species, pests, and disease. Indeed, parks and greenspace are just one of multiple demands on municipal resources.

Given the value derived from parks and greenspace, as well as enduring physical and social barriers and myriad costs, it is important that we understand how mayors perceive the benefits — and beneficiaries — of open space, and how they may prioritize these assets now and in the future.

MAYORAL PERCEPTIONS OF ACCESS AND EQUITY

In the midst of an unprecedented reclamation and recasting of the public realm for people, we sought to understand how mayors perceive the opportunities presented by, and inequities present in, their public parks and open spaces. The 2020 Menino Survey of Mayors, which is based on live interviews with US mayors of cities of over 75,000 residents, included questions pertaining to parks and open space in their communities. Through both closed- and open-ended responses, participating mayors (N=130) highlighted how they think about access to and quality of parks and open space, and related behavior and policy changes they foresee as their communities continue to grapple with — and eventually emerge from — the COVID-19 pandemic.

Across the country, mayors tend to paint a very positive picture of many dimensions of their existing parks and open space. They generally regard their parks as widely accessible and safe to use, including for Black residents. Many spoke of their parks with pride, sharing insight into specific projects and investments. A mayor in the Midwest offered one such perspective: *“We are very strong advocates of parks and recreation. We have a park by every grade school, and have new playgrounds, tennis courts, swimming pool, and a brand new recreation center. We’ve added [a number of] parks in the last three years. Spent millions on parks and recreation.”*

Seventy percent of mayors agreed that all residents, regardless of race, ethnicity or income live within easy walking distance of a park (Figure 1). A slightly higher proportion, 77 percent, believe that parks are also safe for all users, and a similar percentage believe Black residents, specifically, are able to safely use parks without fear of police. However, as our recent report on mayoral views on policing and protests shows, mayors may underestimate the degree to which Black constituents distrust the police.³

A few mayors felt that not all park users were equally welcoming to residents of all racial and ethnic backgrounds. In an allusion to recent public incidents of racism toward parks-goers of color, a West Coast mayor noted: *“We have a bunch of Karens and Beckys that make it less safe to enjoy the park.”*

3 Einstein, K.L., D. Glick, and M. Palmer. 2020 Menino Survey of Mayors: Policing and Protests. Boston University Initiative on Cities: <https://www.surveymayors.com/reports/menino-survey-of-mayors-2020-policing-and-protests-report.pdf>

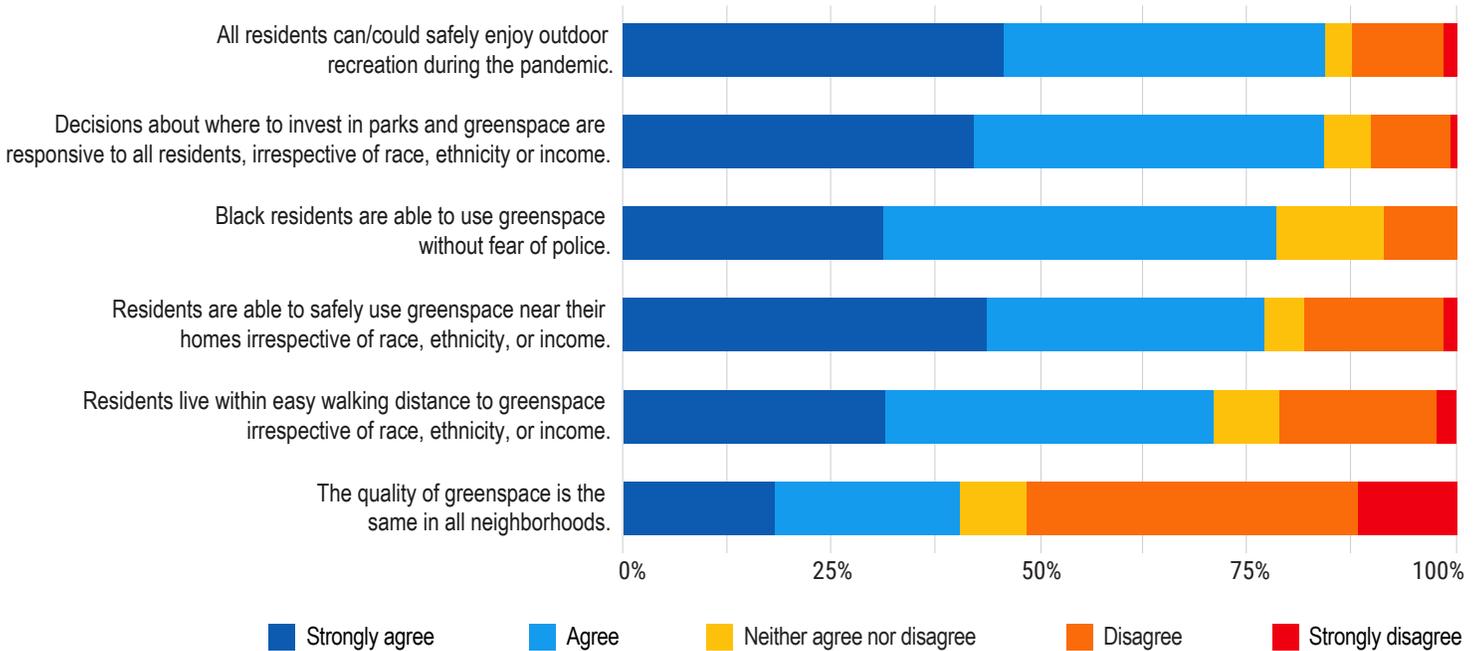


Yet, while mayors generally perceived equitable parks access and comparable levels of physical safety for their residents, they acknowledge differences in the quality of these spaces. Slightly more than half of mayors believe the quality of greenspace differs across different neighborhoods. As an East Coast mayor highlighted: *“I know parks quality is not equitable, which is why we supported a tax increase [to fund parks] and an equity-driven parks master plan.”*

Relatedly, mayors were also asked whether parks investment decisions are responsive to all residents. The overwhelming majority, 84 percent, responded in the affirmative. A small number of mayors noted that investment decisions intentionally prioritized under-invested areas or marginalized communities. As one Midwest mayor relayed: *“We over-invest in areas with higher concentrations of poverty [...] We strive to make the quality the best in low-income neighborhoods.”* Another said: *“Disagree, but it’s actually the reverse. We are implementing a program that considers race to invest more in Black communities.”* Still, these viewpoints were exceptions, rather than the norm.

Figure 1. Access and Quality of Greenspace

Please rate how strongly you agree/disagree with the following statements about greenspace in your city.



Some Southern mayors do seem to be aware that they may offer more limited parks access to residents, consistent with our analysis of urban parks proximity (Figure 2). Fifty-eight percent of Southern mayors agreed or strongly agreed that residents have easy walking access to parks compared to 79 percent of mayors in the Northeast, and 76 percent of mayors in both the Midwest and the West (Figure 3). While mayors in the Northeast recognize their residents enjoy high rates of park access, they are more critical when it comes to quality of those spaces. Sixty-nine percent of Northeast mayors believe there is inequity in the quality of parks across neighborhoods, making them the most critical amongst their peers. This is especially striking given the high percentage of residents of Northeastern cities who live, on average, within a 10-minute walk of a park (81 percent) — far higher than in other regions of the country.

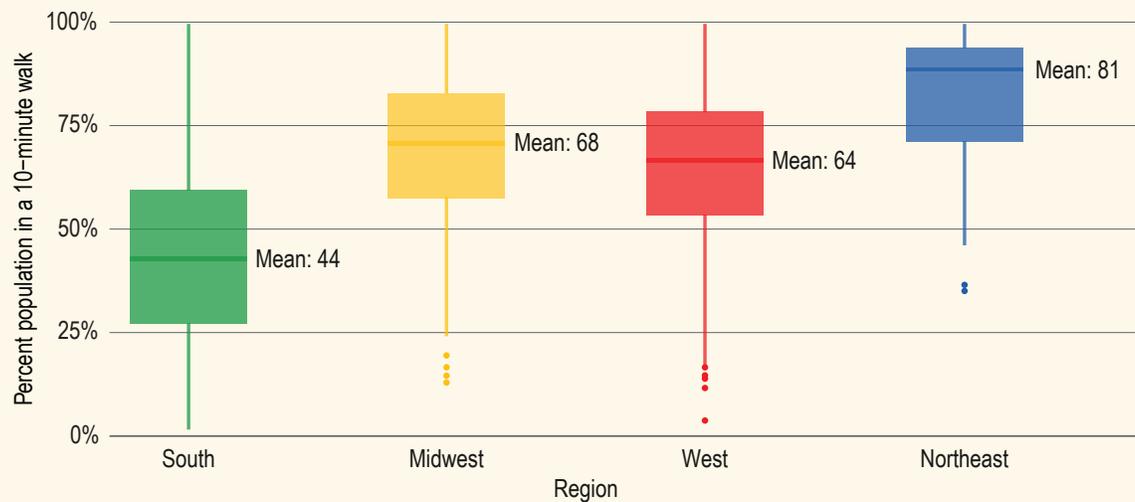


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**HOW
ACCESSIBLE
ARE URBAN
PARKS?**
.....

The Trust for Public Land calculates the number of community residents who live within a 10-minute walk of a park or open space, with data made available through the ParkServe® tool. In order to understand equity in parks proximity within cities, we looked for variation in the percentage of residents who had 10-minute walk access across different age groups, race and ethnicity, and income levels in cities with more than 75,000 residents (N=489). In a majority of cities, Black and Hispanic residents actually have the same or slightly better access to parks than white residents. Across the sample of cities, on average 59 percent of white residents have 10-minute walk access to a park or greenspace, compared to 61 percent of Black or Hispanic residents, and 57 percent of Asian residents. While this result may be surprising given unequal patterns in the delivery of other types of government services, the key is that this data reflect geographic proximity only, not the quality nor degree to which a public space is socially accessible to people of diverse racial and ethnic backgrounds. Parks serving primarily Black, Latino, Indigenous and Native American, Asian Americans and Pacific Islanders, and other communities of color are half the size and serve five times more people per acre than parks in primarily white neighborhoods.⁴

More significant variation in parks access appears when the data is broken down by census region. Residents in Southern cities were significantly less likely to live within a 10-minute walk of a park or greenspace, while residents in the Northeast — where cities are typically more compact — are more likely to live in close proximity to a park. On average 81 percent of residents in Northeast cities enjoy walkable access to a park compared to just 44 percent of residents of Southern cities.

Figure 2. Percent of City Residents with 10 Minute Walk Access to Park or Greenspace by Census Region (N=489)



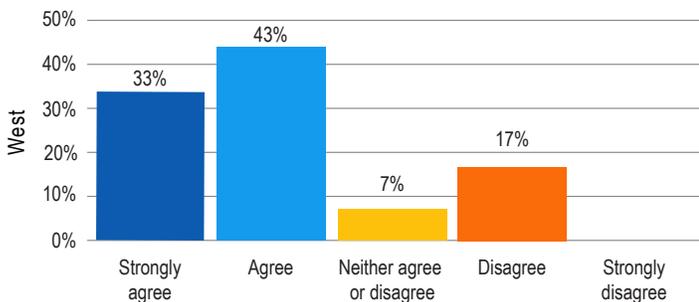
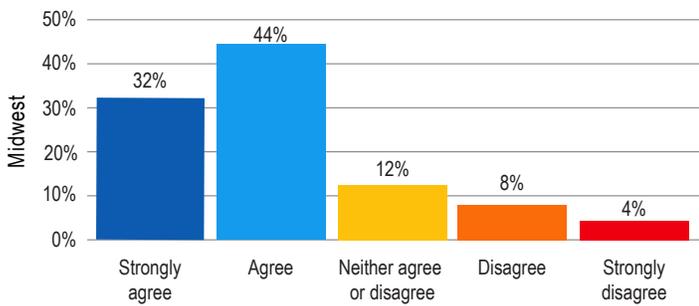
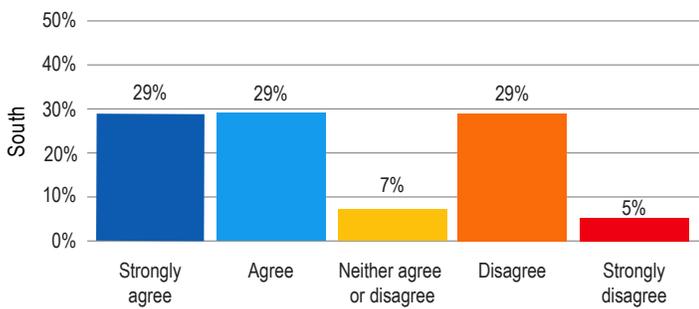
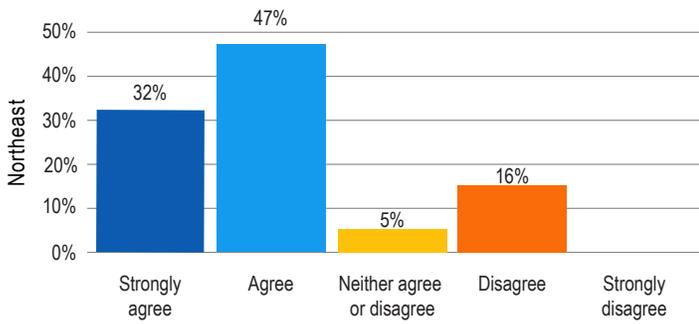
4 The Trust for Public Land. 2020. A Trust for Public Land Special Report: The Heat is On. https://www.tpl.org/sites/default/files/The-Heat-is-on_A-Trust-for-Public-Land_special-report.pdf.



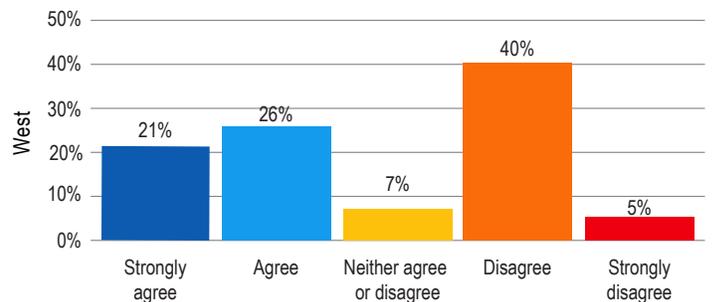
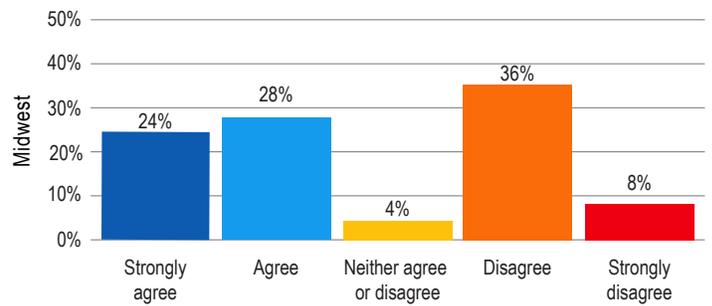
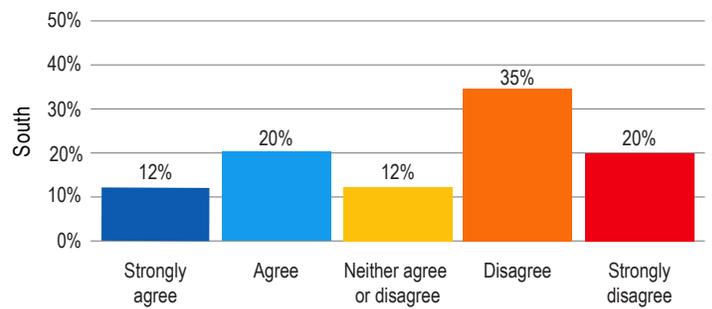
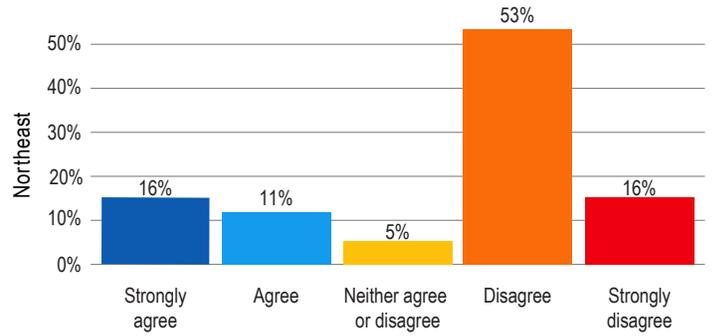
Figure 3. Mayoral Responses by Census Region (N=130)

Please rate how strongly you agree/disagree with the following statements about greenspace in your city.

Residents live within easy walking distance to greenspace irrespective of race, ethnicity, or income.



The quality of greenspace is the same in all neighborhoods.





RECLAIMING THE PUBLIC REALM DURING COVID-19

Across the country and around the world, mayors responded to the pandemic by reclaiming and repurposing the public realm for new uses that let people gather, play, dine, or simply move — at a safer distance — through the city. Cities like Paris, Barcelona, and London dramatically reallocated and transformed use of public spaces. Paris rapidly expanded bike infrastructure. While the effort began well before COVID-19, the city added 31 new miles of lanes during the pandemic and closed parts of its iconic Rue de Rivoli to cars permanently.⁵ It is now planning to reclaim 50 percent of its 140,000 parking spaces to shift their use from private car storage to greener public uses.⁶ Barcelona is advancing its “superblock” strategy, closing networks of streets to through traffic to create more spaces for public plazas for dining, gathering and play, and new space for greenery. Designs will be chosen via a public competition, with specifications calling for 80 percent tree canopy coverage in summer months and at least 20 percent permeable surfaces.⁷

Here in the US, demand for dining provided motivation for the repurposing of city streets. In many locations, roadways, parking lots, and sidewalks were reallocated for outdoor dining. These spaces, dubbed “streateries”, appear to be incredibly widespread, with 92 percent of mayors reporting they had implemented them temporarily or permanently. Thirty-four percent of mayors stated they plan to make these changes permanent, suggesting outdoor dining is one — albeit modest — change to the public realm that may endure in some American cities after the pandemic.

“We have an amazing opportunity to create more public space. Our public spaces are an important part of the character of our city. Fewer cars means more opportunities for public space. We’re learning a lot about how to share public space and not just use it for cars. We worked to close roadways and people want to keep them.”

— EAST COAST MAYOR

Nearly half of cities also shut down some roads to through traffic and just under a third closed roads entirely to all traffic, though very few mayors plan to make these closures permanent. Other efforts to reclaim public streets for new uses appear to be less common. Forty percent of mayors reported widening sidewalks and 38 percent created new bike lanes during the pandemic. Among the 29 percent of mayors who are making new bike infrastructure permanent, some noted these lanes were being implemented as part of an existing plan though the rollout was accelerated by the pandemic. And at least some mayors who responded they “did not implement” new bike lanes during the pandemic indicated it was because they had created more bike infrastructure well before COVID-19 struck.

5 Paris to keep new cycling paths beyond pandemic. France 24 (Sept. 16, 2020): <https://www.france24.com/en/20200916-paris-to-keep-new-cycling-paths-beyond-pandemic>; Alderman, L. ‘Corona Cycleways’ Become the New Post-Confinement Commute. New York Times (Jun. 12, 2020): <https://www.nytimes.com/2020/06/12/business/paris-bicycles-commute-coronavirus.html>

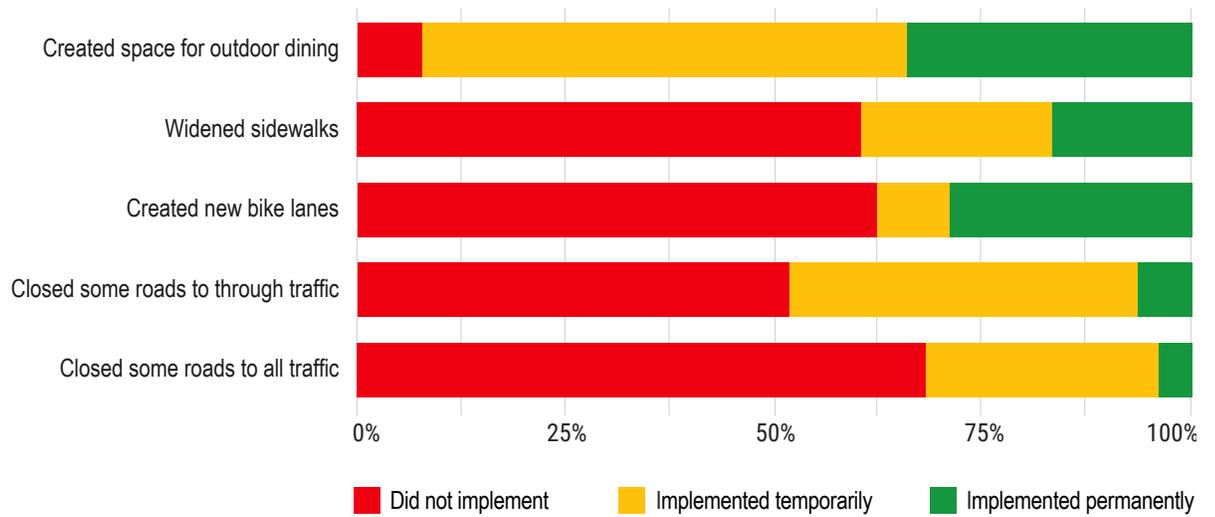
6 Marchant, N. Paris halves street parking and asks residents what they want to do with the space. World Economic Forum (Dec. 7, 2020): <https://www.weforum.org/agenda/2020/12/paris-parking-spaces-greenery-cities/>

7 O’Sullivan, F. Barcelona Will Supersize its Car-Free ‘Superblocks’. CityLab (Nov. 11, 2020): <https://www.bloomberg.com/news/articles/2020-11-11/barcelona-s-new-car-free-superblock-will-be-big>



Figure 4. Reallocating Street Space During the Pandemic

Many cities have responded to the COVID-19 crisis by creating more space for people outside. Which of the following, if any, have you implemented in your community? Do you anticipate any of these changes becoming permanent?



Taken together, these findings suggest the majority of American mayors have not embraced the pandemic as an opportunity to fundamentally reimagine how they allocate space in the public realm, particularly roadways. Their relatively modest ambitions run counter to results from prior surveys. In 2018, mayors told us that they believe traffic crashes are the public health issue for which they're held most accountable, providing motivation to create safer streets.⁸ And in the 2019 Menino Survey of Mayors, 76 percent of mayors believed that their cities were too oriented towards cars and 71 percent favored giving up parking and driving lanes to create new bike lanes.⁹ This awareness of the need to reform urban streets makes the lack of transformative change during 2020 all the more surprising.

8 Puig, L.G., K. Lusk, and M. Wang. Mayors and the Health of Cities. Boston University Initiative on Cities: <https://www.surveymayors.com/reports/Mayors-and-the-Health-of-Cities-Report.pdf>

9 Einstein, K.L., D. Glick, M. Palmer, and S. Fox. 2019 Menino Survey of Mayors. Boston University Initiative on Cities: <https://www.surveymayors.com/reports/Menino-Survey-of-Mayors-2019-Final-Report.pdf>

**NEW YORK, NY
AND
OAKLAND, CA**

RECLAIMING THE PUBLIC REALM: STREETS FOR PEOPLE

In 2020, an urgent need to spread out in the outdoors led cities to accelerate a range of public realm projects. In October 2020, after eight months of temporary closure to vehicles, New York City's Department of Transportation¹⁰ permanently designated more than a mile of 34th Avenue in Queens as a pedestrian promenade¹¹. While the city was already making pedestrian-friendly upgrades to the surrounding Jackson Heights neighborhood, emerging needs related to the global pandemic and significant grassroots advocacy accelerated the process.¹² New York continues to work with community groups, elected officials, local schools and others on a long-term plan for making the street a public space that accommodates walking, running, bike riding, community gardens, street festivals, public gatherings, and other uses.¹³

On the other side of the country, Oakland, California, launched a Slow Streets initiative in April 2020 to encourage mixed-use areas where pedestrians, rather than cars, have priority. Since the beginning of the global pandemic, the city gradually closed off more than 20 miles of streets to all but local traffic to encourage safe physical activity and alleviate overcrowding in parks and on trails. Oakland also took a deeper look into these tactical interventions in efforts to pivot to a more equitable approach to open streets. Soon after, the city built on the well-received initiative with additional improvements to intersections that secured safe, pedestrian-friendly access to essential services such as grocery stores and COVID-19 test sites.¹⁴



Photo: John Reinhardt / Shutterstock.com

Queens neighborhood, New York, NY



Photo: www.oaklandca.gov/projects/oakland-slow-streets

West St 19th St Family, Oakland, CA

Oakland relies on regular feedback from community members to evolve these initiatives to best support continued physical distancing and the mental and physical health of residents. At the beginning of 2021, that included plans for creating pop-up, request-based local street closures to build on success realized during the initiative's first year.

10 Streetsies 2020: The Year's Best Transportation News. StreetsBlog NYC (Dec 29, 2020):

<https://nyc.streetsblog.org/2020/12/29/streetsies-2020-the-years-best-transportation-news/>

11 Open Street for 34th Ave. to be permanent. Queens Chronicle (Oct 29, 2020): https://www.qchron.com/editions/queenswide/open-street-for-34th-ave-to-be-permanent/article_74d386f8-8d03-5a1c-b37f-43b9d02aa2f8.html

12 How New Yorkers Want to Change the Streetscape for Good. The New York Times (Dec 18, 2020): <https://www.nytimes.com/interactive/2020/12/17/nyregion/nyc-open-streets.html>

13 DOT to Develop 'Long-Term' Plan for 34th Avenue Open Street in Jackson Heights. Jackson Heights Post (Oct 23, 2020): <https://jacksonheightspost.com/dot-to-develop-long-term-plan-for-34th-avenue-open-street-in-jackson-heights>

14 Oakland Slow Streets. City of Oakland: <https://www.oaklandca.gov/projects/oakland-slow-streets>



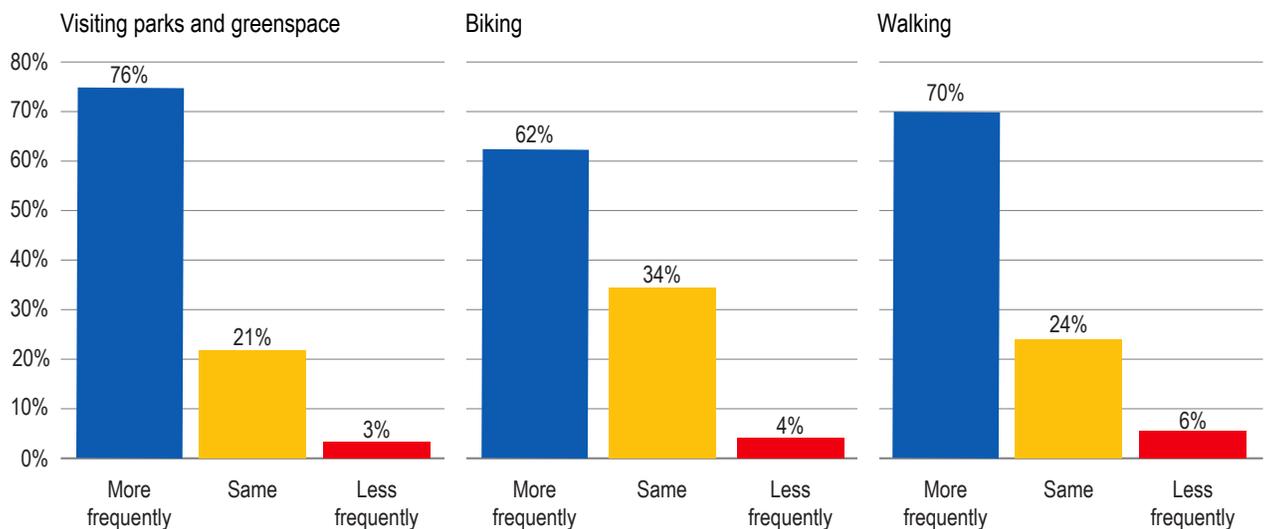
POST-COVID: CHANGES TO RESIDENT BEHAVIOR

When it comes to resident behavior, mayors anticipate a “new normal” even after a vaccine is available. Three out of every four mayors expect residents to spend more time visiting parks and greenspace than they did before the pandemic, and roughly two-thirds expect residents will spend more time biking or walking. Interestingly, mayors in Northeast cities were most likely to expect their residents will increase parks visitation (84 percent), walking (84 percent), cycling (74 percent).

If these expectations hold, equitable investment in parks and open spaces will become even more critical as a foundation for an inclusive city.

Figure 5. Resident Behavior Post-COVID

Once an effective vaccine is available, do you believe that residents in your city will be doing the following with more, less, or the same frequency than they were just before COVID-19:





CAMDEN, NJ

DEMANDING INCLUSIVE AND EMPOWERING COMMUNITY ENGAGEMENT

Most cities engage local communities in plans for parks, neighborhoods, and streets, and in order to qualify for related state and federal funds. Mayors, city councilors, and other elected officials also benefit from giving a voice to their constituents on matters that hit close to home.



Cooper's Poynt Park, Camden, NJ

Both photos: © The Trust for Public Land

In the weeks and months since the global pandemic took hold, cities around the country had to tap into new ways of engaging and supporting local residents. While conducting public meetings remotely represented an option, this approach is inconvenient for some who have limited technology or are juggling jobs and childcare. In response, some cities paved the way with creative solutions to planning for public spaces that engage and meet the needs of local communities.

In Camden, New Jersey, the global pandemic accelerated efforts by city leaders to engage community members in determining why only 70 percent of the population takes advantage of parks and greenspaces when 97 percent of city residents live within a 10-minute walk of these spaces. Prior to the global pandemic, this took place through face-to-face events like listening sessions with Camden students conducted by the Aspen Institute's State of Play. Throughout 2020, city officials also worked with the Cooper's Ferry Partnership to survey more than 500 residents online and

via virtual meetings. The outreach revealed that while residents believe parks are key to social cohesion in their community, they are reluctant to visit some parks due to poor equipment and fields, safety concerns, deficient programming, and confusion about park locations and operating hours.¹⁵

"Recognizing that parks are an effective tool only if they are well used and cared for by the community, this plan endeavors to understand what Camden residents need in their parks and how to encourage greater use, informed by a robust community engagement effort."

— THE CAMDEN PARKS AND OPEN SPACE PLAN 2020

In response, the city is seeking \$25 million in public and private funds over five years to improve park maintenance and safety. Once secured, the city will use the funds to build on efforts that give communities a sense of ownership in their parks. Camden's Lanning Square neighborhood offers one such example, where establishing a resident's association led to notable improvements in Washington Park's upkeep, visitation, and safety. The city also intends to put new systems in place for sharing information about parks with local communities in the form of a citywide calendar, annual parks guide or seasonal email blasts as part of a long-term goal to integrate city parks into the daily lives of all Camden residents by 2050.¹⁶



Cooper's Poynt Park, Camden, NJ

¹⁵ COVID-19 showed the importance of green spaces. Camden wants all residents to have easy park access by 2050. WHYY (Dec 27, 2020): <https://whyy.org/articles/covid-19-showed-the-importance-of-green-spaces-camden-wants-all-residents-to-have-easy-park-access-by-2050/>

¹⁶ The Camden Parks and Open Space Plan. The Trust For Public Land and Cooper's Ferry Partnership (2020): https://coopersferry.com/storage/app/media/uploaded-files/111720_Camden%20Parks%20Plan_Final.pdf



LOOKING AHEAD: TRANSFORMATIVE CHANGE OR MODEST GOALS?

Against the backdrop of the pandemic and public protests against police violence, we asked mayors what citywide change — if any — they would most like to see in their city’s parks and public spaces. Fifty-seven percent of mayors shared new or pressing citywide priorities, though a sizeable number noted they were happy with the status quo. Half of responding “change” mayors want improvements to their parks, specifically, with desired changes ranging from capital improvements, the construction of new parks or parklets, or improved programming to existing spaces. One Southern mayor noted: *“I want our neighborhood parks to be activated, especially in underserved communities. It’s nice to have a waterfront park, but not everyone can get there. People don’t feel like those parks are accessible to them for normal park activities.”*

One in five mayors explicitly related their priorities to COVID and/or the related impact on parks usage. For some, the pandemic created a new sense of urgency in supporting park improvements. A mayor of a northeast city reinforced this point, sharing that: *“the pandemic has made the availability of parks and public space even more*

important than it was before. Definitely heightened it. I want to get that new downtown park done [that has been postponed] and also want to retain the new outdoor dining spaces.”

However, many mayors shared park priorities that preceded 2020 events. As one Southern mayor commented: *“nothing from COVID or protests has altered my thinking on parks, but I also don’t want it to stay the same. [We are] already trying to improve our park system — implementing a masterplan that is focused on being more child- and senior-friendly, trying for 10-minute walk parks.”*

“A quarter of mayors pursuing changes were more focused on the public realm beyond parks, including streets and bike infrastructure. Some of these mayors, as mentioned earlier, sought a re-appropriation of street space to favor pedestrians and cyclists over cars...”

A quarter of mayors pursuing changes were more focused on the public realm beyond parks, including streets and bike infrastructure. Some of these mayors, as mentioned earlier, sought a re-appropriation of street space to favor pedestrians and cyclists over cars, or as one Midwest mayor phrased it: *“returning the public right of way to people.”*

An East Coast mayor, like many of his peers, shared that change was already underway, as the voters had approved a new bond to pay for parks investments as part of a citywide master plan. He, like roughly 20 percent of respondents, is making equity-oriented investments, noting: *“The masterplan has an equity standard. The goal is to ensure parks within a 10-minute walk of all residents, but first prioritize renovations in lowest income neighborhoods.”* Another mayor called for *“more parks and recreation facilities in the poorest parts of city [...] I threatened to veto the whole parks and rec budget unless the disparity was addressed.”*

Finally, 13 percent of mayors were invested in changes to better protect and support protests. Changes ranged from improving road safety, as with one mayor who said: *“We need to be more cognizant of vulnerability to protesters to vehicular traffic. [We’re] working to create policy for when we have large demonstrations, we put up barriers to protect protesters from vehicles.”* Another thoughtfully remarked on the need to create spaces that actually allowed for more effective discourse, sharing: *“We want to focus on enhancing public discussion to support people and create space for good dialogue. [That means] investing in decent speakers so people don’t have to use a bullhorn, better lighting, larger safe spaces — it changes the behavior of the crowd.”*



**CLEVELAND, OH
AND
MINNEAPOLIS, MN**

INTENTIONALLY (RE)DESIGNING FOR EQUITY

Not everyone has equal access to high quality parks and nature. Researchers at The Trust for Public Land have analyzed park access nationwide, finding that nearly one in three US residents — more than 100 million people, including 28 million kids — do not have a park within a 10-minute walk of home.¹⁷ In addition, parks serving primarily people of color are half the size and serve five times more people than parks in predominantly white neighborhoods.¹⁸

In response, several cities around the country are focused on providing equitable access to safe, high quality parks for communities historically denied these amenities.



Both photos: © The Trust for Public Land

Mask4Community event, Cleveland, OH

In Cleveland, research and mapping identified five neighborhoods where building new parks or improving access to existing parks would reach the greatest amount of new park users in underserved communities that have not benefited from prior park investments. Targeted neighborhoods include Clark Fulton, where the city would design programming and amenities to attract the interest of Eastern European, African American and Hispanic residents, and Union Miles where a safe and high quality park would help to reverse decades of disinvestment that resulted in large areas of vacant land.

According to The Trust for Public Land, investing in parks and greenspaces within the five neighborhoods would reach an additional 10,600 individuals, including 2,850 children, who do not currently have easy access to a park. Investing in parks and greenspaces in these neighborhoods would produce an estimated \$10.1 million in economic benefits over 10 years.¹⁹

The Minneapolis Park and Recreation Board's definition of racial equity:

"When race is no longer a predictor of access to parks and recreation, health, well-being, and quality of life."



Towerside, Minneapolis, MN

Farther north, the Minneapolis Park and Recreation Board (MRPB) operates under an equity ordinance — the first of its kind in the nation — established to ensure equitable distribution of capital and rehabilitation funding for parks and greenspaces among all of the city's 87 neighborhoods. The city works to achieve this through its 20-Year Neighborhood Park Plan (NPP20),²⁰ which includes seven quantifiable criteria for racial and economic equity²¹ to ensure that the city invests in the parks and communities with the greatest need, based on:

- areas of concentrated poverty and/or with 50 percent or more people of color
- population density
- youth population
- crime statistics
- condition of park assets
- lifespan of park assets
- comparison of the capital investment over the previous 15 years with the total cost to replace all park assets

The city reviews these criteria annually to address unintended consequences of NPP20-related ordinances and adapt to changes in neighborhoods and in parks due to shifting demographics and economics.

17 The Trust for Public Land ParkScore® Index. The Trust For Public Land: <https://www.tpl.org/parkscore>

18 Parks Serving Majority Nonwhite Neighborhoods are Disproportionately Smaller and More Crowded, New Data Shows. The Trust For Public Land (August 5, 2020): <https://www.tpl.org/media-room/parks-serving-majority-nonwhite-neighborhoods-are-disproportionately-smaller-and-more>

19 Report: Advancing Park Equity in Cleveland. The Trust For Public Land: <https://www.tpl.org/our-work/advancing-park-equity-cleveland>

20 Report: 20-Year Neighborhood Park Plan (NPP20). Minneapolis Park and Recreation Board: https://www.minneapolisparcs.org/about_us/budget_financial/20-year_neighborhood_park_plan/

21 2021 MPRB Racial Equity Action Plan. Minneapolis Park and Recreation Board (January 2021): <https://www.minneapolisparcs.org/wp-content/uploads/2021/01/MPRB-Racial-Equity-Action-Plan-January-2021.pdf>

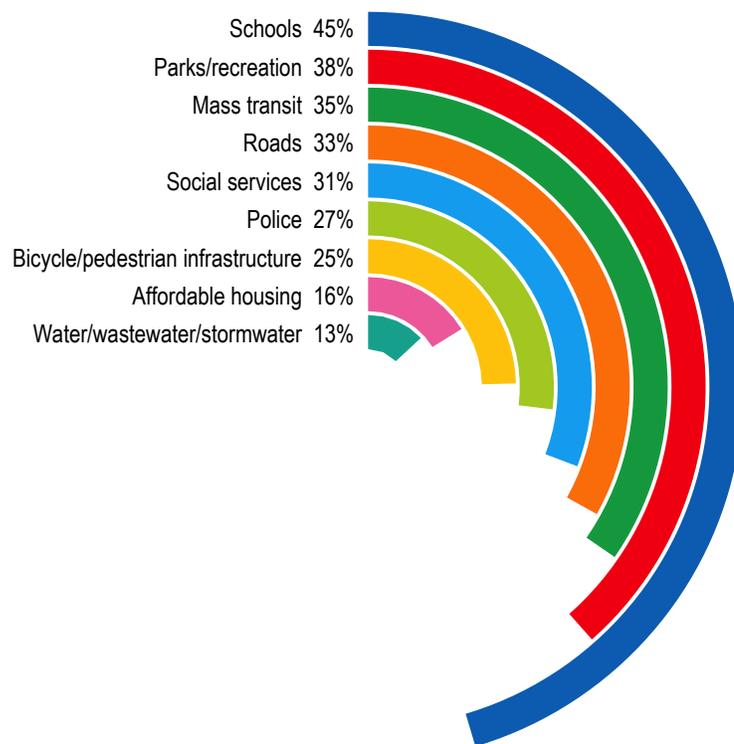


PARKS SPENDING: WHAT'S AT STAKE

Mayors are experiencing adverse fiscal consequences of the pandemic, while also taking on new responsibilities without new federal resources. In December 2020, prior to the passage of the American Rescue Plan Act of 2021, the National League of Cities reported that cities and towns had seen revenues decline by 21 percent since the beginning of the pandemic, while expenditures have increased by 17 percent as a result of COVID-19.²² We asked mayors where they anticipate “dramatic” financial cuts to local services. Parks was the second most frequently mentioned, cited by just over a third of mayors and second only to schools (Figure 6). To put spending categories in perspective — on average, big cities spent about \$250 per resident on parks and recreation and natural resources in 2017. That same year, elementary and secondary education investments averaged \$1,930 per resident, and police expenditures averaged \$410.²³ Anticipated cuts to parks spending often affect already modest budgets.

Figure 6. Dramatic Budget Cuts

In which of the following areas, if any, do you expect to make or see dramatic financial cuts in your community? Check all that apply.



Mayors were also asked about a project or initiative they were planning for the next year or two that they were now unable to pursue. Most talked generally about delayed capital investments (e.g., roads, bridges, and city buildings). Just 11 of the 130 interviewed specifically referenced park-related projects or new funding streams for parks that are now delayed. A few also referenced delays to improvements to or development of new recreation centers. Together, these findings suggest cuts will come in the form of operating budgets rather than specific priority projects.

²² National League of Cities. New Survey Data Quantifies Pandemic’s Impact on Cities: Municipal Revenues Down Twenty-One Percent While Expenses Increase Seventeen Percent (Dec. 1, 2020): <https://www.nlc.org/post/2020/12/01/new-survey-data-quantifies-pandemics-impact-on-cities-municipal-revenues-down-twenty-one-percent-while-expenses-increase-seventeen-percent/>

²³ Lincoln Institute of Land Policy Fiscally Standardized Cities; Averages reflect combined operating and capital expenditures for 150 big US cities in 2017, and include all local spending inclusive of municipal governments, special districts and/or counties to allow for standardization.

**AUSTIN, TX
AND
HOUSTON, TX**

MARSHALLING NEW RESOURCES FOR CITYWIDE TRANSFORMATION

While city governments have limited ability to enact policies that redistribute wealth, they can play a key role in advocating for investments in city services that benefit every resident, regardless of income. In November 2020, in the midst of the global pandemic, 67 percent of Austin, Texas voters approved Prop B, a \$460 million bond aimed at investing in a world-class city for walking, bicycling and moving around in ways that are safe, comfortable and accessible for all.²⁴ Specifically, the bond moves Austin towards its goal of building out 80 percent of a bicycle system that serves people of all ages and abilities by 2025. The bond also provides funding for constructing or repairing approximately 100 miles of sidewalks, advances mobility equity with multimodal improvements to streets in the eastern crescent of the city, and supports investments in urban trails.²⁵



Pedestrian and Bicycle Bridge, Austin, TX

Down the road in Houston, the Office of the Mayor, Houston Parks and Recreation Department, Greater Houston Partnership, and Houston Parks Board are challenging 50 companies to designate monetary contributions, in-kind support, ideas, and volunteer hours towards improvements at 50 of Houston's neighborhood parks as part of the city's Bayou Greenways 2020 initiative.²⁶



Aerial view of Buffalo Bayou Park, Houston, TX

Funded by a combination of city and privately raised funds, Bayou Greenways 2020 formally launched in 2012 following a \$100 million bond referendum approved by voters and a \$50 million catalyst gift from the Kinder Foundation. Today, Bayou Greenways 2020 has garnered \$220 million in support as it closes in on its goal of providing 150 miles of accessible, connected greenways — and 3,000 acres of new public greenspace — located within 1.5 miles of 60 percent of Houston's population.²⁷

While access to nature has been a key driver of Bayou Greenways 2020, other driving factors for this initiative include pursuing more equitable opportunities for economic investment, flood control, and connecting diverse neighborhoods in ways that no longer require a car-centric lifestyle.

24 Prop B walks, rolls, rides to victory. Austin Monitor (Nov 5, 2020):

<https://www.austinmonitor.com/stories/2020/11/prop-b-walks-rolls-rides-to-victory/>

25 Here's what \$460M for a safe mobility bond--Prop B--will get for Austin. Austin Outside. (August 20, 2020): <https://www.austinoutside.org/blog/proposition-b-a-460m-safe-mobility-bond-to-go-on-the-austin-november-ballot>; Story Map: All Ages and Abilities Bicycle Network. ESRI: <https://www.arcgis.com/apps/MapJournal/index.html?appid=dba125033d42453491b36ea5fb935eea>

26 Parks Make Houston Whole. Houston Parks Board: <https://houstonparksboard.org/>

27 Bayou Greenways 2020 Linking Parks, Adding Trails, Transforming Underused Land By Houston Waterways. Forbes (May 30, 2019): <https://www.forbes.com/sites/cynthialescalleet/2019/05/30/bayou-greenways-2020-linking-parks-adding-trails-transforming-underused-land-by-houston-waterways/?sh=494c8ae5e785>



CONCLUSION

This has, in many ways, been the year that parks and open space proved their value, if it was ever in question. In the midst of a pandemic unprecedented in modern memory, they offered sanctuary and solace to millions across the country and around the world, and provided forums to protest racial injustice throughout the US. But, more remains to be done to create public spaces that are welcoming, accessible and safe to all residents, and that promote both human and ecological health. Our interviews with mayors revealed many who are already advocates for high quality greenspace in every neighborhood, and many more who have not yet realized that these are true legacy investments. We also heard from relatively few mayors who sought to permanently reclaim streets for new human-centered, multi-generational uses. As the country emerges from this winter, perhaps mayors — and their constituents — will look to the public realm with fresh eyes and ideas.



METHODOLOGY

The 2020 Menino Survey of Mayors uses a combination of open- and closed-ended questions to explore a myriad of salient local issues and policy priorities. This year, 130 mayors discussed everything from COVID-19 recovery and implications, to policing and protests, to parks and greenspace, to the 2020 Census. [For all related reports on the 2020 Menino Survey findings, please visit surveyofmayors.com.]

To generate a systematic sample, we invited all mayors of cities with 75,000 or more residents to participate. Each mayor received an email invitation from the Boston University Menino Survey of Mayors team at their official email account, and follow-up phone calls. The vast majority of interviews were conducted over the phone. This systematic sampling and recruitment effort yielded a representative sample of mayors of American cities with populations over 75,000. Table 1 compares the demographics of participating cities to all cities with over 75,000 residents.

Table 1. Demographic Comparison of Sample Cities to All U.S. Cities with Populations >75,000

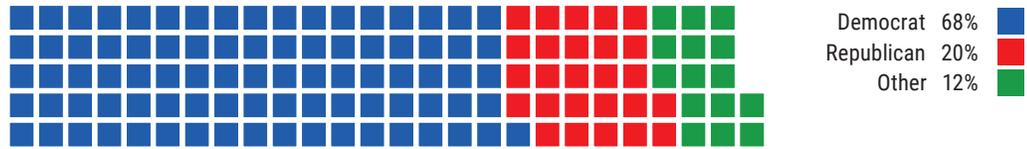
	Surveyed Cities	All Cities
Number of Cities	130	489
Average Population	215,619	223,815
Average Percent White	51%	49%
Average Percent Black	16%	14%
Average Percent Hispanic	22%	25%
Average Median Housing Price	\$273,673	\$295,960
Region	% of Sample	% of Cities
Midwest	20%	16%
Northeast	15%	9%
South	32%	34%
West	33%	40%

Source: 2018 American Community Survey (ACS), published by the US Census Bureau.

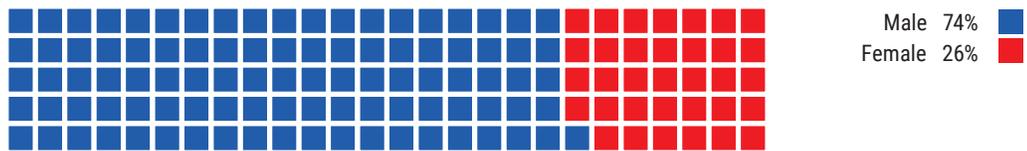


Figure 7. Demographics of Surveyed Mayors

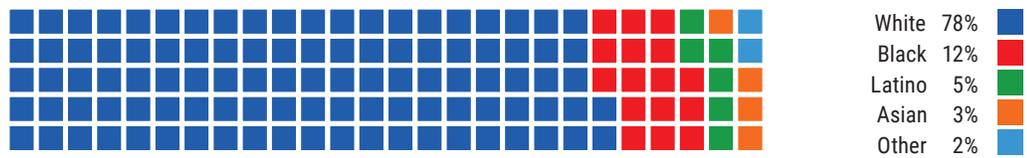
Party



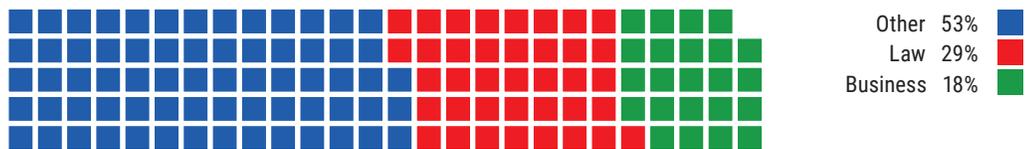
Gender



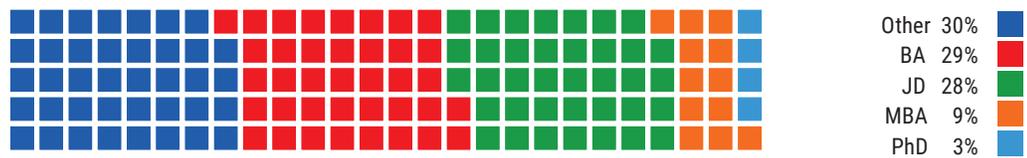
Race



Professional Background



Highest Degree





COMPARING ALL CITIES IN THE US WITH A POPULATION OVER 75,000 AND THE 2020 MENINO SURVEY SAMPLE (N=130 CITIES)

We performed an additional robustness check to examine the extent to which our sample is representative of cities in the US with populations over 75,000 residents by comparing parks access metrics. Table 2 displays the average access for each metric in cities of the 2020 Menino Survey sample with the 489 cities that exceed our population threshold, indicating that our sample is representative of US cities with respect to parks access.

Table 2. Robustness Check: Comparing 489 Cities vs. 2020 Menino Survey Sample

10 Minute Park Access Metric	All Cities with Population>75,000 (N=489)	2020 Menino Survey Sample (N=130)
All Residents	60%	64%
White Residents	59%	63%
Black Residents	61%	66%
Hispanic Residents	61%	65%
Native American residents	61%	66%
Asian residents	57%	60%
Pacific Islander residents	60%	64%
Children	60%	64%
Adults	60%	64%
Seniors	59%	63%
Low Income	62%	67%
Moderate Income	60%	64%
High Income	57%	61%



REFERENCES

- Abercrombie, L.C., Sallis, J.F., Conway, T.L., Frank, L.D., Saelens, B.E. and Chapman, J.E., 2008. Income and racial disparities in access to public parks and private recreation facilities. *American journal of preventive medicine*, 34(1), pp.9-15.
- Anguelovski, I., 2016. From toxic sites to parks as (green) LULUs? New challenges of inequity, privilege, gentrification, and exclusion for urban environmental justice. *Journal of Planning Literature*, 31(1), pp.23-36.
- Bedimo-Rung, A.L., Mowen, A.J. and Cohen, D.A., 2005. The significance of parks to physical activity and public health: a conceptual model. *American journal of preventive medicine*, 28(2), pp.159-168.
- Biddle, S.J. and Asare, M., 2011. Physical activity and mental health in children and adolescents: a review of reviews. *British journal of sports medicine*, 45(11), pp.886-895.
- Boone, C.G., Buckley, G.L., Grove, J.M. and Sister, C., 2009. Parks and people: An environmental justice inquiry in Baltimore, Maryland. *Annals of the Association of American Geographers*, 99(4), pp.767-787.
- Bouchard, C., Blair, S.N. and Haskell, W.L., 2012. Physical activity and health. *Human Kinetics*.
- Branas C.C., Cheney R.A., Macdonald J.M., Tam V.W., Jackson T.D., Have T.R.T. A Difference-in-Differences Analysis of Health, Safety, and Greening Vacant Urban Space. *American Journal of Epidemiology*. 2011;174:1296-1306.
- Branas C.C., Kondo M.C., Murphy S.M., South E.C., Polsky D., MacDonald J.M. Urban Blight Remediation as a Cost-Beneficial Solution to Firearm Violence. *American Journal of Public Health*. 2016;106:2158-2164.
- Branas C.C., South E., Kondo M.C., Hohl B.C., Bourgois P., Wiebe D.J., Macdonald J.M. Citywide Cluster Randomized Trial to Restore Blighted Vacant Land and Its Effects on Violence, Crime, and Fear. Proceedings of the National Academy of Sciences, USA. 2018;115:2946-2951.
- Brooks, S.K., Webster, R.K., Smith, L.E., Woodland, L., Wessely, S., Greenberg, N. and Rubin, G.J., 2020. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*.
- Byrne, J., 2012. When green is White: The cultural politics of race, nature and social exclusion in a Los Angeles urban national park. *Geoforum*, 43(3), pp.595-611.
- Cutts, B., Darby, K. Boone, C. Brewis, A., 2009. City structure, obesity, and environmental justice: An integrated analysis of physical and social barriers to walkable streets and park access. *Social Science & Medicine*, 69 (9), pp. 1314-1322.
- Das, KV, Fan Y, French SA., 2017. Park-Use Behavior and Perceptions by Race, Hispanic Origin, and Immigrant Status in Minneapolis, MN: Implications on Park Strategies for Addressing Health Disparities. *Journal of Immigrant and Minority Health*. 19(2), pp 318-327.
- David, C. and Aljabar, L., 2017, November. Benefits of green infrastructure for heat mitigation and emissions reductions in cities. In APHA 2017 Annual Meeting & Expo (Nov. 4-Nov. 8). American Public Health Association.
- Eliasson, I. and Upmanis, H., 2000. Nocturnal airflow from urban parks-implications for city ventilation. *Theoretical and Applied Climatology*, 66(1-2), pp.95-107.
- Engelberg JK, Conway TL, Geremia C, Cain KL, Saelens BE, Glanz K, Frank LD, Sallis JF. Socioeconomic and race/ethnic disparities in observed park quality. *BMC Public Health*. 2016 May 12;16:395. doi: 10.1186/s12889-016-3055-4. PMID: 27176854; PMCID: PMC4866396.
- Evenson, K., O. Sarmiento, M.L. Macon, K. Tawney, and A. Ammerman. 2008. "Environmental, Policy, and Cultural Factors Related to Physical Activity Among Latina Immigrants." *Women & Health*, vol. 36(2), pgs. 43-57.
- Freeman, S. and Eykelbosh, A., 2020. COVID-19 and outdoor safety: Considerations for use of outdoor recreational spaces. National Collaborating Centre for Environmental Health.
- Godbey, G. and Blazey, M., 1983. Old people in urban parks: An exploratory investigation. *Journal of leisure research*, 15(3), pp.229-244.
- Goldsmith, J., 1994. Designing for diversity. *National Parks*, 68(5-6), pp.20-21.



- Gould, K.A. and Lewis, T.L., 2016. Green gentrification: Urban sustainability and the struggle for environmental justice. *Routledge*.
- Groff, E. and McCord, E.S., 2012. The role of neighborhood parks as crime generators. *Security journal*, 25(1), pp.1-24.
- Hull IV, R.B. and Michael, S.E., 1995. Nature-based recreation, mood change, and stress restoration. *Leisure Sciences*, 17(1), pp.1-14.
- Kaczynski, A.T. and Henderson, K.A., 2007. Environmental correlates of physical activity: a review of evidence about parks and recreation. *Leisure Sciences*, 29(4), pp.315-354.
- Kleinschroth, F. and Kowarik, I., 2020. COVID-19 crisis demonstrates the urgent need for urban greenspaces. *Frontiers in Ecology and the Environment*, 18(6), p.318.
- Jay, J., Bor, J., Nsoesie, E.O., Lipson, S.K., Jones, D.K., Galea, S. and Raifman, J., 2020. Neighbourhood income and physical distancing during the COVID-19 pandemic in the United States. *Nature human behaviour*, pp.1-9.
- Landers, D.M. and S.M. Arent, 2007. Physical activity and mental health. In G. Tenenbaum and R.C. Eklund (Eds.), *Handbook of Sport Psychology* (pgs. 469-491.) John Wiley & Sons, Inc.
- Lopez, B., C. Kennedy and T. McPhearson, 2020. Parks are Critical Urban Infrastructure: Perception and Use of Urban Green Spaces in NYC During COVID-19. Preprints.
- Manley, A.F., 1996. Physical activity and health: A report of the Surgeon General. Diane Publishing.
- Nowak, D.J., 2006. Institutionalizing urban forestry as a “biotechnology” to improve environmental quality. *Urban Forestry & Urban Greening*, 5(2), pp.93-100.
- Nowak, D.J., Crane, D.E. and Stevens, J.C., 2006. Air pollution removal by urban trees and shrubs in the United States. *Urban Forestry & Urban Greening*, 4(3-4), pp.115-123.
- Orsega-Smith, E., Mowen, A.J., Payne, L.L. and Godbey, G., 2004. The interaction of stress and park use on psycho-physiological health in older adults. *Journal of Leisure Research*, 36(2), pp.232-256.
- Paluska, S.A. and Schwenk, T.L., 2000. Physical activity and mental health. *Sports medicine*, 29(3), pp.167-180.
- Papas, M.A., Alberg, A.J., Ewing, R., Helzlsouer, K.J., Gary, T.L. and Klassen, A.C., 2007. The built environment and obesity. *Epidemiologic reviews*, 29(1), pp.129-143.
- Payne, L., Orsega-Smith, B., Godbey, G. and Roy, M., 1998. Local parks and the health of older adults. *Parks & Recreation (Ashburn)*, 33(10), pp.64-70.
- Pitkin-Derose, K, T. Marsh, M. Mariscal, S. Pina-Cortez, and D. Cohen. 2014. “Involving Community Stakeholders to Increase Park Use and Physical Activity.” *Preventive Medicine*, vol. 64, pgs. 14-19.
- Ponde, M.P. and Santana, V.S., 2000. Participation in leisure activities: Is it a protective factor for women’s mental health?. *Journal of Leisure Research*, 32(4), pp.457-472.
- Powell, L.M., Slater, S., Chaloupka, F.J. and Harper, D., 2006. Availability of physical activity-related facilities and neighborhood demographic and socioeconomic characteristics: a national study. *American journal of public health*, 96(9), pp.1676-1680.
- Raglin, J.S., 1990. Exercise and mental health. *Sports Medicine*, 9(6), pp.323-329.
- Rundle, A., Field, S., Park, Y., Freeman, L., Weiss, C.C. and Neckerman, K., 2008. Personal and neighborhood socioeconomic status and indices of neighborhood walk-ability predict body mass index in New York City. *Social science & medicine*, 67(12), pp.1951-1958.
- Sallis, J.F., Johnson, M.F., Calfas, K.J., Caparosa, S. and Nichols, J.F., 1997. Assessing perceived physical environmental variables that may influence physical activity. *Research quarterly for exercise and sport*, 68(4), pp.345-351.
- Sallis, J., Bauman, A. and Pratt, M., 1998. Environmental and policy interventions to promote physical activity. *American journal of preventive medicine*, 15(4), pp.379-397.



Sallis JF. and Pratt M, 2020. Physical activity can be helpful in the Coronavirus pandemic. <https://americawalks.org/physicalactivity-can-be-helpful-in-the-coronavirus-pandemic/>.

Schottland, Taj, 2019. Parks as a Solution to Climate Change: Health & Wellness: Parks and Recreation Magazine: NRPA. National Recreation and Park Association (NRPA), www.nrpa.org/parks-recreation-magazine/2019/april/parks-as-a-solution-to-climate-change/.

Shan, Y., Jingping, C., Liping, C., Zhemin, S., Xiaodong, Z., Dan, W. and Wenhua, W., 2007. Effects of vegetation status in urban green spaces on particle removal in a street canyon atmosphere. *Acta Ecologica Sinica*, 27(11), pp.4590-4595.

Slater, S.J., Christiana, R.W. and Gustat, J., 2020. Recommendations for keeping parks and green space accessible for mental and physical health during COVID-19 and other pandemics. *Preventing chronic disease*, 17, p.E59.

Stark, J.H., Neckerman, K., Lovasi, G.S., Quinn, J., Weiss, C.C., Bader, M.D., Konty, K., Harris, T.G. and Rundle, A., 2014. The impact of neighborhood park access and quality on body mass index among adults in New York City. *Preventive Medicine*, 64, pp.63-68.

Ugolini, F., Massetti, L., Calaza-Martínez, P., Cariñanos, P., Dobbs, C., Ostoic, S.K., Marin, A.M., Pearlmutter, D., Saaroni, H., Šaulienė, I. and Simoneti, M., 2020. Effects of the COVID-19 pandemic on the use and perceptions of urban green space: an international exploratory study. *Urban Forestry & Urban Greening*, p.126888.

Wallace, V.K. and Witter, D.J., 1992. Urban nature centers" What do our constituents want and how can we give it to them? *Legacy* 2, pp.20-24.

Wen, M, X. Zhang, C. Harris, J. Holt, and J. Croft. 2013. "Spatial disparities in the distribution of Parks and Green Spaces in the USA." *Annals of Behavioral Medicine*, 45 Suppl 1, S18-27.

Wilbur, J., P. Chandler, B. Dancy, and J. Choi. 2008. "Environmental, Policy, and Cultural Factors Related to Physical Activity in Urban, African American Women." *Women & Health*, vol. 36(2), pgs. 17-28.

World Health Organization, 2004. Global strategy on diet, physical activity and health. <https://www.who.int/publications/i/item/9241592222>

Xie, J., Luo, S., Furuya, K. and Sun, D., 2020. Urban Parks as Green Buffers During the COVID-19 Pandemic. *Sustainability*, 12(17), p.6751.

Zick, T., 2009. *Speech out of doors: Preserving first amendment liberties in public places*. Cambridge University Press.

American Public Health Association (APHA), 2013. Improving health and wellness through access to nature. <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/08/09/18/improving-health-and-wellness-through-access-to-nature> .

Sisson, Patrick, Bloomberg CityLab, 2020. Amid Protest and Pandemic, Urban Parks Show Their Worth. <https://www.bloomberg.com/news/articles/2020-06-04/how-city-parks-can-to-turn-crisis-into-opportunity>.

Shepley, M; Sachs, N; Sadatsafavi, H; Fournier, C; Peditto, K. 2019. "The Impact of Green Space on Violent Crime in Urban Environments: An Evidence Synthesis." *International Journal of Environmental Research and Public Health* 16, no. 24: 5119

The National Parks Conservation Association (NPCA), 2020. Lands of Protest. <https://www.npca.org/articles/2675-lands-of-protest>.

The Trust for Public Land (TPL), 2020. A Trust for Public Land Special Report: Parks and the Pandemic. <https://www.tpl.org/sites/default/files/Parks%20and%20Pandemic%20-%20TPL%20special%20report.pdf>

The Trust for Public Land (TPL), 2020. Statement by the Trust for Public Land on Protests in Public Parks. <https://www.tpl.org/media-room/statement-trust-public-land-protests-public-parks>.

The Trust for Public Land (TPL), 2020. A Trust for Public Land Special Report: The Heat is On. https://www.tpl.org/sites/default/files/The-Heat-is-on_A-Trust-for-Public-Land_special-report.pdf

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