



City of Raleigh  
**Dog Park  
Study**  
January 2019



# City of Raleigh Dog Park Study

## City of Raleigh Mayor and City Council

Nancy McFarlane, Mayor  
Russ Stephenson, At Large  
Nicole Stewart, At Large  
Richard A. "Dickie" Thompson, District A  
David N. Cox, District B  
Corey D. Branch, District C  
Kay Crowder, District D  
Stef Mendell, District E

## Parks, Recreation and Greenway Advisory Board

Patrick Buffkin  
Christopher Dillon  
Kendall Harris  
Dexter Hebert  
Jennifer Hoverstad  
Brad Johnson  
Carol Love  
Clodagh Lyons-Bastian  
Shane Mellin  
David Millsaps  
Marsha Presnell-Jennette  
Amy Simes  
Dave Toms  
Charles Townsend  
Jennifer Wagner

## Special Thanks

Downtown Raleigh Alliance  
SPCA of Wake County  
Wake County Animal Services  
Trust for Public Land  
National Recreation and Park Association  
North Carolina Recreation & Park Association  
Dorothea Dix Park Planning Team  
Randolph Johnson, Special Events Crew Supervisor

## City of Raleigh Staff

Diane Sauer, Director  
Scott Payne, Assistant Director  
Stephen Bentley, Assistant Director  
Ken Hisler, Assistant Director  
Sally Thigpen, Assistant Director  
Shawsheen Baker, Capital Projects Administrator  
Billy Aubut, Recreation Division Superintendent  
Mark Elmore, Park Manager  
Amanda Fletcher, Moore Square Assistant Director  
Brian Johnson, Parks Division Superintendent  
Jason Kiser, Park Manager  
Grayson Maughan, Dix Park Senior Planner  
Paul Busacca, Park Planner  
Laura Kordulewski, Park Planning Specialist  
Allison Evans, Urban Designer  
Carter Pettibone, Senior Urban Designer  
Dhanya Sandeep, Senior Urban Designer  
Tracey Alford, Animal Control Supervisor

## Prepared By

TJ McCourt, Planning Supervisor  
Emma Liles, Park Planner



## INTRODUCTION .....1

Purpose .....	3
Executive Summary .....	4
Infographic .....	5
Planning Methodology .....	6
System Plan Survey .....	8
2018 Dog Park Study Project Timeline .....	10
Public Participation Strategy .....	12

## INPUT & ANALYSIS ..... 15

Dog Park Inventory .....	18
Benchmarking .....	22
Public Input Summary .....	26
Spatial Data Analysis .....	34
Summary of Findings .....	40

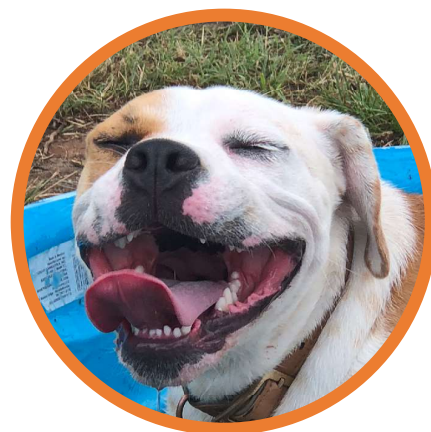
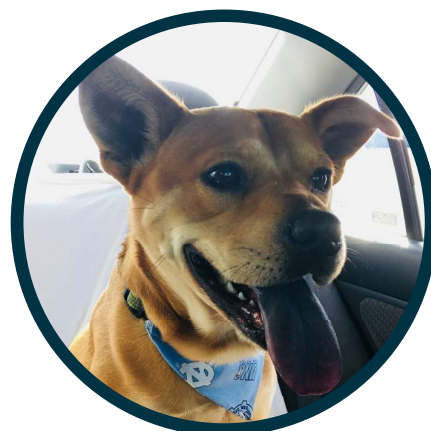
## RECOMMENDATIONS ..... 43

Key Issue # 1: Dog Park Access .....	46
Key Issue # 2: Dog Park Policy .....	52
Key Issue # 3: Dog Park Design .....	58
Key Issue # 4: Dog Parks Downtown .....	62
Key Issue # 5: Dog Park Stewardship .....	70
Implementation Strategies .....	78

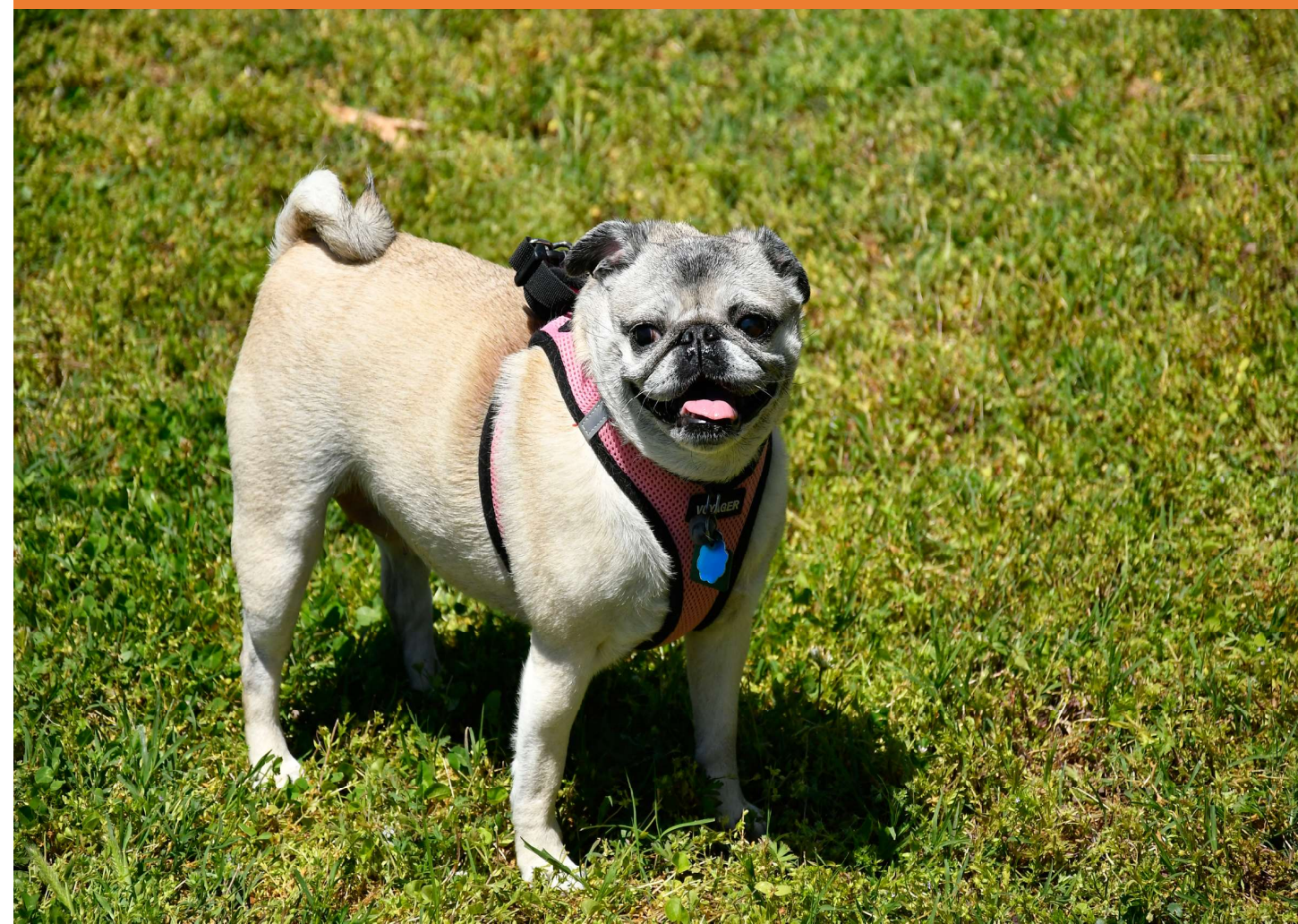
## APPENDICES ..... 85

Appendix A: References and Resources .....	88
Appendix B: System Plan .....	90
Appendix C: Community Survey Results .....	97
Appendix D: Downtown Analysis .....	104
Appendix E: ESRI Community Analyst .....	107
Appendix F: FAQ .....	120
Appendix G: Dog Park Design Guidelines .....	122
Appendix H: Pop-Up Dog Park Handbook .....	129
Appendix I: Planned Dog Park Inventory .....	134





# Introduction





“I LOVE THE DOG PARKS IN RALEIGH, AND  
THINK IT WOULD BE GREAT TO FIND NEW AND  
INNOVATIVE WAYS TO CREATE MORE  
DOG-FRIENDLY SPACES ACROSS THE CITY!”

- JULIE T.

## PURPOSE

The 2018 Dog Park Study was a comprehensive citywide planning effort to guide the long-term planning, design, delivery, operation, and maintenance of public dog park facilities throughout the City of Raleigh.

This effort was called for as an Action Item in the 2014 Parks, Recreation and Cultural Resources System Plan (Parks: Goal 2, Objective A.5), which recognized dog parks as an important park use with an unmet need through the community needs assessment.

This report summarizes the 2018 City of Raleigh Dog Park Study planning process and presents some of the key issues that were raised during the 9-month citywide public engagement effort. The recommendations in this report reflect community priorities as identified by over 1200 participants in the public planning process, input from a diverse set of stakeholders and City staff, and a comprehensive evaluation of dog park access in Raleigh as compared with trends in other communities throughout the nation.

Full implementation of these recommendations will position Raleigh’s park system to meet the needs of a growing and urbanizing population. This report outlines a prioritized, cost-effective, and multifaceted approach to meeting the need for dog parks, and recommends using a combination of programming, temporary installations, and permanent construction to deliver dog park access throughout the City.



EXECUTIVE SUMMARY

Dog parks are among the fastest growing park amenities in the nation. According to the Trust for Public Land’s 2018 City Park Facts report, the number of public dog parks in the 100 largest U.S. cities has increased by 40% in the past ten years.<sup>1</sup> Many public park agencies now have citywide dog park plans or adopted design standards that govern the creation, ongoing maintenance, and operations of dog parks. This Dog Park Study Report is intended to serve that purpose for the City of Raleigh.

Raleigh has experienced many of the same social and demographic trends that are driving dog park demand throughout the country. In rapidly urbanizing areas where growing numbers of people are choosing to live in apartments and townhomes with limited access to private yards, dog-owners increasingly rely on public open space to walk, exercise, and socialize with their canine companions. In Raleigh, over half of all residents live in multifamily or attached housing, and more than 60% of all new residential units built since 2010 have been apartments.<sup>2</sup> These trends have contributed to an increase in the attention paid to conflicts over shared spaces, especially in public parks and densely populated areas.

Dog ownership and dog park use is not limited to just a small subset of the population. While the prevalence of dog ownership does vary significantly along demographic and geographic lines, dog parks are generally used by households of all different types, sizes, races, and income levels. Baby Boomers and Millennials alike own pets in record numbers, at rates significantly higher than a decade ago.<sup>3</sup> Additionally, dog-owners are spending far more time and money caring for their pets today than in previous decades, exhibiting market behavior that is consistent with increased use and visitation of dog parks.<sup>4</sup>

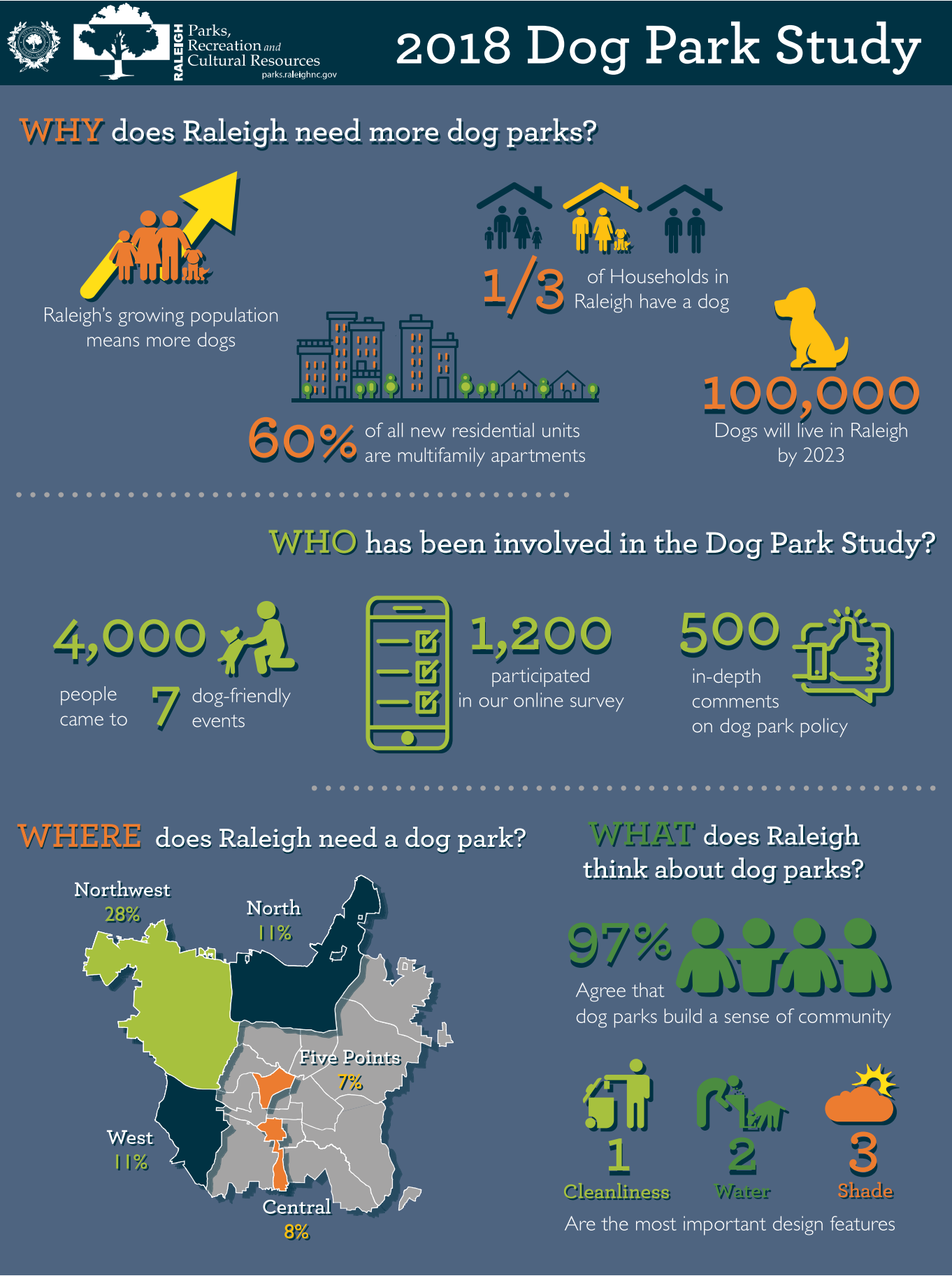
While the demand for dog parks continues to surge, there are many challenges to providing adequate, safe places for dog-owners to recreate with their pets. Concerns over maintenance, cleanliness, safety, and noise often make it difficult to locate dog parks in small spaces or in close proximity to other uses. Funding for the construction of new dog parks must be budgeted and prioritized among many other amenities and park development projects.

Today, an estimated one-third of all households in Raleigh own at least one dog. By 2023, the total dog population in the city is projected to exceed 100,000.<sup>5</sup> If Raleigh is going to keep pace with the growing demand for dog parks, the city will need to plan ahead and explore alternative options for cost recovery, revenue generation, and community partnerships.

Although there are many factors to consider when planning for dog parks, one sentiment became clear through the public process for the 2018 Dog Park Study:

Dog parks are for people, too.

Of over 1,200 participants who took our community survey, 97% agreed that dog parks build a sense of community. Many people shared heartfelt stories about the importance of dog parks in their lives. We heard from dozens who expressed that they rely on dog parks as a way to spend time with friends & family, socialize with neighbors, and meet new people. Dog parks provide many people with an important reason to spend time outdoors, get exercise, and interact with their community. This report recognizes dog parks as an important component of Raleigh’s public park system.





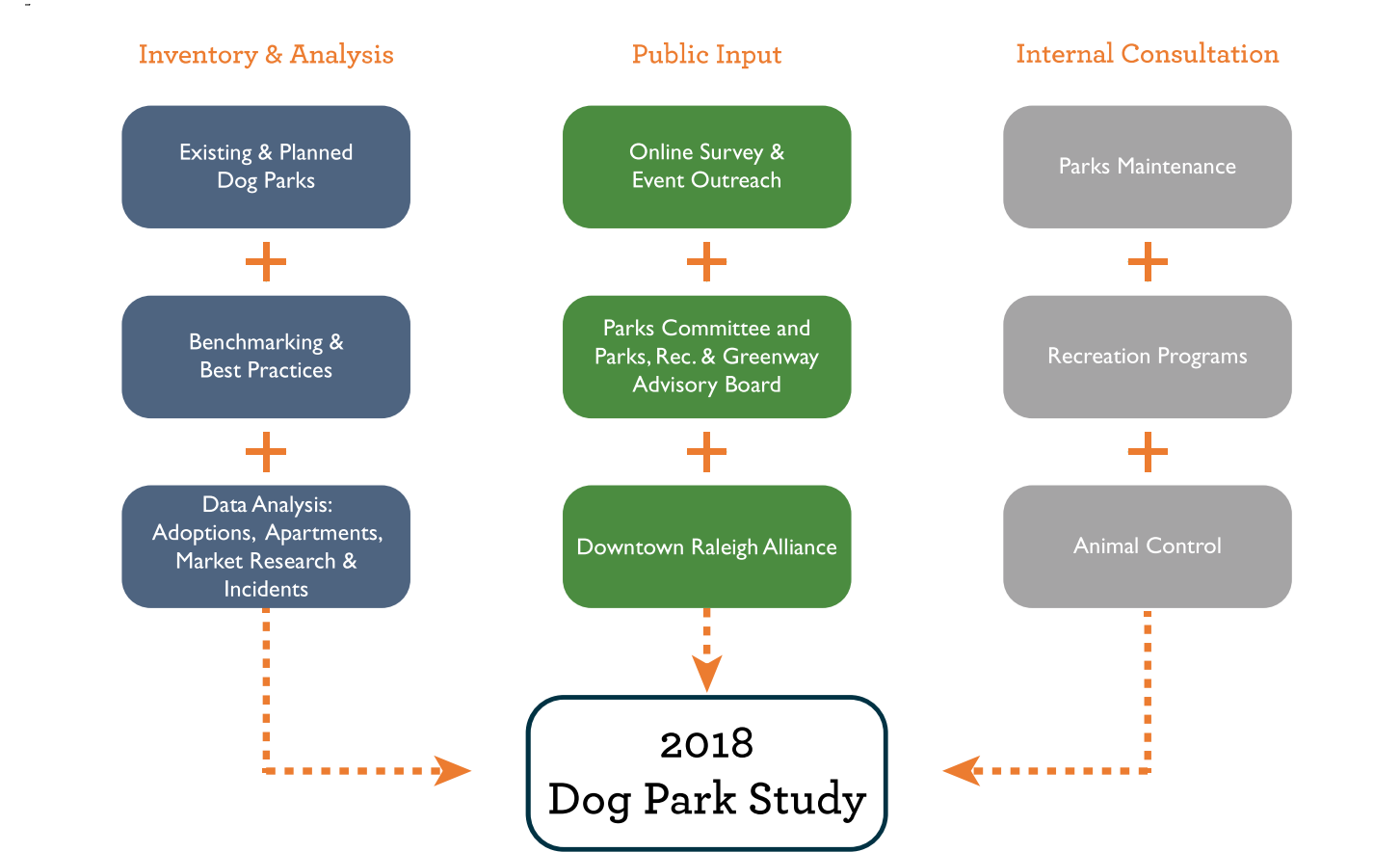
PLANNING METHODOLOGY

The 2018 City of Raleigh Dog Park Study planning process was designed to take advantage of three complementary sources of information: (1) Objective analysis of quantitative and spatial data, (2) Public input sourced through extensive online outreach and a series of dog-friendly community events, and (3) Consultation with internal subject matter experts. The recommendations contained in this report were derived from this combined methodology.

**Inventory & Analysis** included a quantitative and data-centric approach to analyzing the need for dog parks throughout Raleigh. This included a geographic analysis of the spatial distribution of the City of Raleigh’s five existing dog parks and four planned dog parks. Raleigh’s system of dog parks was benchmarked against peer cities throughout the nation. In order to achieve optimal dog park coverage throughout the City, additional spatial data was used to prioritize where new dog parks are most needed.

**Public Input** was the cornerstone of the Dog Park Study. Ultimately, this event-based planning process reached over 4,000 citizens and was informed by direct survey feedback from over 1,200 people. The public participation process was guided through consultation with the Parks Committee of the City of Raleigh Parks, Recreation and Greenway Advisory Board. Outreach methods included an online survey, a series of special dog-friendly events, and collaboration with stakeholders such as the Downtown Raleigh Alliance.

**Internal Consultation** with a diverse group of City of Raleigh staff was designed to ensure that the recommendations of the Dog Park Study are feasible and realistic while meeting the needs expressed through the public input process. Implementation of the Dog Park Study recommendations will require continued and ongoing coordination between multiple City of Raleigh departments and will place demands on all divisions within the Parks, Recreation and Cultural Resources Department.





SYSTEM PLAN SURVEY

The 2014 Parks, Recreation and Cultural Resources System Plan<sup>6</sup> sets a strategic vision for the design, development, and delivery of park services throughout the City of Raleigh for the next 20 years. The System Plan was developed through an intensive public planning process to reflect the goals and priorities of the entire community, and it establishes a number of specific Action Items which direct Raleigh’s park planning efforts.

One specific Action Item in the System Plan (Parks: Goal 2, Objective A.5) is *Analyze the need for dog parks and implement recommendations*. This action item was anticipated to be completed within 1-5 years of the plan’s adoption. The 2018 Dog Park Study is intended to accomplish this Action Item.

The System Plan also includes a comprehensive park needs assessment based on a statistically valid citywide Citizen Opinion and Interest Survey. This citywide survey was conducted with scientifically sound sampling methods that yielded a 95% confidence level with a +/- 3.4% margin of error. Several questions from the System Plan survey included dog parks among the park amenities or activities that respondents could choose from.

The results of these questions are included in this section of the report, and demonstrate the importance of dog parks to Raleigh’s general population. The full questions and complete results are reproduced in **Appendix B** of this report.



Who Needs Dog Parks?

Which park facilities  
do you or your  
household  
have a need for?

30%  
said “dog parks”

30% of households in Raleigh indicated a need for dog parks. The average need for dog parks reported among nationwide peer cities that conducted an identical survey was 26%.

Which park  
facilities  
have you visited  
over the past 12  
months?

20%  
said “dog parks”

20% of households in Raleigh reported visiting a City of Raleigh public dog park in the past year. This places dog parks in the top-10 most widely used park facilities.

Which park facilities  
are most  
important to you?

14%  
said “dog parks”

14% of households in Raleigh included dog parks among their top-3 most important park facilities. This places dog parks in the top-10 facilities considered “most important”.

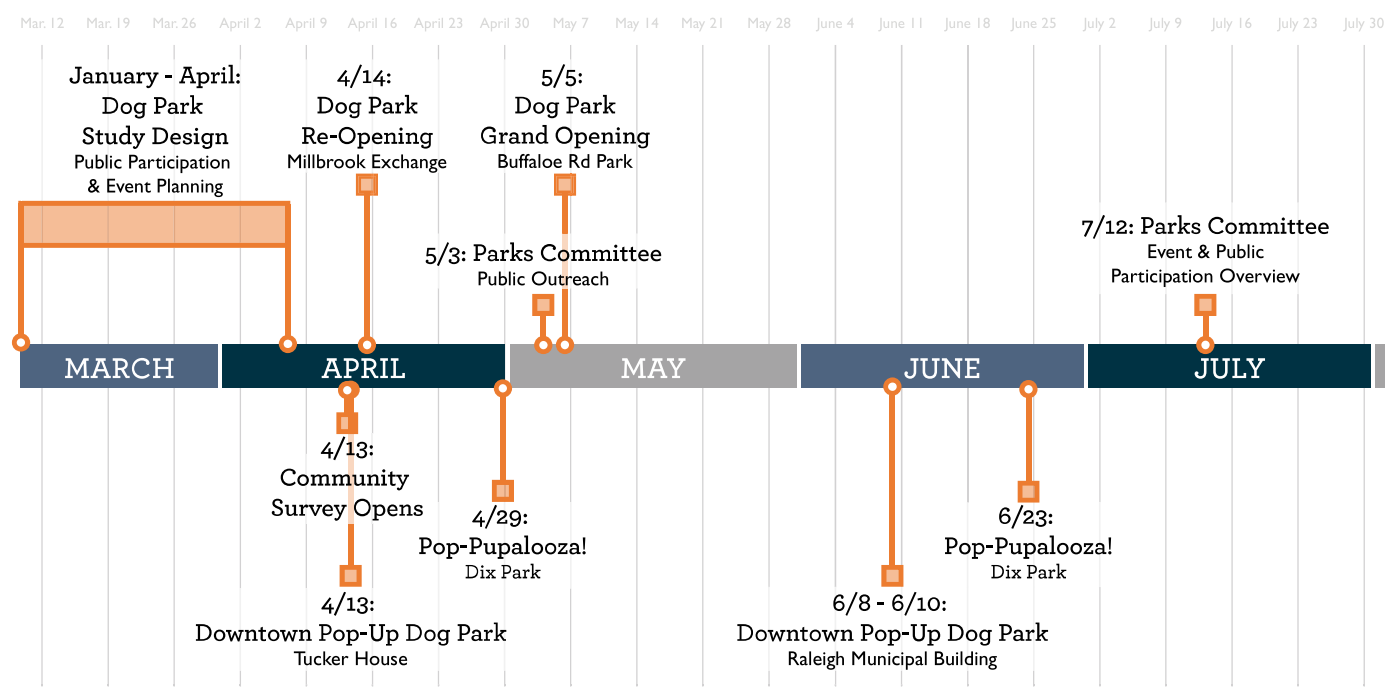
Which park facilities  
do you visit  
most often?

9%  
said “dog parks”

9% of households in Raleigh included dog parks among their top-3 most visited park facilities. This places dog parks in the top-10 most commonly visited park facilities.



# 2018 DOG PARK STUDY PROJECT TIMELINE

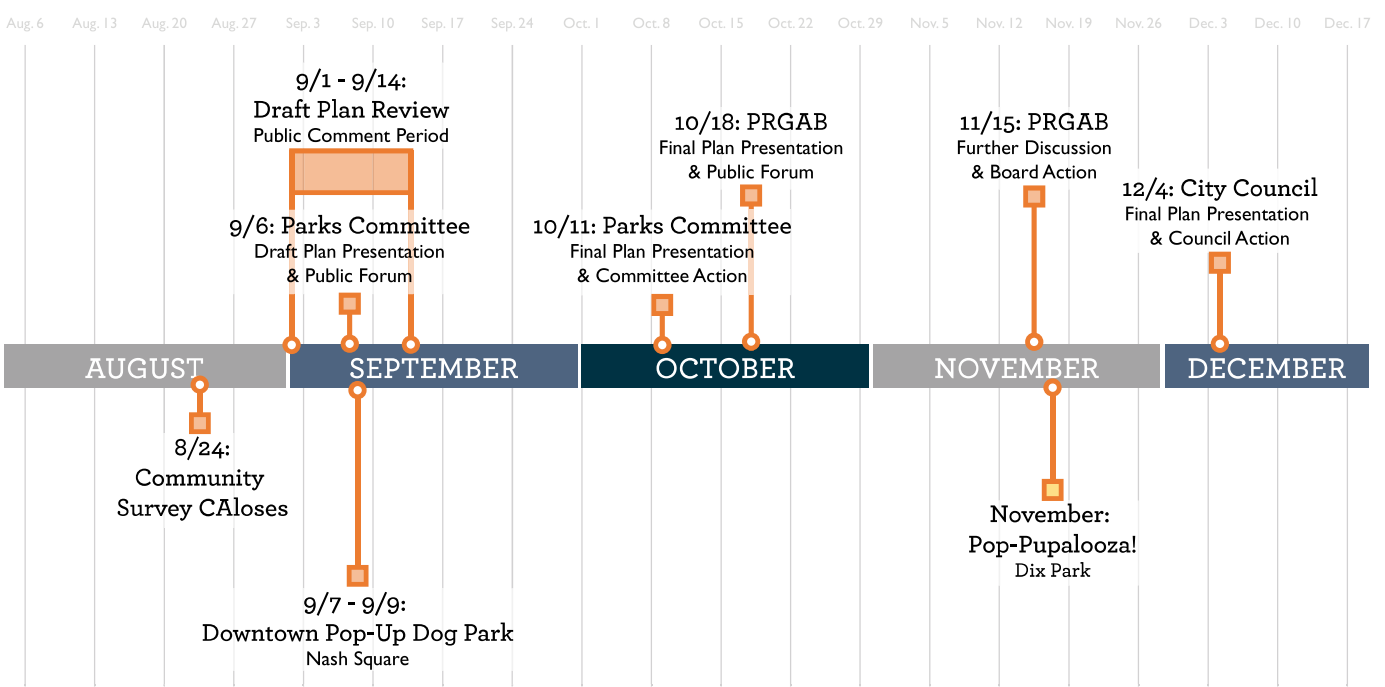


The 2018 Dog Park Study was designed as a year-long planning process focused on event-based outreach to maximize citizen participation.

Staff began designing the planning process in January 2018, and the Dog Park Study was introduced to the Parks Committee of the Parks, Recreation and Greenway Advisory Board at their February meeting. This was the first of five presentations to the Parks Committee, which served to guide the Dog Park Study process, provide direct feedback to staff, and advise on the public participation process. Each Parks Committee meeting was also open as a public forum for direct citizen participation.

Throughout the Spring and Summer, the City of Raleigh hosted a number of dog-friendly events, including the opening celebrations for two permanent dog parks (Millbrook Exchange Park and Buffaloe Road Park) as well as five pop-up events featuring temporary dog parks in new locations throughout Downtown Raleigh and at Dix Park. In total, over 4000 people attended these events.

Public participation was encouraged through direct outreach at these special events as well as through outreach and advertisement at the City's existing dog parks. This strategy yielded a rich volume of



community participation in the Dog Park Study. Over 1200 people participated in the online survey, which was open from April through August.

Several months into the planning process, we used geographically targeted social media ads to reach out to citizens in particular geographic areas of the City which were underrepresented up to that point. This approach was effective in improving the degree to which the final survey results reflect the needs and desires of a large and representative cross-section of the entire City.

After five months of public engagement, a draft Dog Park Study Key Issues Report was published online and presented to the Parks Committee. This draft report highlighted the Key Issues raised during the planning process, which required further analysis and public feedback to establish a consensus and clarify recommendations for the final report.

330 citizens provided direct feedback on those Key Issues, and that input was used to form the final recommendations contained in this report.

PUBLIC PARTICIPATION STRATEGY

We think a Dog Park planning process should be fun!

By using an event-based public participation strategy, the 2018 Dog Park Study reached thousands of people interested in dog parks.

In addition to quantitative survey questions, the Dog Park Study project website ([www.publicinput.com/dogparks](http://www.publicinput.com/dogparks)) also included public message boards for in-depth comments and interactive discussion. Overall, we received more than 500 unique comments on these message boards, which provided qualitative insight and greater detail on the needs and priorities of the community. This platform for idea exchange proved extremely valuable in forming the final recommendations of this report.

Over 1200 people shared their opinions in our online survey, which was actively distributed to the general public as well as dog park users.

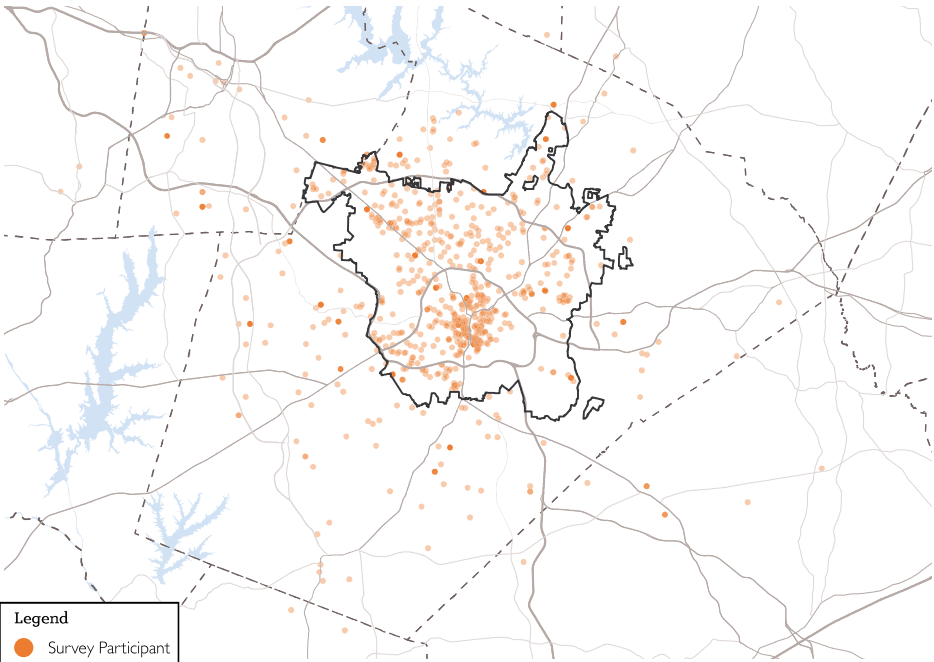
The Dog Park Study was featured in print and television coverage by news outlets such as WRAL and the News & Observer, and was shared extensively across multiple City of Raleigh social media platforms. The survey was also distributed through MyRaleigh Subscriptions e-mail newsletters and CAC newsletters. Additional advertisement and in-person outreach was conducted at all City of Raleigh dog parks.

Over 4000 people (plus their dogs!) attended our five Downtown pop-up dog park events, including the incredibly popular “Pop-Pupalooza” events at Dix Park. We also hosted community events for the grand opening of the brand new Buffaloe Road Dog Park and the re-opening of Millbrook Dog Park, which received significant renovations earlier this year.

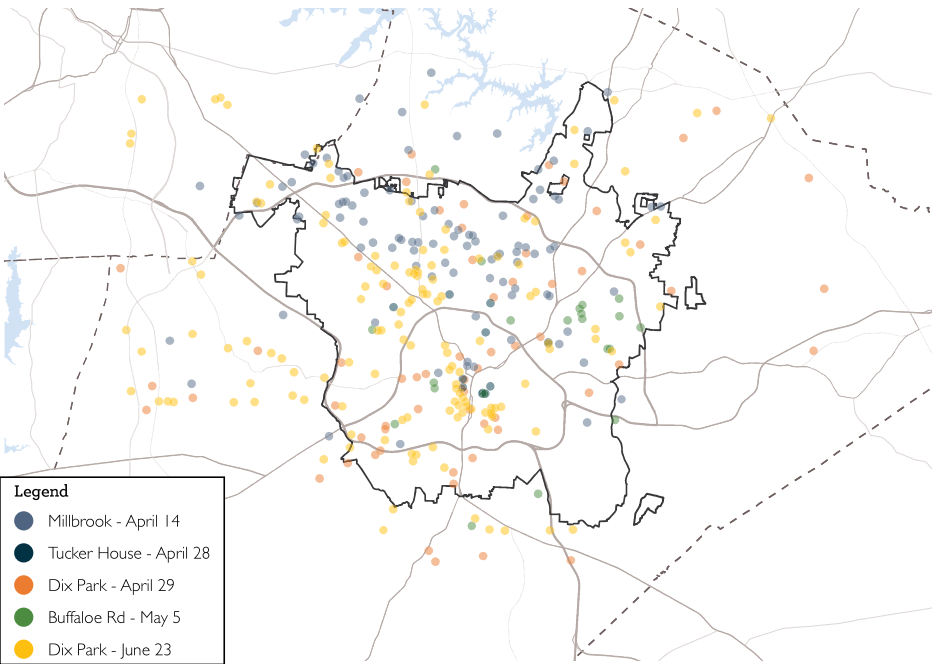
These events provided an opportunity to advertise and solicit participation in the Dog Park Study, but also served to bring thousands of members of the community together to enjoy the company of their canine companions. Many local businesses, nonprofit organizations, and independent artisans participated as vendors at these events, boosting awareness of the depth and variety of dog-friendly services, products, and programs available in Raleigh.

In order to ensure that this citywide planning process included input from citizens throughout all areas of the City of Raleigh, we asked event attendees and survey participants to share their home address or approximate location. Several months into the planning process, we used geographically targeted social media ads to reach out to citizens from those particular geographic areas of the City which were underrepresented up to that point.

Where do you live?



Event Attendance











The **Input & Analysis** chapter includes and assessment of Raleigh’s current dog park offerings, summarizes the spatial analysis techniques used to assess dog park access throughout the city, and summarizes the quantitative portion of the community survey results. The information in this chapter is used to prioritize where in Raleigh the City should invest in additional dog park facilities.

DOG PARK INVENTORY ..... 18

The **Dog Park Inventory** section provides an overview of the City of Raleigh’s five existing dog park facilities, including locations, amenities, and additional details on each site.

This section also highlights the four additional City of Raleigh parks which include dog park facilities in adopted park master plans, but which have not yet been built.

BENCHMARKING ..... 22

The **Benchmarking** section compares the City of Raleigh’s dog park offerings relative to peer cities in North Carolina and throughout the country.

PUBLIC INPUT SUMMARY ..... 26

The **Public Input Summary** section highlights the key findings of the Dog Park Study community survey and provides narrative analysis of how the survey results guided the formation of the recommendations in this report.

SPATIAL DATA ANALYSIS ..... 34

The **Spatial Data Analysis** section provides an overview of the various sources of data that were used to help identify dog park access throughout Raleigh, and to prioritize which areas should be considered for planning additional dog park facilities beyond the five existing and four currently proposed in park master plans.

SUMMARY OF FINDINGS ..... 40



# DOG PARK INVENTORY

Raleigh’s five existing public dog parks provide convenient access for a large portion of the city.Approximately 75% of Raleigh’s population today lives within a 10-minute drive of one these dog parks.

In order to meet the service level goals recommended in this report (10-minute drive access for the entire city), additional dog park facilities will need to be provided.

In addition to the five existing dog parks, the City of Raleigh has already planned for four additional dog parks in the adopted Master Plans of several parks across the city.These planned dog parks will extend 10-minute drive access to almost 90% of residents.

The Dog Park Inventory maps on the following pages illustrate the extent of coverage provided within a 5-minute and 10-minute drive of the city’s existing and planned public dog parks.

These maps can be used to identify gaps in service area coverage, and to demonstrate the impact of implementing these planned dog parks, .



## Existing Dog Parks

### Millbrook Exchange Dog Park

- Opened: 2003  
Redesigned: 2018  
Amenities:
- Water fountain for dogs & humans
  - Picnic tables
  - Benches
  - Picnic shelter
  - Agility equipment
  - Natural Shade + Shade Structure
  - Small & big dog areas
  - Lights
  - Wood chips

### Oakwood Dog Park

- Opened: 2006  
Amenities:
- Water tap for dogs
  - Benches
  - Natural shade
  - Small & big dog areas
  - Wood chips

### Carolina Pines Dog Park

- Opened: 2007  
Amenities:
- Water tap for dogs
  - Dog climbing platform
  - Picnic tables
  - Natural shade
  - Small & big dog areas
  - Wood chips

### Jaycee Dog Run

- Opened: 2017  
Amenities:
- Benches
  - Natural shade
  - Wood chips

### Buffaloe Road Dog Park

- Opened: 2018  
Amenities:
- Water fountain for dogs & humans
  - Benches
  - Shade
  - Small & big dog areas
  - Wood chips

## Planned Dog Parks

### Leesville Dog Park

Location: Northwest Raleigh  
  
Master Plan Adopted: 2009

### Erinsbrook Dog Park

Location: Northwest Raleigh  
  
Master Plan Adopted: 2017

### Kiwanis Dog Park

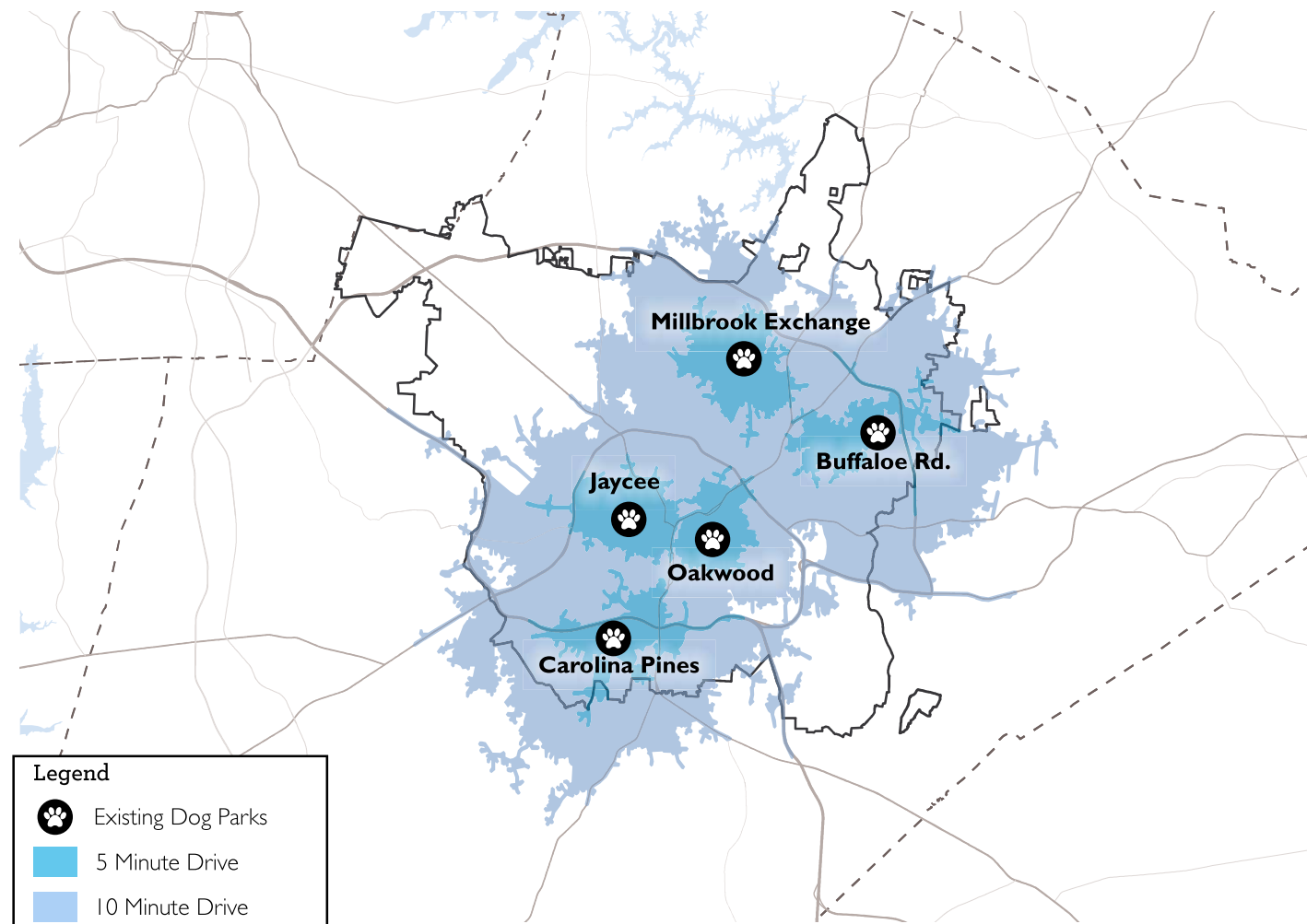
Location: Five Points Area  
  
Master Plan Adopted: 2017

### Barwell Dog Park

Location: Southeast Raleigh  
  
Master Plan Adopted: 2017

Additional information on the four park master plans listed above can be found in [Appendix I](#).

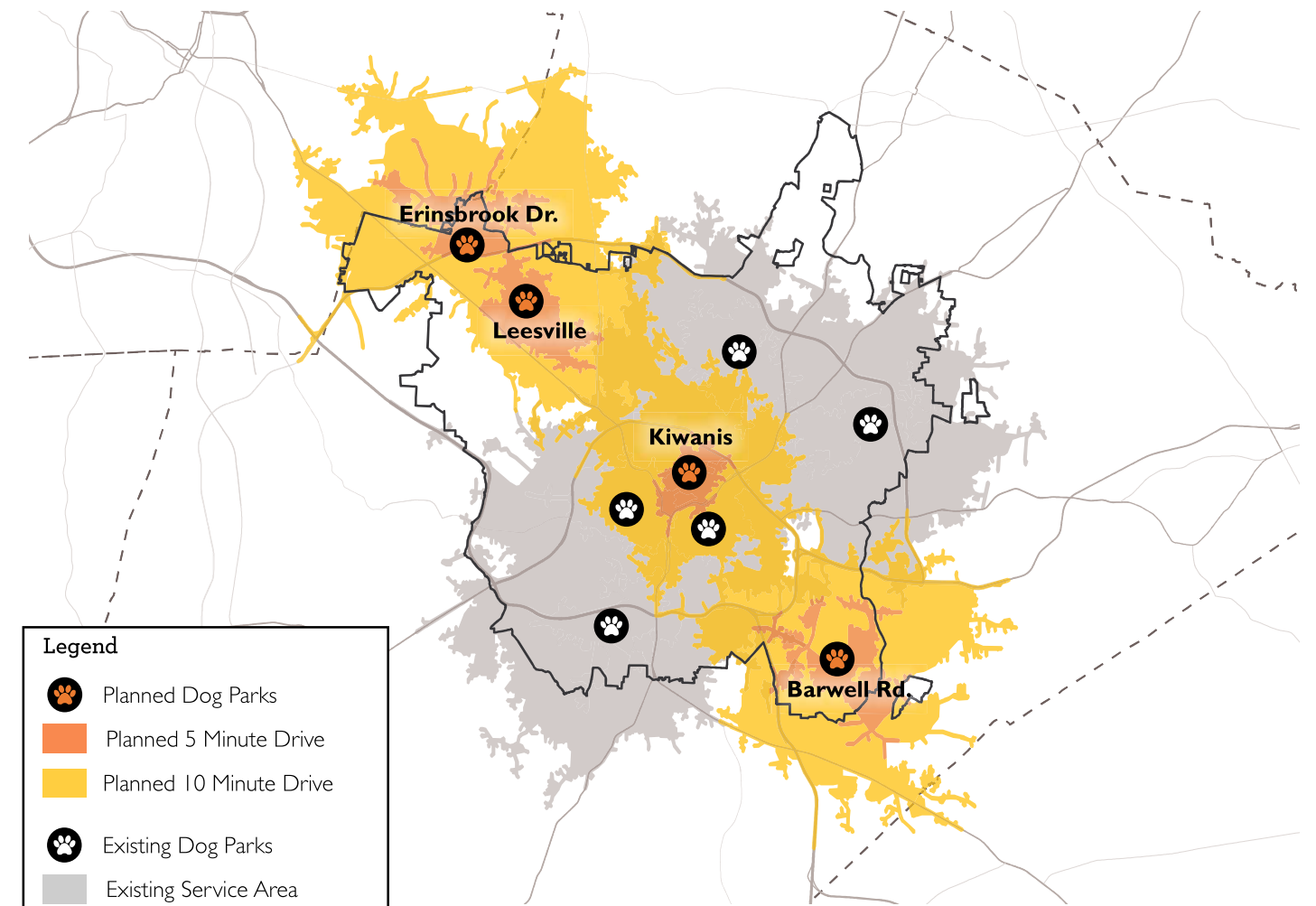
## Existing Dog Park Service Areas



Raleigh's five existing public dog parks provide convenient access for a majority of the city. The 2018 Dog Park Study community survey established that a majority of dog park users consider a 5-10 minute drive to be an appropriate threshold for convenient access.

As this map demonstrates, there are several gaps in service area coverage, especially in Northwest, Northeast, and Southeast Raleigh. The recommendations in this report present several approaches to providing dog park access in these gap areas as well as improved access for areas with above-average demand for dog parks.

## Planned Dog Park Service Areas



The four additional dog parks which are currently featured in adopted park master plans are well-distributed throughout the city, and provide service area coverage for most of the gaps identified in the previous map. These park master plans were developed through an intensive public participation process for each individual park, reflecting the needs and priorities of the neighborhoods and community in those areas.

Implementation of these four planned dog parks would improve service area coverage significantly, providing access to dog parks within a 10-minute drive of almost 90% of Raleigh residents. Additional dog park facilities beyond those currently planned will be necessary to provide complete coverage for the entire city.

Additional information on the four park master plans listed above can be found in [Appendix I](#).



BENCHMARKING

In order to assess how Raleigh’s investment in dog parks compares to other cities around the country, the 2018 Dog Park Study included a thorough benchmarking analysis.

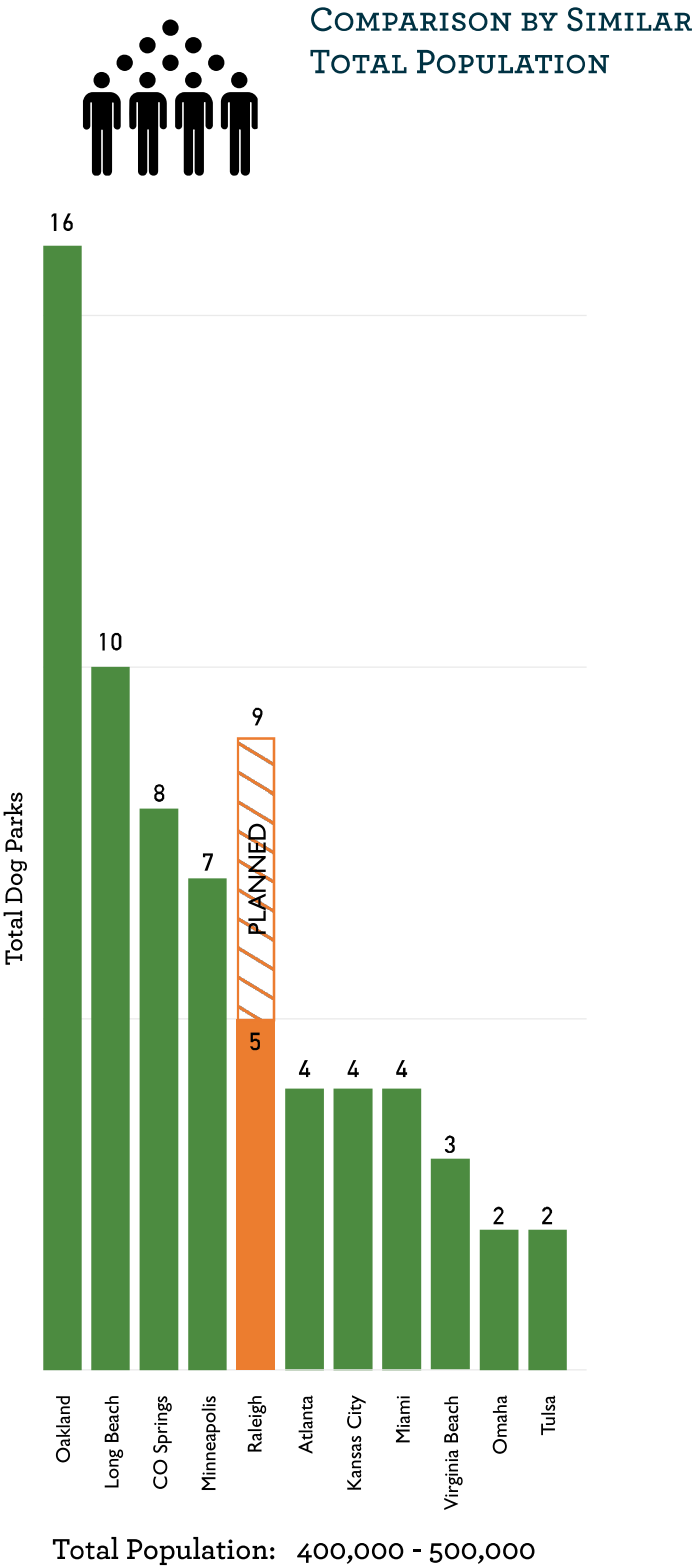
Raleigh’s dog park system is currently in the “middle of the pack” today compared to cities across the country. Relative to other cities in North Carolina, Raleigh is a leader.

Full build-out of the planned dog park system (five currently operating plus four in existing park master plans) would put Raleigh in the above-average range nationwide.

The results of the benchmarking analysis are summarized in the following charts.

The City of Raleigh currently operates five (5) public dog parks. Four (4) additional dog parks are included in park master plans throughout the city, in Southeast Raleigh (Barwell Road Park), Five Points (Kiwanis Park), and Northwest Raleigh (Leesville Road Park & Erinsbrook Park).

This full planned buildout of nine (9) total dog parks is also shown in the benchmarking charts, for reference.



Trust for Public Land

Using data from the Trust for Public Land’s 2018 City Park Facts report, the City of Raleigh can be compared with the other top-100 largest municipal park agencies in the United States. Overall, Raleigh ranks 65th among these 100 cities by measure of Dog Parks per 100,000 residents.

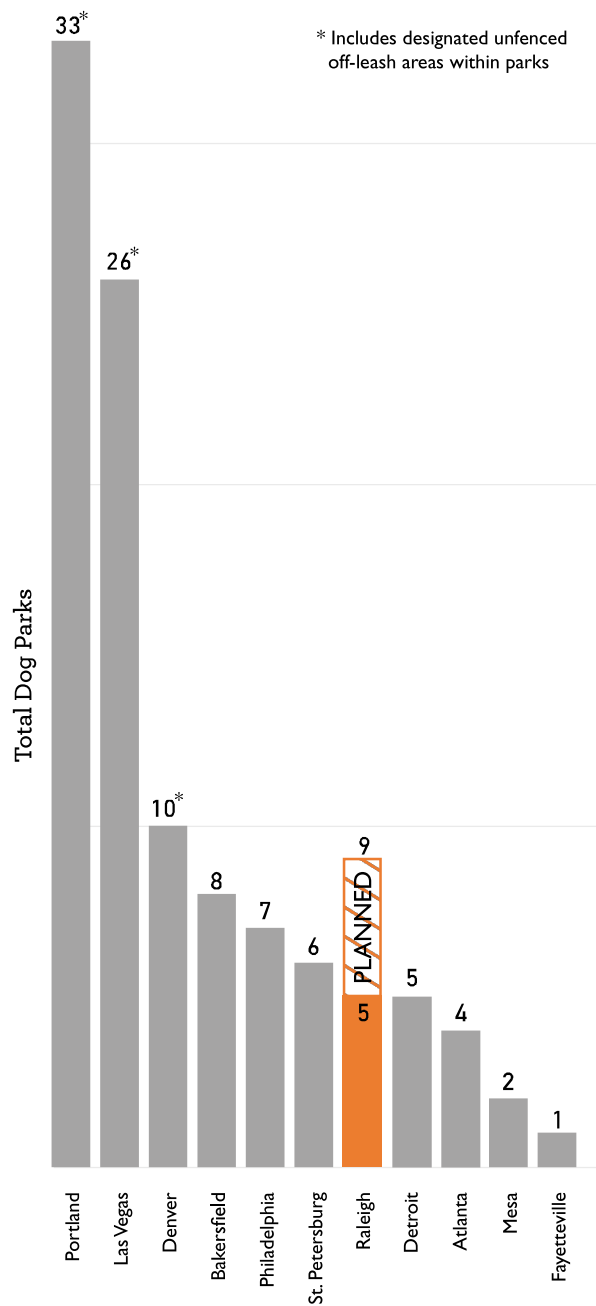
The benchmarking charts in this section filter the data from the 100 largest cities to highlight only those that share key characteristics with the City of Raleigh (such as total population, land area, and population density).

This benchmarking exercise yields more meaningful context than the full City Park Facts report alone, since it compares the number of dog parks in Raleigh with the number of dog parks in similar urban environments.

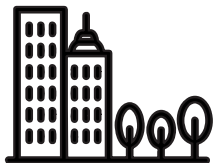
It is notable that some cities which report an exceptionally high number of dog parks also include designated unfenced off-leash dog areas in their total count of dog parks. These may be trails, entire parks, or areas within larger parks that are designated for off-leash dog use, sometimes restricted to specific hours. These cities are denoted with an asterisk.



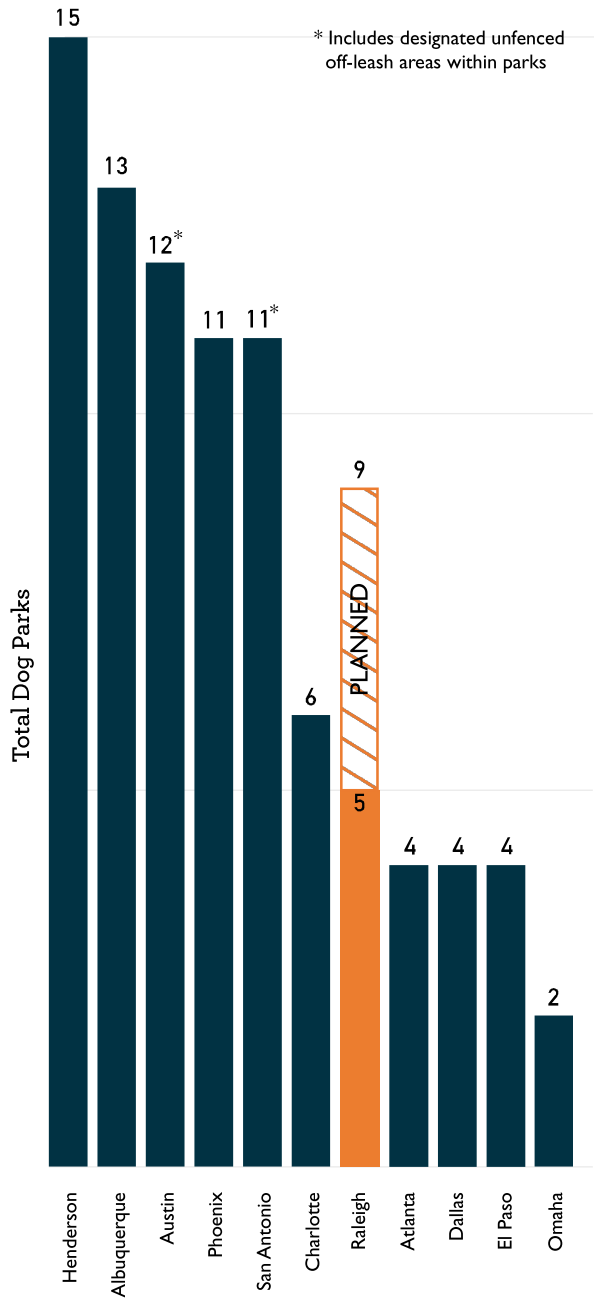
COMPARISON BY SIMILAR  
LAND AREA



City Area: 140 - 160 Sq. Miles



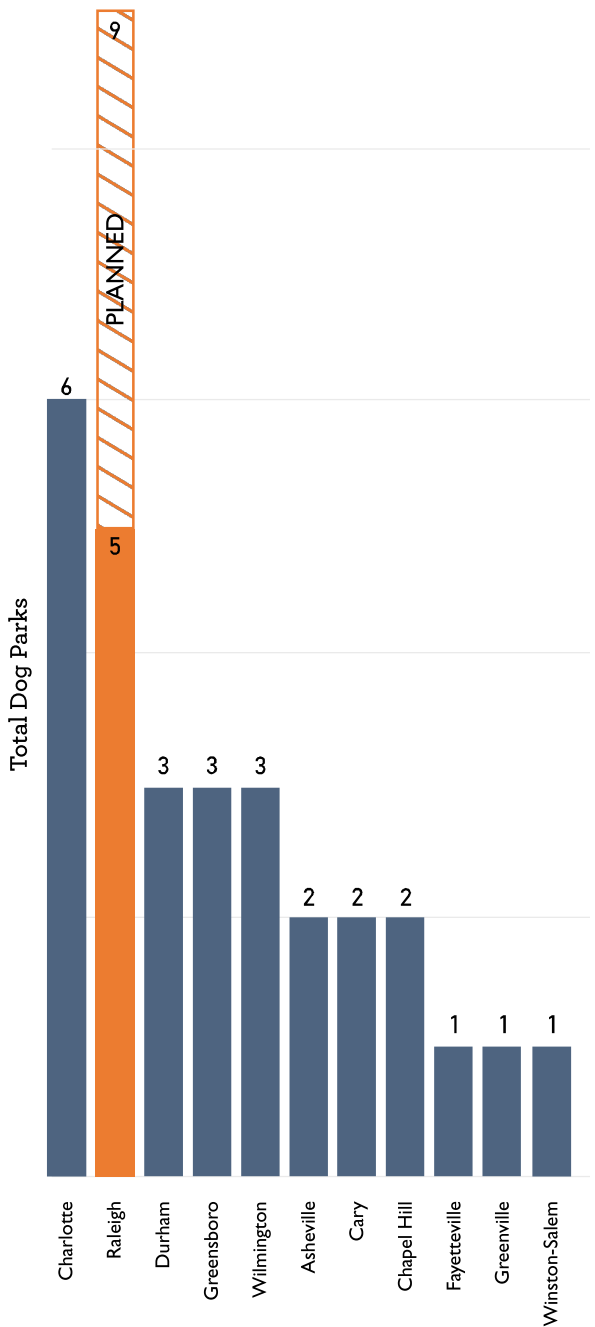
COMPARISON BY SIMILAR  
POPULATION DENSITY



Population Density: 2,500- 3,500 People Per Sq. Mile



COMPARISON WITH OTHER  
NORTH CAROLINA CITIES



North Carolina Cities

NCRPA

The City of Raleigh, in partnership with the NCRPA, conducted a survey of Parks and Recreation agencies in North Carolina to determine how other local governments in the state are addressing the need for dog parks.

Agencies were asked:

- 1) Does your agency operate any dog parks? If so, how many?
- 2) Does your agency designate any unfenced areas as off-leash dog areas in public parks?

Most North Carolina agencies surveyed are significantly smaller than the City of Raleigh, and operate only 1-2 dog parks. The data from a selection of 10 comparable peer cities in North Carolina are illustrated in the chart below.

Of the 32 agencies surveyed, there were none that designate unfenced areas for off-leash dog use in public parks. Further discussion of this issue can be found in Dog Park Policy section of the Key Issues chapter.



## PUBLIC INPUT SUMMARY

The Dog Park Study community survey included responses from over 1200 people. The majority of respondents were City of Raleigh residents, although some participants live outside of Raleigh’s jurisdiction.

In addition to the quantitative results included in this section, we received over 500 in-depth comments providing further details on public preferences, priorities, and personal experiences related to dog parks and the presence of dogs in public parks.

While most survey respondents were dog-owners and at least occasionally use City of Raleigh dog parks, many respondents do not currently use City of Raleigh dog parks and some do not own a dog at all, but still wished to provide their opinions through the survey.

This section includes a selection of key questions and results from the community survey. The full results for all 15 questions in the community survey can be found in [Appendix C](#).

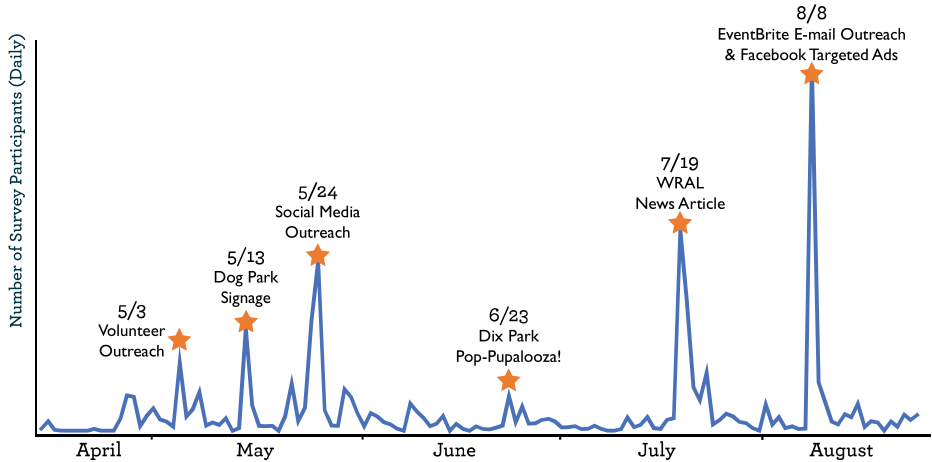


The 2018 Dog Park Study community survey was conducted between April and August.

As illustrated on this timeline, survey participation was solicited through a variety of methods. Media coverage contributed to a significant spike in survey participation, as did a direct e-mail campaign marketed to e-mail addresses that were used to register through EventBrite for the Dorothea Dix Park “Pop-Pupalooza” events.

Other traditional forms of outreach, including Win-person intercept surveys at Raleigh dog parks, contributed to a steady influx of participation throughout the five-month public participation period.

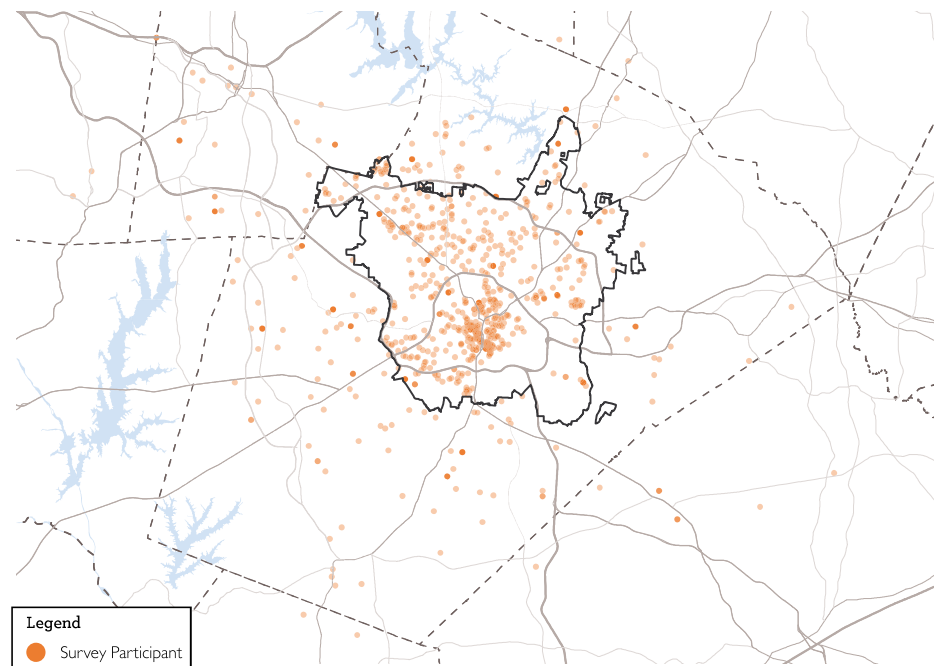
Survey Participation Timeline



“THANK YOU SO MUCH FOR MAKING AN EFFORT TO BETTER UNDERSTAND THE NEEDS, AND FOR ACKNOWLEDGING THE IMPORTANCE OF DOG PARKS IN THE COMMUNITY!”

- DANIELLE

### Question #1 Where do you live?



The Dog Park Study was designed to assess the citywide need for dog parks, so the public participation approach needed to capture input from residents in all areas throughout Raleigh.

After several months, survey outreach methods were adjusted to solicit more direct feedback from the specific geographic regions that were underrepresented up to that point in the process. Geographically-targeted social media advertisements promoting the Dog Park Study survey were used, targeted to residents of Southeast Raleigh. These ads yielded over 5000 impressions, and generated more than 150 “clicks” that brought people to the Dog Park Study project webpage. This outreach significantly increased the number of responses received from Southeast Raleigh, broadening the scope of public participation.

The Dog Park Study community survey included an interactive map which asked participants to select the CAC “neighborhood” where Raleigh most needs a new dog park.

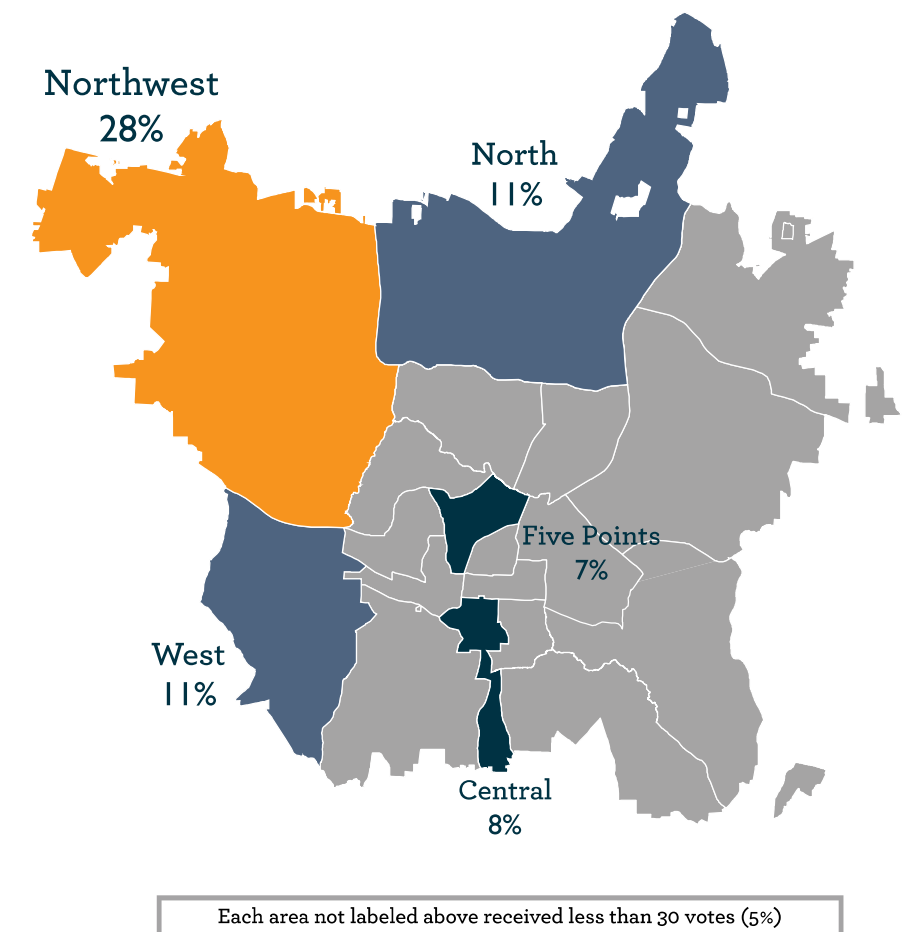
The most-voted area was Northwest Raleigh, which received nearly 30% of all votes. Even when controlling the results for the number of participants who live in each area, Northwest Raleigh remained the highest priority. This region includes Erinsbrook Park and Leesville Road Park—two parks with dog parks recommended in their adopted park master plans.

The 2nd most-voted areas were North Raleigh (which includes potentially suitable locations such as Baileywick Park) and West Raleigh (which includes the densely populated area around Lake Johnson Park).

The 3rd most-voted areas were Downtown Raleigh and the nearby Five Points area. The master plan for Kiwanis Park, in the Five Points area, includes a dog park among its recommended park facilities.

Additional recommendations for addressing dog park demand in Downtown Raleigh are included in the Recommendations chapter.

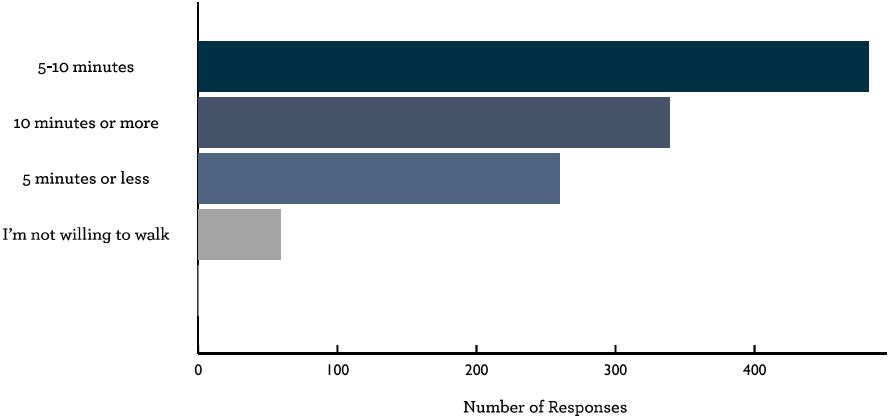
### Question #2 Where does Raleigh most need a dog park?





Question #3

How far are you willing to walk to get to a dog park?



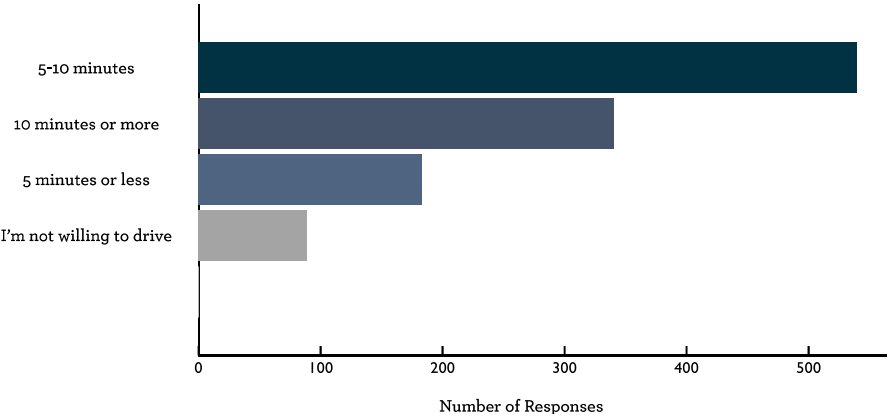
In order to establish an appropriate “service area” coverage of dog parks specific to Raleigh, the Dog Park Study community survey asked how far people are willing to walk or drive to access a dog park.

Most survey respondents consider 5-10 minutes an acceptable amount of travel time to visit a dog park.

These results were used to inform how “service areas” of dog parks were defined throughout the Dog Park Study. This report recommends providing access to a dog park within a 10-minute drive of most residents.

Question #4

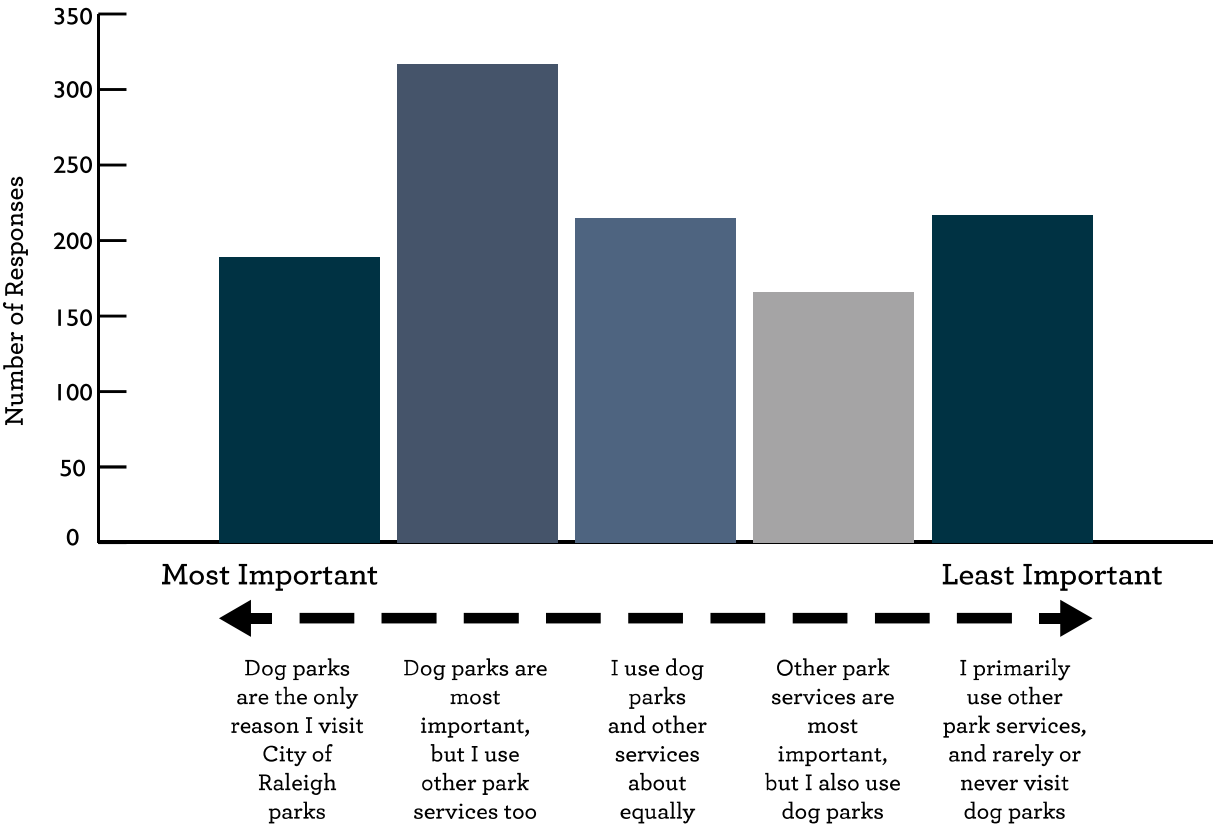
How far are you willing to drive to get to a dog park?



Where feasible, it is recommended that the City also attempt to provide dog park access within a 10-minute walk of residents in the densest urban areas, such as Downtown Raleigh.

Question #5

How important are dog parks to you?



For nearly half of all respondents, dog parks are the most important reason or the *only* reason that they visit City of Raleigh Parks.

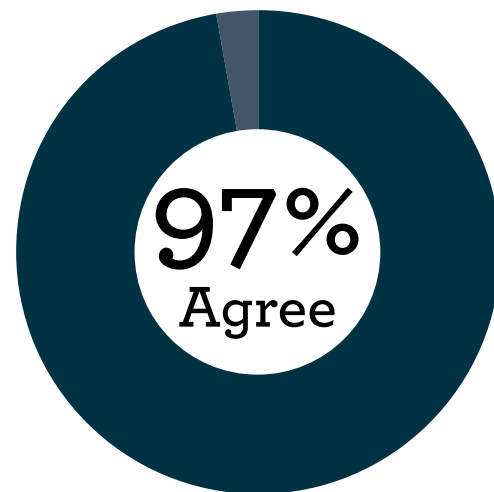
It is important to recognize that, for this segment of the population, dog parks may be one of the only public park facilities that they use.

These results illustrate how dog parks serve an important social function as part of the overall park system.

Dog parks are not just safe spaces for dogs to play. They also provide valuable public spaces for people to spend time outdoors and socialize with neighbors, serving residents who might not get that experience from any other park facility.



Question #6  
Dog parks build a sense of community.



"WE LOVE THE DOG PARKS. IT'S NICE TO SEE  
THE SAME PEOPLE AND TALK WITH THEM WHILE  
OUR DOGS RUN AROUND AND PLAY."

- MINDY

Dog parks are for people, too!

Of over 1,200 participants who took our community survey, 97% agreed that dog parks build a sense of community. Many people shared heartfelt stories about the importance of dog parks in their lives. We heard from dozens who expressed that they rely on dog parks as a way to spend time with friends & family, socialize with neighbors, and meet new people.

Dog parks provide many people with an important reason to spend time outdoors, get exercise, and interact with their community.





## SPATIAL DATA ANALYSIS

In order to identify priority areas in need of future dog park development, the 2018 Dog Park Study considered a number of geographic and demographic factors that can be used as indicators of dog park demand.

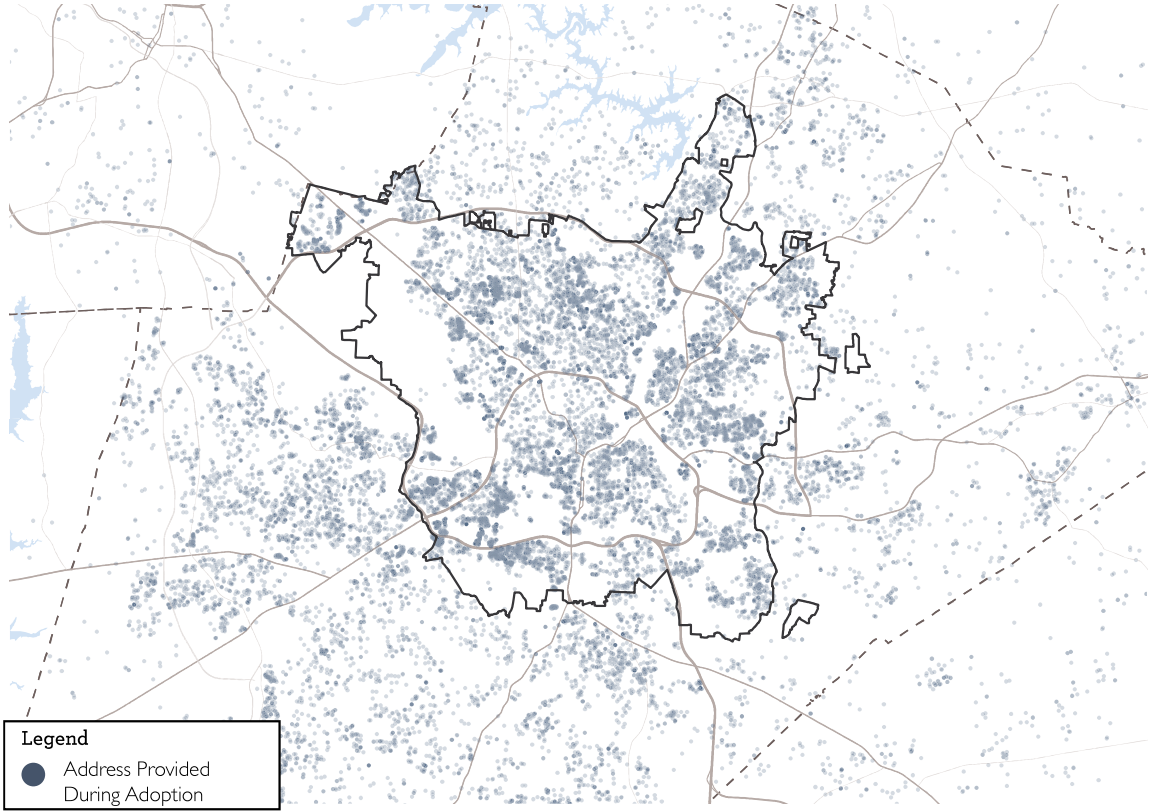
These objective factors can be analyzed in combination with public input (as expressed through the Dog Park Study community survey and future planning processes) to provide a holistic evaluation of which areas of the city have the highest unmet need for dog parks.

This section highlights four layers of spatial analysis that were used in the Dog Park Study: Dog adoption records, dog-friendly apartment locations, density of dog-friendly apartments, and concentrations of dog-ownership.VV

“WITH ALL THE NEW APARTMENTS AND HIGH  
RISES PEOPLE NEED A PLACE TO TAKE THEIR  
DOGS TO SOCIALIZE  
AND PROMOTE PET HEALTH.”

- ANONYMOUS

## Wake County Dog Adoptions (2008-2018)



### Adoption Records

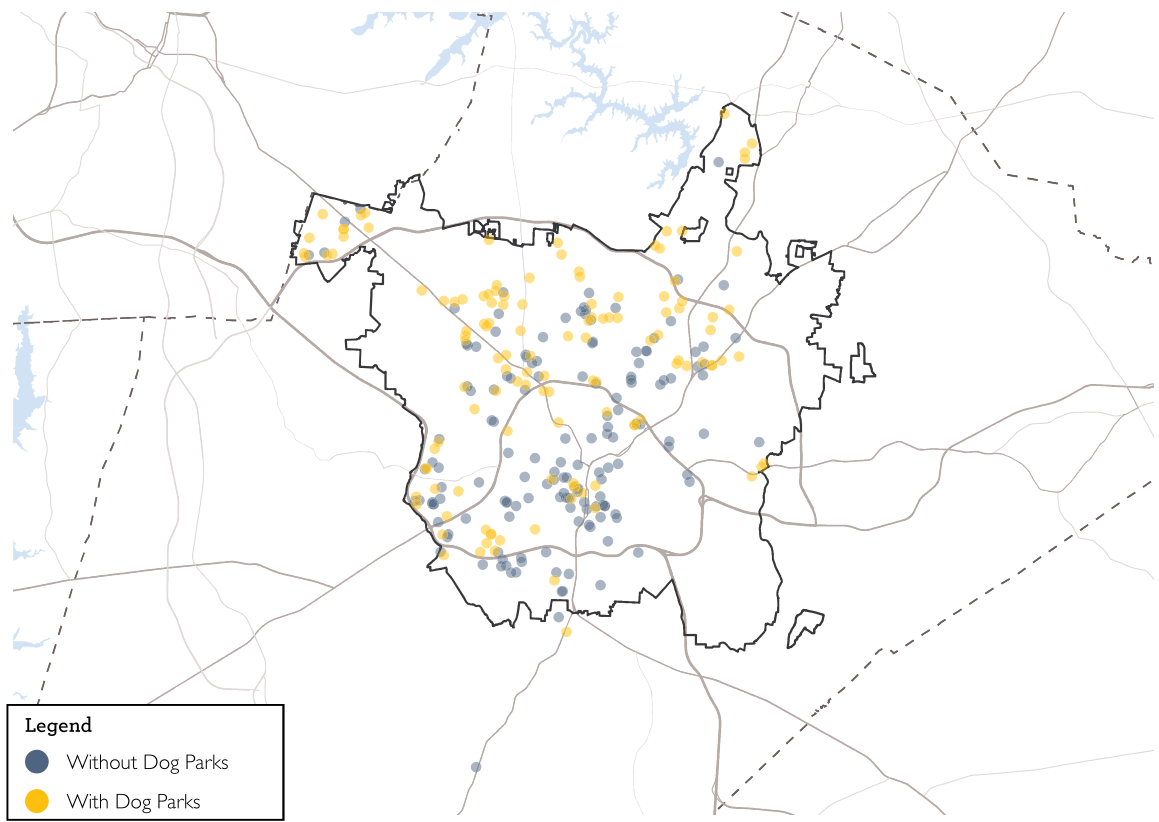
The Adoption Records map was created using anonymized home address data provided by Wake County Animal Services and SPCA of Wake County. Because Wake County does not maintain a digital database of current rabies vaccinations, these adoption records are the best data available to use as an approximate “canine census” for the City of Raleigh.

The points on this map represent more than 30,000 individual home addresses associated with dog adoptions between 2008-2018.

This data can be used when evaluating potential sites for new dog park development.

For example, the area just west of Downtown is very densely populated (by humans) compared with most areas in Raleigh. However, this map indicates a very low population of dogs in that area. This is because the majority of residents in that vicinity, which is near NC State’s campus, are university students. This map shows that dog ownership is rare among that population segment and dog parks are probably not in high demand.

Dog-Friendly Apartments



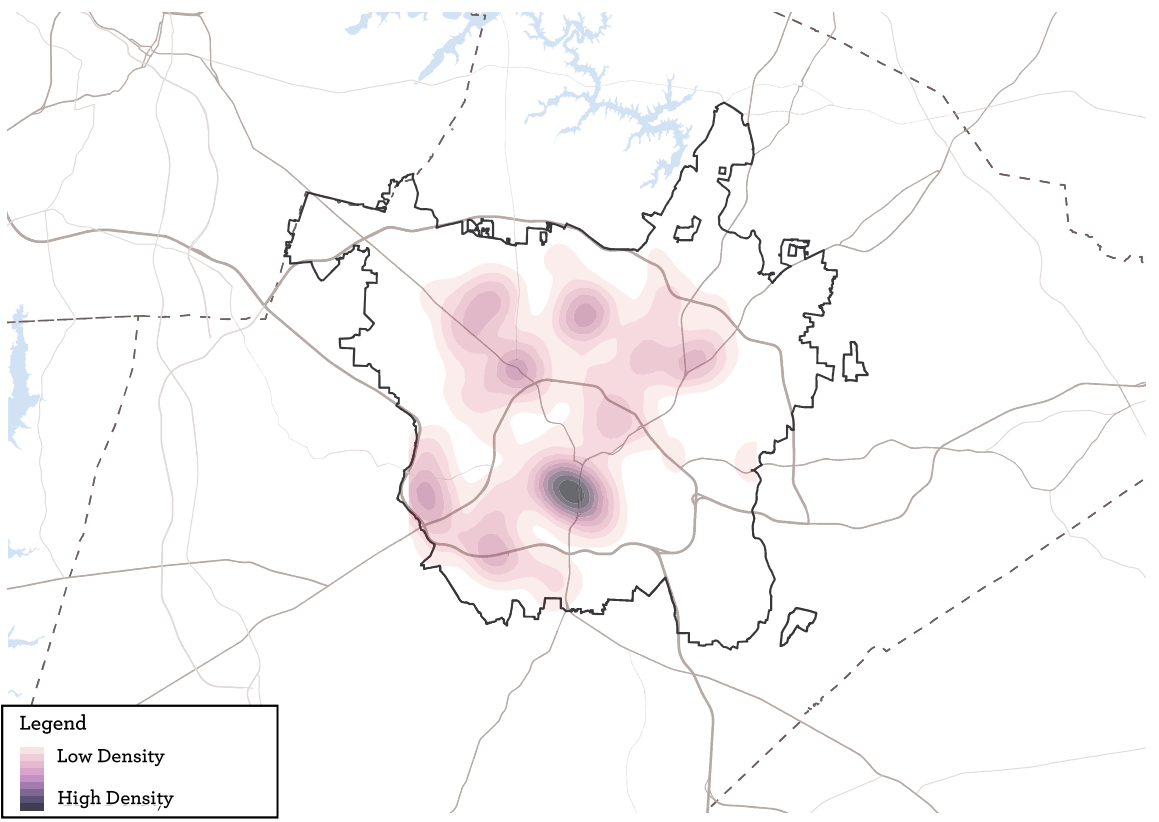
Dog-Friendly Apartment Locations

This map identifies the locations of 280 dog-friendly multifamily developments throughout Raleigh, and distinguishes between which dog-friendly apartments offer some sort of on-site dog exercise area for the use of residents and which do not.

Although not an exhaustive inventory, this data can be used to highlight several trends: Multifamily developments in the densest areas of the City are less likely to provide on-site dog amenities, but in general, there has been a trend toward newer apartments being more likely to provide on-site dog amenities for the use of residents.

Based on this analysis, approximately 40% of all dog-friendly multifamily developments offer some type of on-site dog exercise area. The Recommendations chapter outlines several approaches to encourage new residential development to provide on-site dog park facilities for their residents.

Dog-Friendly Apartment Density



Dog-Friendly Apartment Density

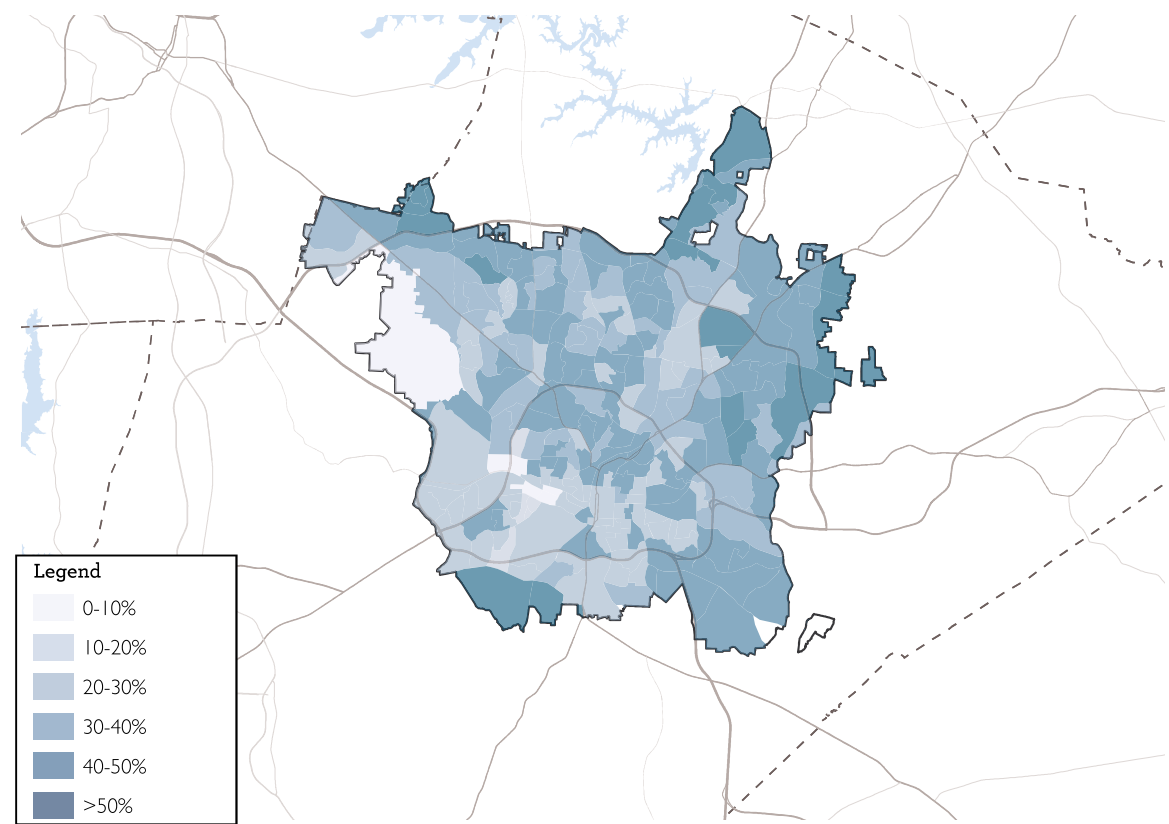
Visualizing the density or clustering of dog-friendly apartment locations throughout the City of Raleigh is one method we can use to identify where there are high concentrations of residents that will rely on public open space to walk, exercise, and socialize with their dogs.

If these residents do not have convenient access to public dog parks, they will be more likely to use public sidewalks or other areas in nearby public parks as exercise or play spaces for their dogs, potentially creating conflicts with other park users.

Locating dog parks near these areas may reduce the potential for conflict and will serve a segment of the population that is likely to have a high demand for dog park access.



Dog Ownership by Household (%)



Concentrations of Dog Ownership

This map illustrates the estimated percentage of Households that own one or more dogs within each Census Block Group in the City of Raleigh.

The estimates illustrated here were generated using Esri’s Community Analyst toolset through ArcGIS Online. Esri’s Community Analyst enriches census-based geographies with estimates based on local

demographic composition and consumer behavior data.

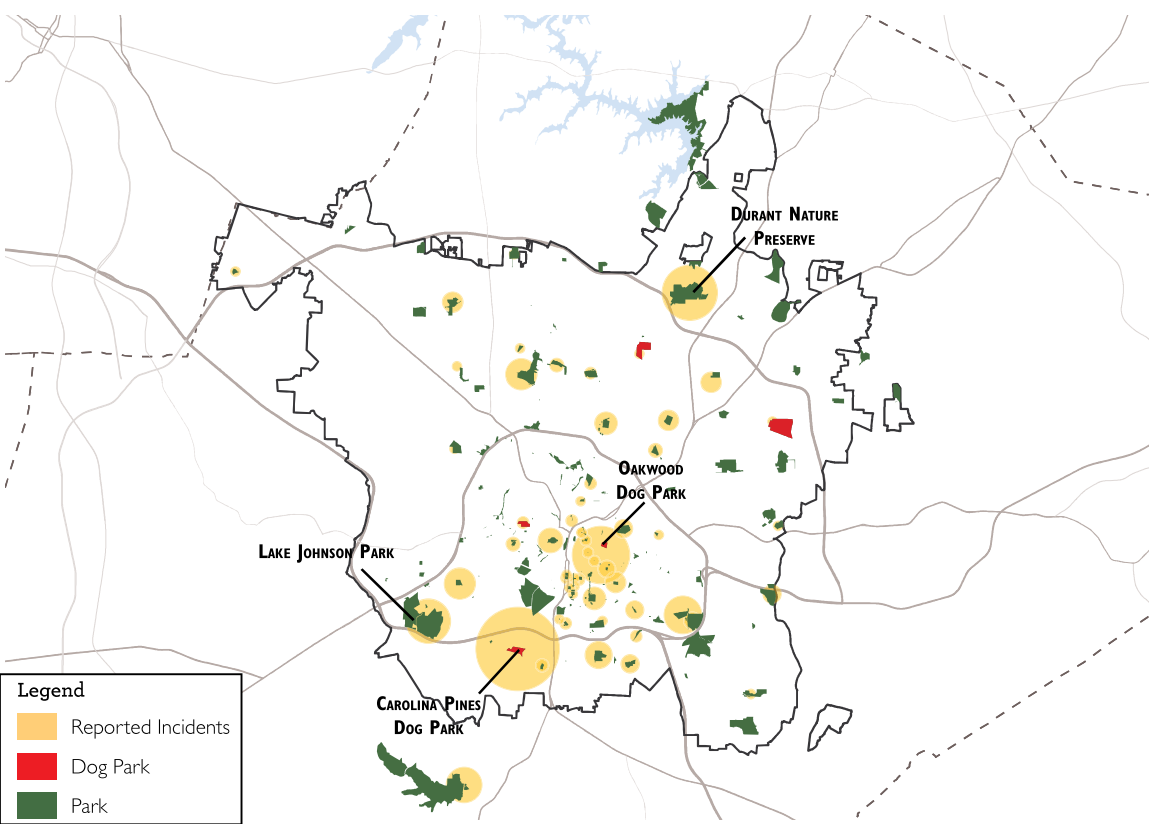
Dog ownership estimates are based on the relative propensity for households in these areas to purchase dog food, dog treats, veterinary services, and other dog-related products.

Indicators of market potential and consumer behavior can be a valuable tool for estimating community

preferences across different areas of the city. Demand for dog-related products and services is likely to be highly correlated with demand for dog park access.

Detailed estimates of the dog-owning population living near each existing, planned, and potential dog park area, along with further details on the methodology used to generate this analysis, can be found in [Appendix E](#).

Incidents Reported to Animal Control



Dog-Related Incidents in Public Parks

This map illustrates the relative number of dog-related incidents reported at various public parks throughout the City of Raleigh.

The City of Raleigh Animal Control Division of the Raleigh Police Department provided data on all dog-related calls received over the past 5 years. This data was filtered by Call Code to show incidents most likely to be related to conflicts between dogs and other park patrons such as dog bites, reports of vicious dogs, and stray or loose (off-leash) dogs.

It is not surprising that most animal-related calls tend to originate from dog parks. Two dog parks (Carolina Pines in SW Raleigh and Oakwood in Central Raleigh) are particularly visible on this map. Approximately 15-20 dog-related incidents are reported at these parks each year.

This data can also be used as an indication of which parks are already heavily trafficked by people with dogs, such as Durant Nature Preserve in NE Raleigh and Lake Johnson in SW Raleigh. Providing more convenient dog park access in these areas may alleviate some of the conflict between off-leash dogs and other park users.

SUMMARY OF FINDINGS

The data illustrated throughout this chapter can be overlaid to analyze patterns and identify key areas in the City of Raleigh where there is a concentration of dog-owning households most likely to exhibit unmet demand for public dog parks.

No individual source of data or information, taken alone, is sufficient to capture the full picture of dog park demand in Raleigh. Potential dog park locations should be identified, evaluated, and prioritized using a multi-layered approach that considers all of the factors discussed in this chapter.

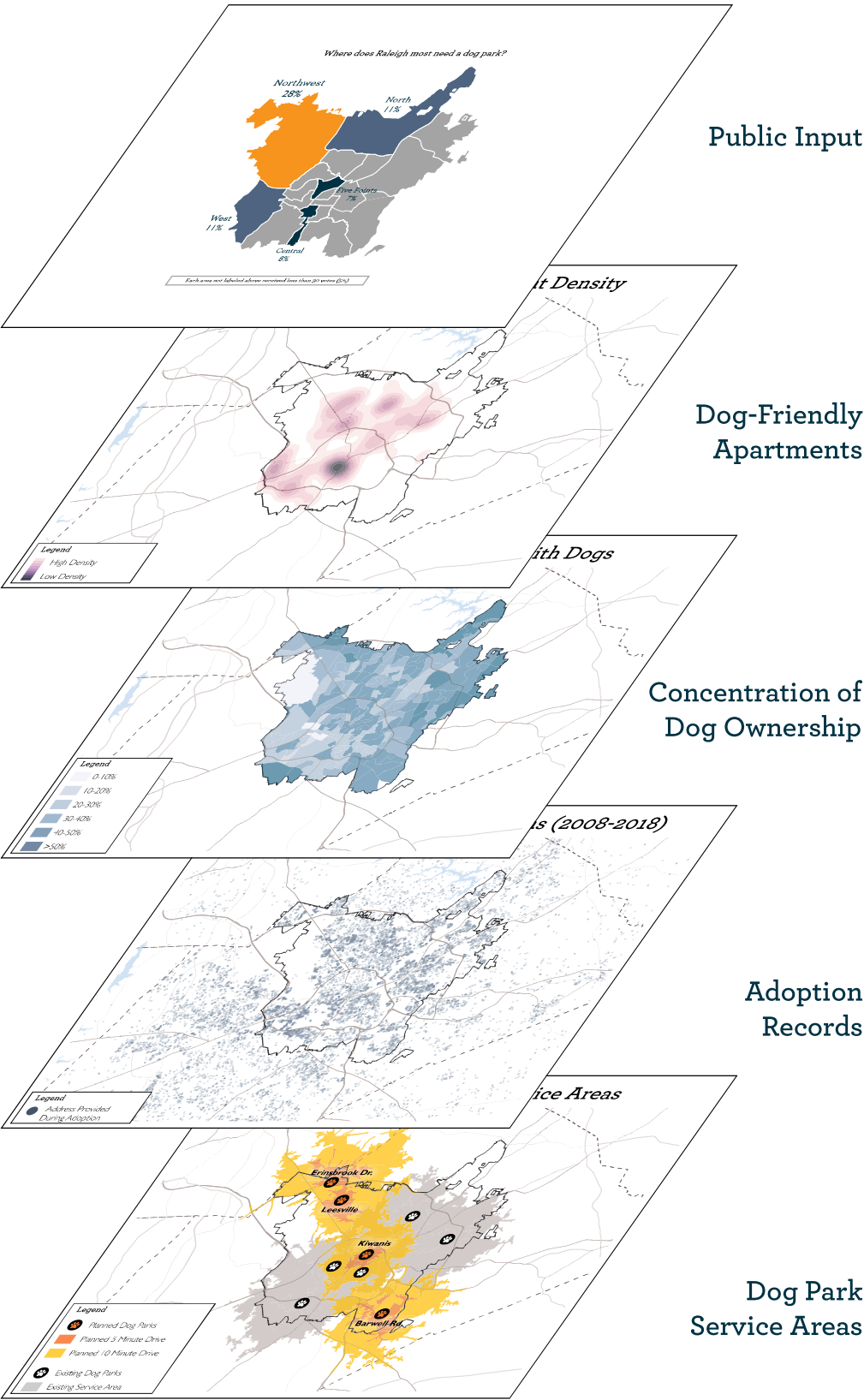
The **Service Area** analysis of the Dog Park Inventory identifies where gaps currently exist and where planning efforts have so far fallen short of providing for future coverage. This layer should form the foundation of future analysis. Developing dog parks in areas located outside of the current 10-minute service areas should be a high priority. Implementation of the dog parks in adopted master plans at Erinsbrook, Leesville, Kiwanis, or Barwell Road Park could be feasible in a relatively short timeframe, as funding becomes available, because a public process has already identified the suitability of these sites for dog park development.

Indicators of dog ownership and dog population density should also be considered in future planning efforts. **Adoption Records**, concentrations of **Dog Ownership**, and the locations of **Dog-Friendly Apartments** are useful indicators of where demand for access to public dog parks is likely to be highest.

Finally, and most importantly, future planning efforts should always prioritize direct **Public Input** and community interest. The results of the Dog Park Study community survey should guide which areas of the city are considered for future dog park development, and can supplement more focused planning efforts for individual parks in those areas.

Dog parks are most successful when they are located in communities with a true sense of ownership and stewardship over these shared spaces. Future dog park planning should prioritize development in areas where citizens have demonstrated the desire and commitment to work with the City of Raleigh to build and sustain a local dog park. When planning for future dog parks, the City should take an active role in seeking out and identifying community leaders that could help to organize an Adopt-a-Park agreement with a local volunteer group.

Multi-Layered Analysis







## Recommendations







The **Recommendations** chapter is intended to guide the future planning, design, delivery, operation, and maintenance of public dog parks and dog-related policies in the City of Raleigh.

These recommendations are intended to set realistic and achievable goals. Taken together, they provide a clear vision for the future which is supported by a consensus of public opinion, stakeholder priorities, spatial data analysis, and professional staff experience.

The initial phase of the Dog Park Study planning process revealed several **Key Issues**, which form the basis of organization for this chapter. These Key Issues represent some of the most important, controversial, or transformative topics distilled from the planning process.

A supplementary public outreach effort, after the first draft of the Dog Park Study Key Issues report was published online and presented to the Parks Committee, sought to gather additional public input on these specific topics. An additional survey was conducted to solicit focused and in-depth feedback on the details of these areas. This Key Issues survey was completed by over 330 participants, and generated nearly 250 in-depth comments on these topics. The results of that process are integrated throughout this chapter. For most of these Key Issues, a clear consensus public opinion emerged, guiding the formation of these recommendations.

ACCESS ..... 46

POLICY..... 52

DESIGN ..... 58

DOWNTOWN..... 62

STEWARDSHIP ..... 70

IMPLEMENTATION STRATEGIES ..... 82



KEY ISSUE # 1: DOG PARK ACCESS

Dog Park Access is the central issue that the 2018 Dog Park Study is intended to address.

*How many dog parks should the City of Raleigh have?*

*Where should they be located?*

*How far should citizens be expected to travel to visit a dog park?*

Based on a combination of public input, spatial analysis, and nationwide benchmarking, the following recommendations are proposed to guide the future planning and design of dog parks throughout the City of Raleigh. Implementation of these recommendations would create a park system that provides convenient and equitable access to dog parks throughout the entire City.

Access Recommendation #1

***Provide dog park access within a 10-minute drive of most residents***

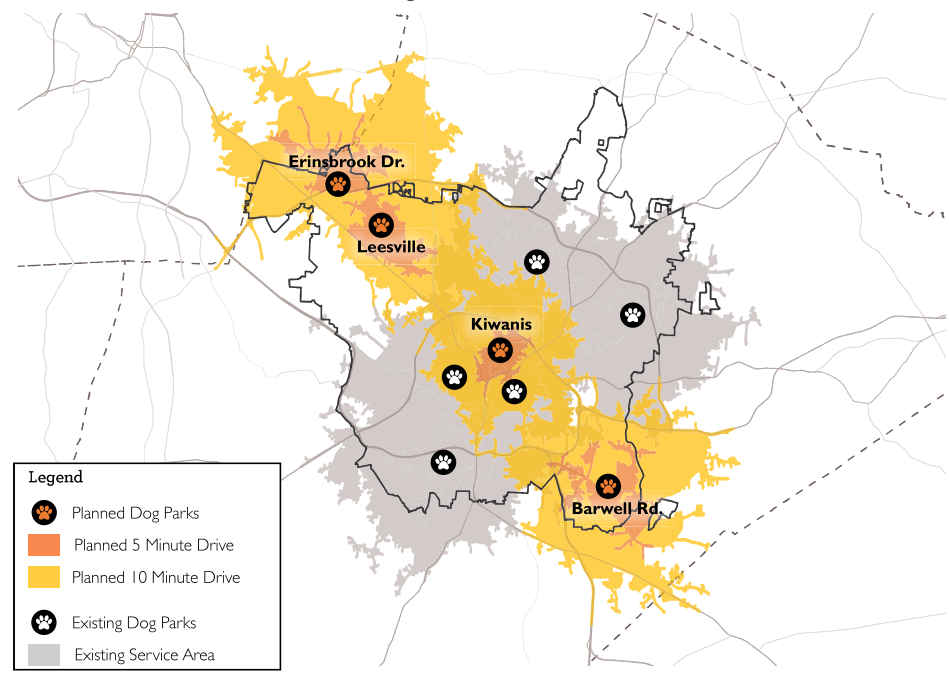
Results of the Dog Park Study community survey indicate that most residents are willing to drive up to 10 minutes to access a dog park. The planning process established a consensus opinion that dog park access does not need to be provided at the same level as core park facilities, such as playgrounds, greenways & walking trails, or fields for open play. However, most citizens who cannot access a dog park within a 10-minute drive consider their need for this park facility to be unmet.

Nearly 75% of Raleigh’s residents currently live within a 10-minute drive of one of the five (5) existing public dog parks. Implementation of the four (4) additional dog parks already planned at other parks would increase this coverage to almost 90% of residents.

Further improvements to access could be made by decreasing the average drive time for all residents and by providing walkable dog park access in the most densely populated areas of Raleigh.

In order to provide complete coverage for the entire city, it would be necessary to plan and deliver up to four (4) dog parks beyond those currently planned, in order to address gaps in access in West Raleigh, North Raleigh, and Northeast Raleigh, and to provide walkable access in Downtown Raleigh.

Planned Dog Park Service Areas





Access Recommendation #2

*Prioritize future dog park development based on:*

- (1) expressed public interest & community support,*
- (2) availability of suitable land, and*
- (3) concentration of “demand” indicators described in the Spatial Data Analysis section of this report*



The top priority areas established through the Dog Park Study Community Survey were Northwest Raleigh, West Raleigh, North Raleigh, Downtown, and the Five Points area. Addressing demand in these areas will require a combined planning approach that includes implementing existing park master plans, identifying suitable locations for additional new permanent dog parks, and using temporary installations to meet some demand in the short-term until long-term solutions can be adequately planned for.

In Northwest Raleigh and the Five Points area, there are adopted park master plans that have already identified suitable locations, supported by the local community, for future dog parks. Implementation of these master plans (at Erinsbrook Park or Leesville Road Park in Northwest Raleigh, and Kiwanis Park in Five Points) would address demand in these areas.

Currently, there are no formally adopted plans to provide additional dog parks in North Raleigh or West Raleigh, where there is a high unmet demand for dog parks. Future park planning efforts should seek to identify potentially suitable locations in these areas, to meet the public demand expressed through the Dog Park Study. Potential opportunities may include the upcoming park planning process at Baileywick Park in North Raleigh, or the provision of a temporary dog park at Lake Johnson in West Raleigh.

The need for improved Downtown dog park access, particularly walkable access, is further addressed in the section for **Key Issue #4: Dog Parks Downtown.**

Access Recommendation #3

*Encourage new residential developments to provide on-site dog park facilities*



Many newer residential developments, particularly multifamily apartments, are providing private dog park areas for the use of residents. These private amenities offset the negative externalities that would otherwise impact public space as dog-owners seek out areas to walk, play, and socialize with their dogs.

There are several tools available to encourage more private dog parks to be built, including clarification of UDO code requirements, proactive encouragement through development plan review, and partnering with the private development community through agencies like the Downtown Raleigh Alliance.

UDO Section 1.5.3. could be clarified to explicitly allow dog parks to satisfy the Outdoor Amenity Area requirement. Dog parks have previously been used in approved development plans to satisfy this requirement, but explicitly allowing it in the definition of Outdoor Amenity Areas would further encourage the provision of dog parks, especially in dense urban areas.

UDO Section 2.5.4 establishes the Allowed Uses of Open Space as required for residential developments. This section could be revised to encourage the provision of publicly accessible park amenities (including, but not limited to, dog parks) as a means of satisfying the total open space area requirements. This approach would ensure that the open space set aside during new development is functional to meet the needs of residents as well as the interests of the City of Raleigh as a whole.



Access Recommendation #4

*Expand the use of pop-up dog parks and temporary installations to meet dog park demand in key areas until a permanent solution can be provided.*

Some priority areas lack readily available land that is suitable for dog park development. This is especially true Downtown, but also applies to areas such as West Raleigh and Northeast Raleigh which do not currently have adopted park master plans featuring new dog parks.

Semi-permanent dog park installations set up with temporary fencing can be used to test out the viability of a dog park in a new location. These installations could be featured for a single weekend, or could be operated for longer periods of time on a weekly, monthly, or seasonal basis.

Continued support of this program will require coordination between Recreation, Parks Maintenance, and Special Events staff. Appendix H includes design guidelines and a handbook for installing and operating pop-up dog parks.

Access Recommendation #5

*Expand upon the current offerings of dog-friendly programs and dog-themed events, especially in downtown locations.*

Special events and programs can serve the role of building community and providing residents with safe spaces to enjoy parks with their dogs. Pop-up dog parks, dog-themed classes, dog-friendly events, and other programs have been extremely popular suggestions throughout the Dog Park Study.

The dog-friendly events hosted during the Dog Park Study planning process were extremely popular, and there has been significant support for them to continue on a regular basis.

Additional ideas raised during the Dog Park Study process include dog-obedience training classes, “puppy yoga”, and “pups & pints” events. Staff at Moore Square Park will actively seek out opportunities to provide dog-friendly programming in partnership with local businesses and nonprofit organizations when Moore Square re-opens in 2019.



Key Issue Survey: Public Input Summary

Key Issue #1: Dog Park Access

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Raleigh should set a goal of providing dog park access within a 10-minute drive of most residents.	50%	34%	10%	4%	2%
Raleigh should attempt to provide dog park access within a 10-minute walk of residents in the densest areas of the city.	45%	32%	18%	3%	1%



## KEY ISSUE # 2: DOG PARK POLICY

During the initial phase of the Dog Park Study, two City of Raleigh policies were highlighted for further study and community input: Off-Leash Dogs in Public Parks and Dog Park Membership Programs.

Under current policy, dogs are only allowed off-leash in Raleigh’s public parks if they are within the secure fenced areas of designated dog parks.

There is currently no membership policy in place that would require visitors to register their dogs with the City, and Raleigh’s public dog parks are free to access.

Initially, public opinion on these issues was unclear.

Some citizens argued passionately for a revised policy that would allow off-leash dogs in certain designated unfenced areas, during prescribed times of day. Other citizens expressed equally strong opinions in favor of not only maintaining the current off-leash policy but further ramping up enforcement.

A membership program was suggested by some citizens as a necessary means to improve the safety of dog parks and to provide a mechanism for rules enforcement. Other citizens insisted that a membership requirement would dramatically reduce the number of people who could visit these places and would destroy the sense of community enjoyed at Raleigh’s dog parks today.

The Key Issues Survey directly addressed these policy areas, and a consensus public opinion ultimately became clear: Raleigh should maintain its current policies.

The Policy Recommendations in this section align with that consensus public opinion, and are supported by the research findings and professional opinions of staff. As Raleigh continues to grow and evolve, however, these policies should be revisited and reconsidered as necessary.

## Off-Leash Dogs in Public Parks

City of Raleigh ordinances currently require that dogs must be kept on-leash within City parks, except for within designated dog exercise and play areas. In Raleigh, all designated dog exercise and play areas are securely fenced dog parks.

During the Dog Park Study planning process, staff investigated the feasibility of designating **un-fenced** open space areas within certain parks as “off-leash areas” during prescribed times of day.

In coordination with the NCRPA, over 30 North Carolina counties and municipalities were surveyed on this issue. None currently allow off-leash dogs in public parks outside of fenced areas.

While there are many cities elsewhere in the country that successfully use this policy to meet the need for dog parks, more consideration is needed before such a program could be implemented in Raleigh.

Animal Control, a division of the Raleigh Police Department, is responsible for enforcement of Raleigh’s “leash law” and other animal nuisance rules and regulations.<sup>7</sup> Violations of these rules on public park property (both inside and outside of designated “dog

“PLEASE DON’T CONSIDER “UNFENCED” PARKS. MY DOGS AND I ARE CONSTANTLY HARASSED BY OTHER PEOPLE’S UNLEASHED DOGS.”

- ANONYMOUS

exercise and play areas”) are subject to fines and penalties as defined in the City of Raleigh’s Code of Ordinances (Part 12 – Licensing and Regulation, Chapter 3. Animals).

The current “leash law” dictates that animals not on the premises of its owner must be under physical restraint. Voice command is not currently recognized as sufficient physical restraint. This rule applies in all public park areas, except “areas in City parks that have been delineated by the City Council as dog exercise and play areas.” Such designated areas must be “securely separated from the rest of the park by a physical barrier sufficient to prevent any animal from leaving the area unless under its owner’s restraint and control.”<sup>7</sup>

To allow off-leash dogs in unfenced areas within public parks would require revision of this ordinance or a suspension of its enforcement.

The supplementary survey conducted after the first Dog Park Study Draft Report was compiled established a clear community consensus in support of current policy. 81% of survey participants agreed that the City of Raleigh should maintain its current policy, permitting off-leash dogs in public parks only within secure fenced areas.

“REALLY LIKE THIS IDEA OF “OFF LEASH AREAS OR HOURS” AT PARKS, SO I COULD TAKE MY DOG RUNNING OR EXPLORING”

- ANONYMOUS



Dog Park Membership Program

At this time, users of Raleigh’s dog parks are not required to register their dog or pay any membership fees to access the dog park. Many other communities institute membership programs in order to control access, enforce penalties for rules violations, and recover some of the cost associated with operation and maintenance of their dog parks.

Although this would be a change in current operating procedure for Raleigh, the initial community survey generated a significant number of comments from people who expressed the opinion that public dog parks would be safer and better maintained with a membership program. The most common reason cited was that, if memberships required proof of current vaccination, a membership program with controlled gate access would provide a means of ensuring that dogs visiting City of Raleigh dog parks were up to date on all necessary vaccines.

A fee program such as this would be consistent with the Parks, Recreation and Cultural Resources Department’s adopted User Fee Policy, and would be similar to how visitors must purchase a membership or daily passes to access Raleigh’s public pools.

Currently, budgeting for dog park development in Raleigh must be prioritized against many other needs throughout the parks system. If revenue from a membership program could be used to help offset the cost of new construction and ongoing maintenance & operation, it could improve the feasibility of developing more dog parks in the future.

Membership fees could be an important source of cost recovery and revenue generation, which could make it easier to develop more new dog parks in underserved areas of the city while maintaining our existing dog parks. However, the administrative costs associated with managing and enforcing a memberships may reduce the cost-effectiveness of the program.

For reference, the Town of Cary generates approximately \$50,000 per year through their dog park membership program.

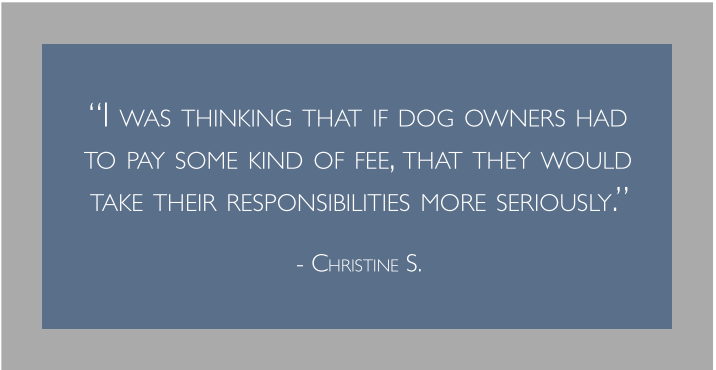
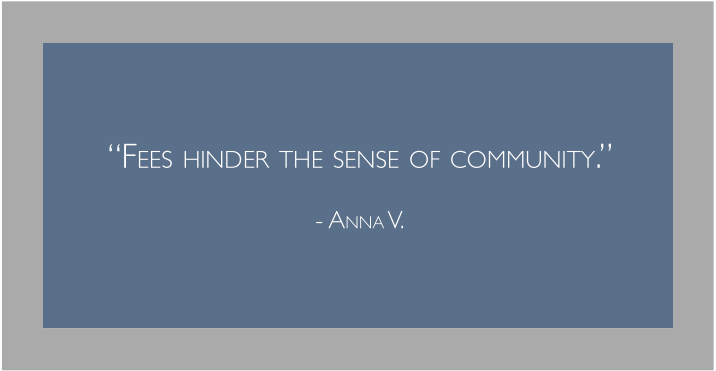
The number of incidents reported in Town of Cary dog parks is not significantly less than the number of incidents reported in City of Raleigh dog parks, however, providing some indication that while a membership program does provide stronger means of rule enforcement, it does not necessarily result in a significantly lower number of incidents. Notably, incidents in membership-based dog parks are much more likely to be reported than similar incidents in non-membership public dog parks, so the number of recorded incidents alone may not be a reliable indication of relative safety.

Instituting a membership policy for City of Raleigh dog parks would require an investment in infrastructure for controlled-access gates as well as the design of a system for administering and tracking memberships.

The supplementary survey conducted after the first Dog Park Study Draft Report was compiled established a clear community consensus *against* requiring memberships for dog park access. Many participants cited concerns that a membership program would severely limit the number of people who visit dog parks, and would deter new or casual users.

Many participants also suggested that the financial benefits of a membership program could be achieved with more proactive fundraising by the City or stewardship groups, and a more user-friendly way to provide private donations, such as collection boxes at dog park entrances.

Considering the costs associated with administering a membership program, it is unlikely that such a program would be feasible at this time. The City of Raleigh Parks, Recreation, and Cultural Resources Department will continue to revisit this issue in the future, as necessary, to weigh the relative costs and benefits of instituting a membership program.





Policy Recommendation #1

*In the near term, Raleigh should maintain its current policy, permitting off-leash dogs in public parks only within secure fenced areas.*

The supplementary survey conducted after the first Dog Park Study Draft Report was compiled established a clear community consensus in support of current policy. 81% of survey participants agreed that the City of Raleigh should maintain its current policy, permitting off-leash dogs in public parks only within secure fenced areas. This public consensus is supported by the recommendation of City staff and the Animal Control Division of the Raleigh Police Department.

Policy Recommendation #2

*Raleigh should not institute a membership program for dog park access at this time, but should continue to evaluate the costs and benefits of such a program.*

Parks, Recreation, and Cultural Resources staff will continue to revisit the viability of instituting a membership program to promote the safety of dog park users and the ongoing maintenance of dog parks.

A program for membership-based access could be useful in promoting safety and offsetting the cost of providing new dog parks. Membership-based access should be considered as a potential tool for encouraging the development of a public-private dog park.



Public Input Summary

Key Issue #2: Dog Park Policy

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Raleigh should maintain its current policy, permitting off-leash dogs in public parks only within secure fenced areas.	55%	26%	8%	7%	3%
Raleigh should consider requiring a modest membership fee for access at NEW dog parks.	7%	16%	21%	29%	27%
Raleigh should consider requiring a modest membership fee for access at EXISTING dog parks.	4%	7%	15%	26%	48%



### KEY ISSUE # 3: DOG PARK DESIGN

This chapter outlines the top priorities for future dog park design.

The amenities recommended in this chapter are not necessarily guaranteed to be provided at any particular dog park. Rather, these recommendations are intended to serve as a prioritization guide when deciding which features should be provided, given limited space and limited budget available for each new project.

According to the results of the community survey, the most important features of a successful dog park are: Cleanliness & maintenance,

shaded areas, and water fountains for dogs. Whenever space allows, separate areas for small dogs and large dogs should also be provided.

Other top design priorities for future dog parks include: Lighting to extend access hours after dark, especially during winter months; expanded water access for cooling off, designed to mitigate maintenance issues due to erosion and runoff; and alternative ground cover other than mulch.

Where feasible, additional special features should be considered, such as: Walking/exercise tracks within the off-leash area for human use, ample

seating and shade structures, and play equipment such as ramps, tunnels, and obstacle course elements.

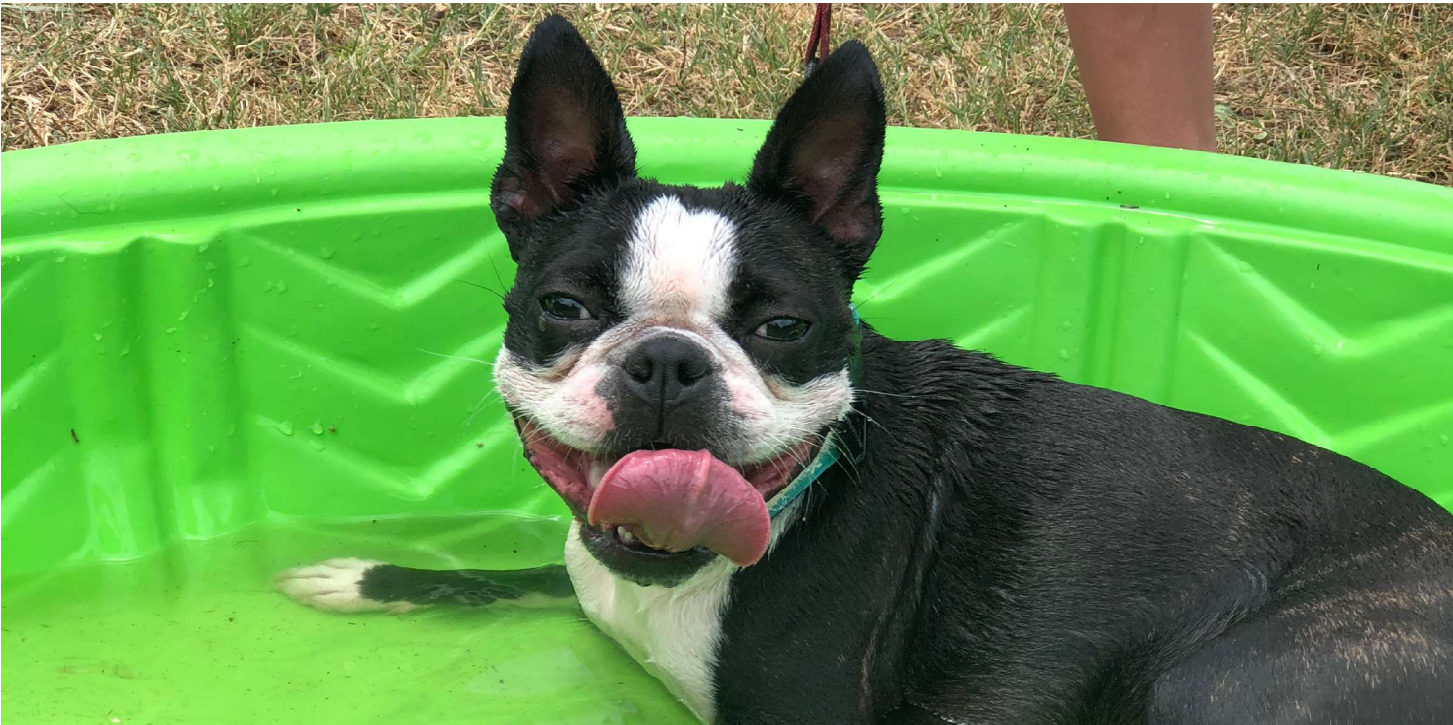
Expanded water access was a particularly salient issue for many, who expressed deep concern for the effects of heat on their dogs during warmer months. Without access to a hose and/or pools, many people shared concerns that their dogs may overheat while playing at the dog park.

Providing access to a hose and water tap at all dog parks is not always feasible due to cost and design restrictions. Where water line connections are not readily available, it can be prohibitively expensive relative to the total construction cost of a dog park to run new water infrastructure to a site. Furthermore, if a dog park is not originally designed to accommodate a “bathing” area, it can be difficult to manage the maintenance issues that arise with high volumes of water.

The supplementary Key Issues survey conducted after the initial Dog Park Study Draft Report was compiled provided an opportunity for more detailed feedback on community priorities when considering future dog park design elements.

The recommendations below reflect the consensus community opinions around which features should be prioritized, where possible, for new dog parks, where consensus exists. Each new dog park should be designed with the particular needs of the surrounding community in mind, and will need to conform to the particular location and constraints of the site.

**Appendix G** includes detailed Design Guidelines for future dog parks, dog runs, urban dog parks, and temporary dog parks.





Design Recommendation #1

Top-priority features for new dog parks are  
(1) Cleanliness & Maintenance,  
(2) Shaded Areas, and  
(3) Water Fountains for Dogs.

These design features address primary concerns over safety and sanitation. Whenever a new dog park is designed, guidelines for conditions such as slope and drainage must be considered and the staff resources necessary to maintain and operate a new dog park must be allocated when planning for future parks. Additionally, concerns over the safety impact of heat at dog parks featured prominently in the Dog Park Study planning process. While it will not always be financially viable, drinking water and shade should always be a top priority when designing future dog parks.

Design Recommendation #2

Where financially viable, these additional design features should be considered:  
(1) Expanded water access,  
(2) Lighting, and  
(3) Alternative Ground Cover.

These secondary design features are high community priorities, but add significant expense to the construction of dog parks. Where possible, dog parks should be designed to provide expanded water access for bathing and cooling off. It is difficult to retrofit existing dog parks for this purpose, due to the maintenance issues created by high volumes of water. Site lighting is also a highly demanded, but very expensive, feature. Opportunities to co-locate dog parks near other planned sources of lighting could provide safe night-time use without the full cost of extending a dedicated light source.

Design Recommendation #3

New dog park design should conform to the full design guidelines in the Dog Park Study (Appendix G) including the newly added design guidelines for Urban Dog Parks and Temporary Dog Parks.

Dog Park Design Guidelines were recently updated by the Parks, Recreation, and Greenway Advisory Board in 2015. Those guidelines remain mostly unchanged, except for additional guidelines specific to Urban Dog Parks and Temporary Dog Parks. The guidelines for Urban Dog Parks promote the aesthetic impact of alternative fencing materials and encourage alternative groundcover that would be more appropriate for use in a dense, high-traffic, urban environment. Temporary Dog Parks will be developed with temporary fencing, and are unlikely to include some basic dog park amenities, such as water access.



Public Input Summary

Key Issue #3: Dog Park Design

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The most important features of a successful dog park are: Cleanliness & Maintenance, Shaded Areas, Water Fountains for Dogs, and Separate areas for small dogs and large dogs.	70%	27%	1%	1%	0%
2nd-tier design features should include: Ample seating, Convenient parking, and Play equipment for dogs.	29%	52%	16%	3%	0%
3rd-tier design features might include: Lighting to extend access after dark (especially in winter months), Expanded water access for cooling off (especially in summer months), Alternative ground cover other than mulch, and Walking/exercise tracks within the off-leash area for human use.	50%	35%	11%	4%	0%



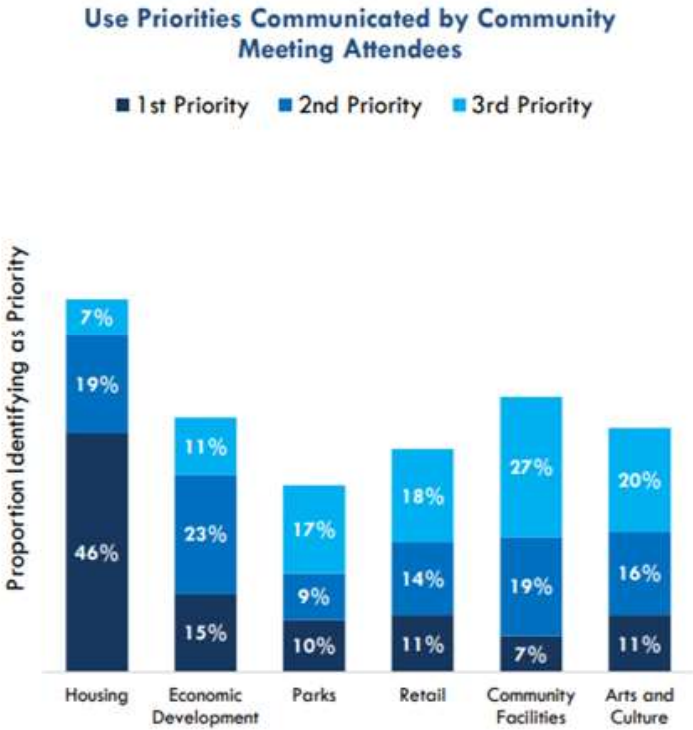
## KEY ISSUE # 4: DOG PARKS DOWNTOWN

Due to high real estate values and many competing demands for limited land in Downtown Raleigh, finding a suitable site for a Downtown dog park has proved to be a challenge.

The City of Raleigh will look for opportunities to repurpose underutilized parcels, offer new dog-themed programs and dog-friendly events, expand the use of temporary dog parks as an interim solution until more permanent dog parks can be established, and proactively seek out partnerships with private residential developments to share the cost of providing a publicly accessible dog park in the Downtown area.

As part of the Dog Park Study, staff from the Urban Design Center and Parks, Recreation and Cultural Resources Department reviewed underutilized City-owned parcels throughout Downtown Raleigh to identify any potentially suitable sites for dog park development.

In 2017, the City of Raleigh adopted a Downtown Land Disposition Strategy that identified proposed future use, development, or sale of City-owned properties downtown. Among competing priorities for housing, retail, economic development, and other community facilities downtown, “parks” were identified as the lowest priority for these underutilized city-owned sites (see chart).



“Parks” were likely considered a low priority in the Downtown Land Disposition study because general park access in Downtown Raleigh is strong, and will improve even further with the development of Dix Park, Devereux Meadows, and Moore Square. However, the specific need for walkable dog park access remains largely unmet. Among those few parcels that were flagged as potential “park” uses, none are highly desirable for dog park development.

Furthermore, most existing park properties in Downtown Raleigh lack suitable areas for permanent dog park development, due to site constraints, conflicting park master plans, or a lack of community support that would be required to amend existing park master plans to add a dog park. Especially when looking for suitable sites within walking distance of Downtown Raleigh’s major residential population nodes, suitable open land is hard to come by.

In the absence of any obviously suitable locations for permanent dog park development on City-owned land, providing dog park access downtown will require creative solutions and innovative methods of partnering with private development to meet the needs of the public.



Downtown Recommendation #1

*Continue the program of pop-up dog parks in Downtown Raleigh, and extend the duration that temporary dog parks are open to test the viability of potential sites for permanent dog park development.*

As an interim solution, pop-up dog parks are an inexpensive way to create safe off-leash areas for pups to play in parks. These spaces are created with temporary fencing and gates, along with just the basic dog park amenities (bags, trash cans, and some places to sit). Since this can be done at a small fraction of the cost of building a permanent dog park, these pop-ups can help address some demand on a temporary basis.

So far, our pop-up dog parks have been open for a weekend at a time. In the future, we could expand the program to host pop-up dog park events more frequently and for longer durations. Additionally, dog parks created with temporary fencing can be used as a low-cost, low-impact method to test out whether a particular site might be a good fit for a permanent dog park.



Downtown Recommendation #2

*Develop a regular program of dog-friendly and dog-themed events downtown.*

Special events and programs can serve the role of building community and providing residents with safe spaces to enjoy parks with their dogs. Pop-up dog parks, dog-themed classes, dog-friendly events, and other programs have been extremely popular suggestions throughout the Dog Park Study. City of Raleigh staff will partner with local businesses and public agencies to design these programs and expand dog-friendly programs Downtown.

Providing a regularly scheduled, temporary pop-up dog park in Moore Square could help address the need for dog park access for the dense residential node that is developing in that area of downtown. The quality and design of this space should be of a high standard appropriate for a premier urban square.

“POP-UP DOG PARKS ARE A GREAT WAY TO BRING THE COMMUNITY TOGETHER.”

- ANONYMOUS



Downtown Recommendation #3

*Continue to look for new opportunities to provide dog park access within a 10-minute walk of Downtown Raleigh’s core residential population nodes.*

As shown in the accompanying map, Downtown Raleigh’s residential population is concentrated in three main areas: Glenwood South, the Warehouse District, and Fayetteville Street/Moore Square.

While the park resources within walking distance of these nodes are limited and already under intense pressure for many competing uses, there may be opportunity to provide temporary or permanent dog park access through some of the sites in the vicinity. Future park planning efforts should consider the special need in this area for dog park access. There are several remnant parcels throughout the Downtown Raleigh area that have limited potential for dog park development; staff will evaluate these sites and the feasibility of temporary or permanent dog park construction.

“DRIVING TO A DOG PARK IS NOT IDEAL.  
DOWNTOWN RESIDENTS  
NEED A WALKABLE SOLUTION.”  
  
-JANE H.

Downtown Residential Unit Density



This map is a visualization of residential unit density, created based on the location of 62 multifamily residential developments in Downtown Raleigh. This includes 46 existing developments, 7 currently under construction, and an additional 9 proposed. Density was calculated based on the concentration of total residential units: 6,398 units in all.  
(Data provided by the Downtown Raleigh Alliance)



Downtown Recommendation #4

*Proactively seek out partnership opportunities to develop a publicly accessible dog park.*

In coordination with the Downtown Raleigh Alliance, Urban Design Center, and Development Services staff, the Parks, Recreation and Cultural Resources Department is prepared to explore partnership opportunities to develop a publicly accessible dog park in Downtown Raleigh. This solution may require consideration of cost-share arrangements, leasing of privately owned land, or agreements to provide maintenance, indemnification, and other contributions.

Downtown Recommendation #5

*Encourage the provision of on-site dog parks in new residential development by clarifying UDO requirements for Open Space and Outdoor Amenity Areas.*

Several residential developments downtown have provided on-site dog park facilities for the use of residents. Compared with multifamily projects in the rest of the city, however, a smaller proportion of downtown developments provide private dog areas. Due to the density and intensity of site development in Downtown districts, it is often infeasible to dedicate open space for dog park use.

Residential sites required to provide space for an Outdoor Amenity Area (UDO 1.5.3) could satisfy this requirement through the provision of a private or publicly accessible dog park. Requirements for Open Space Allocation are governed by UDO 2.5.2; expansion of the definition of Open Space to allow publicly accessible park facilities to satisfy this area requirement would increase flexibility and opportunity for development of these public facilities.



Public Input Summary

Key Issue #4: Dog Park Downtown

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Raleigh should proactively look for creative ways to provide a Downtown dog park, including: re-purposing underutilized parcels, using temporary dog parks as an interim solution, and public-private partnerships.	44%	38%	14%	2%	2%
Raleigh should continue to host pop-up dog parks & other dog-friendly programs in locations with poor dog park access, especially focusing on the most densely populated areas.	58%	26%	13%	2%	0%



“RIGHT NOW, THERE IS NO CLEAR NOTICE OF HOW AND WHERE TO DONATE. IF THERE WAS A NOTICE SOMEWHERE NOW, I WOULD DONATE.”

- JACQUELINE M.

## KEY ISSUE # 5: DOG PARK STEWARDSHIP

### Volunteers, Donations, & Sponsorships

Volunteer groups and private donations (no matter how small!) are crucial to Raleigh’s ability to maintain well-functioning dog parks. We rely on volunteers to help enforce rules, report incidents, stock bag dispensers, maintain & spread mulch, and take on many other essential tasks that keep our dog parks clean and safe.

In some cases, a dedicated group (such as the Friends of Millbrook Dog Park) has formally organized and entered into an Adopt-a-Park agreement with the City of Raleigh. Alternatively, sponsorships are a great way for a business or organization to give back to the community and build social capital.

The Dog Park Study process has revealed a great deal of public energy and enthusiasm for dog parks. It will be the responsibility of the City of Raleigh to harness this energy and direct it positively toward the maintenance, upkeep, and stewardship of dog parks and dog park programs.

Many people logged comments interested in more opportunities to volunteer, and a more straightforward way to provide donations for specific dog parks. Nearly 20% of survey respondents provided direct contact information along with their interest in supporting local dog parks.



### Enforcement and Education

During the Dog Park Study planning process, concerns came to light over the enforcement of dog-related rules in public parks. Citizens expressed concerns over the enforcement of leash laws on public park property—some argued that these laws were being unjustly enforced to penalize harmless behavior, and others argued that there was a general lack of adequate enforcement and more efforts should be made to establish and impose stricter penalties for rule violations.

Animal Control, a division of the Raleigh Police Department, is responsible for enforcement of Raleigh’s “leash law” and other animal nuisance rules and regulations.<sup>8</sup> Violations of these rules on public park property (both inside and outside of designated “dog exercise and play areas”) are subject to fines and penalties as defined in the City of Raleigh’s Code of Ordinances (Part 12 – Licensing and Regulation, Chapter 3. Animals).

Staff reviewed the City of Raleigh’s current fee structure of fines for repeat violations of the leash law, and found that these fines were most recently revised in March 2016. It is not recommended at this time that any further revisions to these fines be considered at this time. The current fine structure is described in Sec. 12-3069:

*The first violation of this chapter shall subject the violator to a civil penalty of one hundred dollars (\$100.00); the second violation during a twelve- month period shall be subject to a one hundred fifty dollar (\$150.00) penalty; the third violation during a twelve- month period shall be subject to a two hundred fifty dollar (\$250.00) penalty; the fourth and subsequent violations shall be subject to a five hundred dollar (\$500.00) penalty. Civil citations shall be served personally upon the violator by an animal control officer, by a member of the Raleigh Police Department, or by any other means authorized for the service of civil process by the North Carolina Rules of Civil Procedure.*

Parks, Recreation, and Cultural Resources staff will work with Animal Control representatives to develop a comprehensive strategy for responding to violations of dog-related rules in public parks. Marketing materials, such as post cards and temporary signs, will be developed so that Park staff have the resources necessary to educate members of the public about the rules in place.

Staff is also working to develop a friendly, positive, outreach-based response protocol to address incidents in public parks such as dog bites or attacks. Based on an analysis of animal-related 911 calls and consultation with Animal Control staff, we have identified which parks are the most common locations of dog-related incidents. In response to future incidents, staff could organize pop-up dog park events at incident locations, in partnership with Animal Control and other public agencies, to create a platform for public engagement, education, and raising awareness around animal safety.

Stewardship Recommendation #1

***Provide more volunteer opportunities and service days at existing dog parks, and recruit potential “Friends Group” leaders from among Dog Park Study participants.***

Millbrook Dog Park benefits from the efforts of a highly involved, organized, and motivated group of stewards known as the Friends of Millbrook Dog Park ([www.millbrookdogpark.com](http://www.millbrookdogpark.com)). Volunteers at Millbrook and other dog parks are integral to the stocking of bag stations, enforcement of rules & etiquette, other maintenance tasks, and fundraising.

Community involvement should be encouraged and expanded, but sustainable volunteerism requires committed, dedicated, and consistent involvement from a core group of users. The City of Raleigh will assist citizens interested in establishing a formal stewardship group for the care of existing and future dog parks.



Stewardship Recommendation #2

***Provide more straightforward and accessible means of accepting donations for the benefit of specific dog parks.***

Staff will develop new methods to solicit and accept donations for the support of dog parks, including the possibility of an online portal or collection boxes at dog park entrances (both of which were suggested by Dog Park Study participants).

Stewardship Recommendation #3

***Seek out potential sponsorships from major corporations and local businesses for the construction of new dog parks and improvement of existing dog parks.***

Sponsorships have been successfully used in many communities to fund the construction of dog parks and dog park improvements. Occasionally, national corporations such as Purina, PetCo, or PetsMart will offer grant or sponsorship opportunities for dog park development and programming.



Stewardship Recommendation #4

***A multi-departmental team of City of Raleigh staff will develop an educational campaign to improve outreach and communicate off-leash rules & regulations to park users.***

Parks, Recreation and Cultural Resources staff, in coordination with the Animal Control Division of the Raleigh Police Department and the City of Raleigh Communications Department, will develop a set of marketing materials to be used as part of a standardized response to off-leash violations or dog-related incidents in public parks.

In coordination with other groups such as Wake County Animal Control and SPCA of Wake County, community events featuring pop-up dog parks can be organized as a positive, participation-based approach to reinforcing rules & regulations and encouraging compliance without relying exclusively on punitive measures.



To raise awareness of the detrimental impact that uncollected dog waste has on the quality of water in our streams, this mural was commissioned by the Stormwater Management Division as part of a public outreach campaign. The Stormwater awareness campaign was run in cooperation with the pop-up dog park program, encouraging dog-owners (especially in Downtown Raleigh), to be more mindful of all of the impacts of uncollected dog waste.

Stewardship Recommendation #5

***Continue to provide more user-friendly outreach to promote dog park rules and regulations, and retrofit outdated signage to conform with new graphic standards.***

As part of the Dog Park Study, the standard dog park rules sign was redesigned (see images) to be less text-heavy and easier to interpret at a glance. The new sign is consistent with the Parks, Recreation and Cultural Resources facility signage package.

Additional efforts will be made to update other communication outlets, such as the City of Raleigh Dog Parks webpage, to include a more accessible list of resources and information related to dog parks.



Old Rules Sign



New Rules Sign



Stewardship Recommendation #6

*Continue to assess maintenance needs at existing City of Raleigh dog parks, and budget the staff time and resources necessary to implement priority improvements.*

City of Raleigh Parks Maintenance staff endeavors to be responsive to community needs at all of our park facilities, including dog parks. Where possible, staff has already responded to community demand expressed during the Dog Park Study, including improved water access at Millbrook Dog Park and increase the frequency of trash removal at Buffalo Road Dog Park.

Future dog parks will be designed to limit the maintenance burden of existing dog parks, by limiting the potential for erosion and pooling of water. The long term operational & maintenance resources necessary for a successful dog park will be considered when evaluating the total lifecycle cost of new dog parks.



Public Input Summary

Key Issue #5: Dog Park Stewardship

Volunteer groups and private donations (no matter how small!) are crucial to Raleigh’s ability to maintain well-functioning dog parks. We rely on volunteers to help enforce rules, report incidents, stock bag dispensers, maintain & spread mulch, and take on many other essential tasks that keep our dog parks clean and safe. In some cases, a dedicated group (such as the Friends of Millbrook Dog Park) has formally organized and entered into an Adopt-a-Park agreement with the City of Raleigh. Alternatively, sponsorships are a great way for a business or organization to give back to the community and build social capital.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
18%	36%	31%	10%	4%



## IMPLEMENTATION STRATEGIES

Full implementation of the Dog Park Study recommendations will require many years, as capital projects can only be implemented as funding becomes available. Without an outside source of dedicated revenue—such as donations, sponsorships, public-private cost share arrangements, or membership dues—the budget allocated for dog park facilities must be considered among the many other competing priorities of the park system.



It will require a great deal of teamwork to build the system of dog parks envisioned in this plan. These recommendations will impact every division of the Parks, Recreation and Cultural Resources Department, drawing on staff expertise in design, construction, maintenance, programming, marketing & communications, and volunteer coordination. The Dog Park Study recommendations also serve as a call to action for other City departments and partner organizations to recognize the importance of encouraging dog park facilities in the context of private development, and to address the negative externalities created when dogs are invited to live with us but not given a dedicated place to play.

Finally, and most importantly, these recommendations will be impossible to implement without the continued and sustained support of the community. In order to build a truly successful dog park system, the City of Raleigh will need to rely on the support, time, and dedication of volunteers and donors who are willing to contribute to the facilities that they enjoy. The Dog Park Study planning process has shown that there is a great deal of energy and enthusiasm for public dog parks. It will be incumbent on the City to provide positive direction for this enthusiasm, and it will be role of individual citizens to exercise their support and commitment to these beloved park facilities.



Implementation Strategy #1

*Implement existing park master plans*

Constructing elements from an adopted park master plan would require no further public process. The master plan process for that park has already established the community desire and acceptance of a dog park as a priority facility for that site. Although the decision of whether to fund dog park construction must be prioritized among other potential park amenities, dog parks in these locations could be constructed as soon as time and funding allows.

This strategy applies to parks such as Erinsbrook Park, Leesville Road Park, Kiwanis Park, and Barwell Road Park, as outlined in Chapter 2: Input & Analysis.

Implementation Strategy #2

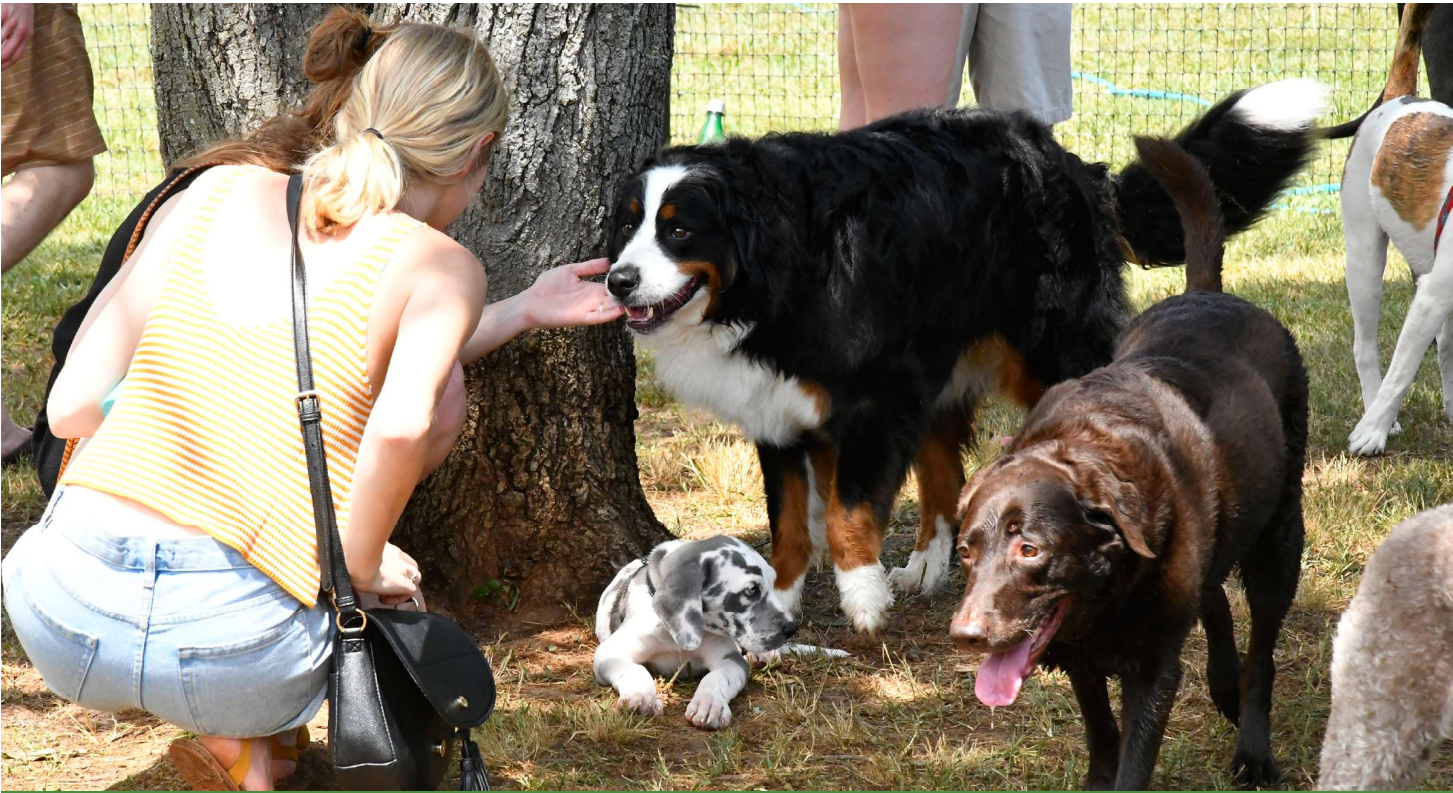
*Include dog parks in future park master plans*

Master Plan processes are intensive community-based approaches to designing (or re-designing) public parks. Through this process, a team of staff, designers, and members of the community work together to establish a consensus vision for the future park based on site constraints, neighborhood context, and the unique needs of the area. If the community process results in a dog park recommended for that particular site, then it may be included in the resulting master plan. When new master plan processes are undertaken in “areas of need” as identified in this Dog Park Study, they should explore the feasibility of including a dog park at that park site.

This strategy may apply to parks such as Baileywick Park (North Raleigh), Devereux Meadows (Downtown), Dix Park (Downtown), and the undeveloped park properties in Northeast Raleigh.

“WITH THE SCARCITY OF LAND IT IS BETTER TO PLAN FOR THE FUTURE FOR ALL PARKS, INCLUDING THE FEATURING OF DOG PARKS AT MORE EXISTING AND FUTURE PARKS.”

- STEPHEN M.





Implementation Strategy #3

*Evaluate opportunities at existing park sites, particularly for temporary dog parks*

Where the Dog Park Study has identified areas of need, it may be necessary to evaluate the suitability of developed parks in those areas to support the addition of a temporary or permanent dog park. In some cases, this may require a process to update or amend the existing park master plan. Alternatively, these sites may provide an opportunity to install temporary or pop-up dog parks.

This strategy may apply to parks such as Lake Johnson Park (West Raleigh), the plaza at Dawson & Morgan Street (Downtown), and Abbott’s Creek Park (Northeast Raleigh).

Implementation Strategy #4

*Identify opportunities on excess City-owned land*

In some cases, it may be possible to identify City-owned land that is not currently managed as a public park site. While these parcels may be too small or otherwise poorly situated to support a permanent dog park, they do provide an intriguing opportunity that requires further investigation. Since these parcels are undevelopable, there is limited competition with alternative potential uses, making them candidates for permanent or temporary dog park development.

This strategy may apply to several remnant parcels downtown, near the intersection of Dawson & South Street.

Implementation Strategy #5

*Public-private partnerships*

In some situations, especially downtown, there is both a high demand for public dog park access and a limited availability of park land that could support dog park use. In these circumstances, it may be necessary to seek opportunities for providing a publicly accessible dog park on private land. Several strategies could be considered to accomplish this goal.

Cost-share arrangements may be used to incentivize private developers to include a publicly accessible dog park in plans for new multifamily developments. Partnerships such as this would require a balance of potential costs beyond just the capital costs for design and construction. Long term ownership, maintenance responsibility, and liability concerns will need to be addressed through any partnership agreement. Although there is very little vacant privately-owned land available Downtown, it may be feasible to lease ground space to develop a semi-permanent dog park as an interim use during a period before underutilized land is re-developed.





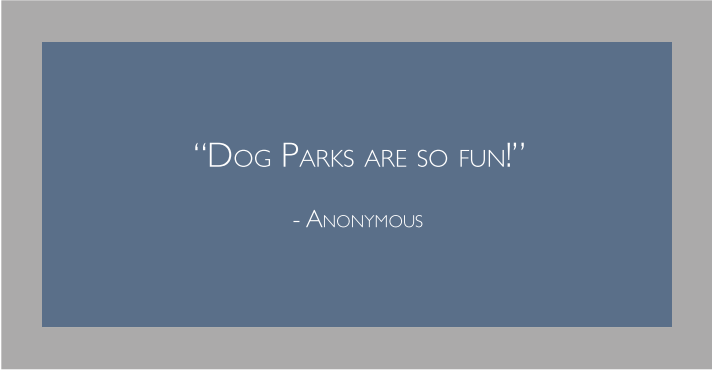


PHOTO CREDIT MEREDITH COOPER

# Appendices







APPENDIX A: REFERENCES AND RESOURCES .....88

APPENDIX B: SYSTEM PLAN.....90

APPENDIX C: COMMUNITY SURVEY RESULTS.....97

APPENDIX D: DOWNTOWN ANALYSIS.....104

APPENDIX E: ESRI COMMUNITY ANALYST .....107

APPENDIX F: FAQ.....120

APPENDIX G: DOG PARK DESIGN GUIDELINES.....122

APPENDIX H: POP-UP DOG PARK HANDBOOK .....129

APPENDIX I: PLANNED DOG PARK INVENTORY .....134



APPENDIX A: REFERENCES AND RESOURCES

<sup>1</sup> Trust for Public Land City Park Facts Report (2018), available online at <https://www.tpl.org/2018-city-park-facts-dog-parks>

<sup>2</sup> Building permit data based on residential building permits issued between 2010 and 2016 as reported by the City of Raleigh Inspections Department and Department of City Planning in the City of Raleigh Data Book (September 2018), at <https://www.raleighnc.gov/government/content/PlanDev/Articles/LongRange/RaleighDemographics.html>.

<sup>3</sup> Pet Population and Ownership Trends in the U.S.: Dogs, Cats, and Other Pets, 2nd Edition (May 2017), as reported by Good News For Pets in an article titled “4 Trends Driving Pet Population and Pet Ownership Growth” (May 2017).

<sup>4</sup> 2017-2018 American Pet Products Association National Pet Owners Survey, as reported by the American Kennel Club.

<sup>5</sup> City of Raleigh household dog-ownership statistics and total dog population estimates used throughout this report are based on Esri’s 2018 demographic estimates for the City of Raleigh, including 2018 Pets and Products Market Potential Index and 2018 Consumer Spending Index. More information on the methodologies behind these demographic estimates is available online at [http://www.esri.com/data/esri\\_data/methodology-statements](http://www.esri.com/data/esri_data/methodology-statements) and in Appendix E: Esri Community Analyst Methodology.

<sup>6</sup> The 2014 Parks, Recreation and Cultural Resources System Plan can be viewed online at: <https://www.raleighnc.gov/parks/content/PRecDesignDevelop/Articles/2012PRSystemPlan.html>

<sup>7</sup> Raleigh, North Carolina - Code of Ordinances PART 12 - LICENSING AND REGULATION CHAPTER 3 – ANIMALS. Available online at: [https://library.municode.com/nc/raleigh/codes/code\\_of\\_ordinances?nodeId=DIVIICOGEOR\\_PT12LIRE\\_CH3AN](https://library.municode.com/nc/raleigh/codes/code_of_ordinances?nodeId=DIVIICOGEOR_PT12LIRE_CH3AN)

Sec. 12-3001: Division of Animal Control Created; Composition; Responsibility

Sec. 12-3004: Definitions: Animal at Large (Establishes the definition of an Animal at Large, requiring physical restraint such as a leash, except within delineated “dog exercise and play areas” which must be securely separated from the rest of the park by a physical barrier.

<sup>8</sup> Ordinance No. 2016-552, Adopted March 1, 2016 and Effective March 15, 2016. [https://library.municode.com/nc/raleigh/ordinances/code\\_of\\_ordinances?nodeId=766255](https://library.municode.com/nc/raleigh/ordinances/code_of_ordinances?nodeId=766255)



APPENDIX B: SYSTEM PLAN

The 2014 City of Raleigh Parks, Recreation and Cultural Resources System Plan included a comprehensive park needs assessment based on a statistically valid citywide Citizen Opinion and Interest Survey.

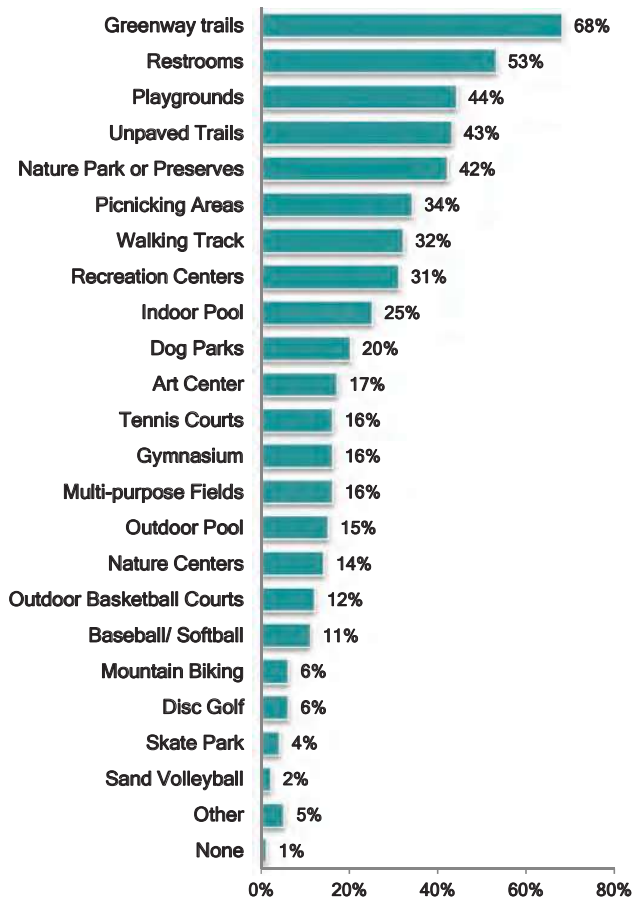
This citywide survey was conducted with scientifically sound sampling methods that yielded a 95% confidence level with a +/- 3.4% margin of error. Several questions from the System Plan survey included dog parks among the park amenities or activities that respondents could choose from.

The full results of these questions are reproduced in this section of the report, and demonstrate the importance of dog parks to Raleigh’s general population.

ALL the City of Raleigh recreation facilities you or members of your household have used or visited in the City of Raleigh over the past 12 months?

Of the 83% of households that visited City of Raleigh parks in the past 12 months, 68% used Greenway Trails. Other facilities used include: Restrooms (53%), Playgrounds (44%), Unpaved Trails (43%), Nature Park or Preserves (42%), and Picnicking Areas (34%).

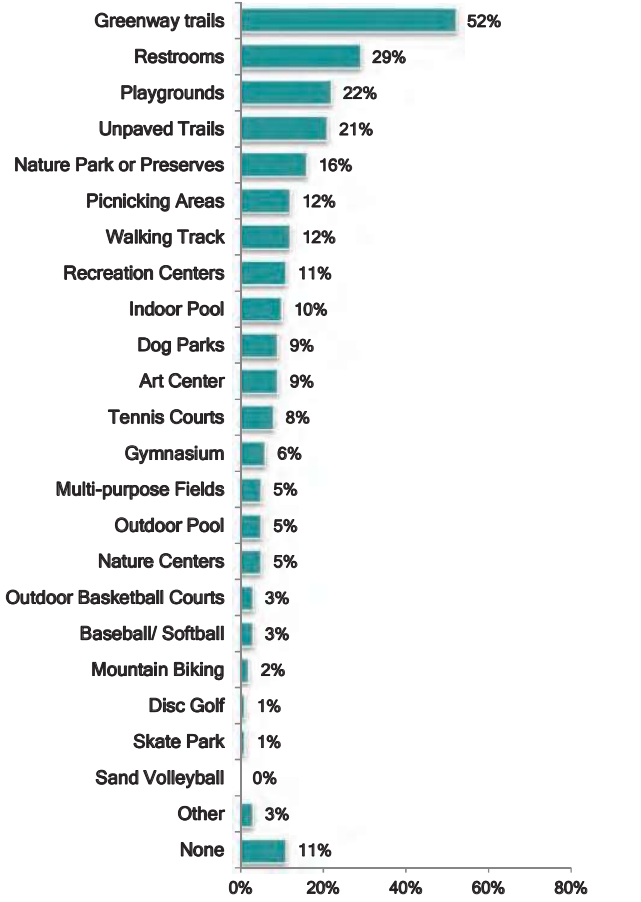
Table 40. Which facilities have you visited?



Which park and recreation facilities do you or members of your household visit most often?

Based on the sum of their top three choices, the parks and recreation facilities visited most often include: Greenway Trails (52%), Playgrounds (29%), Nature Park or Preserves (22%), Unpaved Trails (21%), and Walking Track (15%).

Table 41. Which facilities do you visited most often?

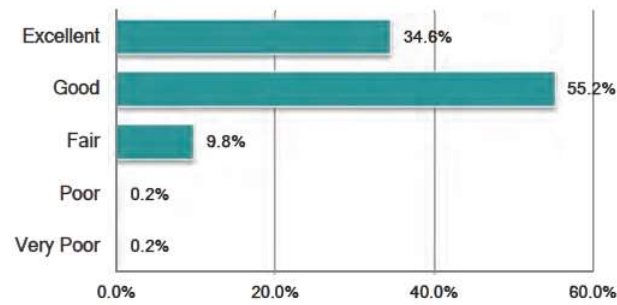




Overall, how would you rate the condition and appearance of ALL the parks and recreation sites in the City of Raleigh you have visited?

Of the 83% of households that visited City of Raleigh parks in the past 12 months, 35% rated the overall condition and appearance as “excellent.” Fifty-five percent (55%) rated them as “good,” and the remaining 10% rated the condition and appearance of the parks as “fair.”

Table 42. How would you rate the conditions and appearance of parks in the City of Raleigh?

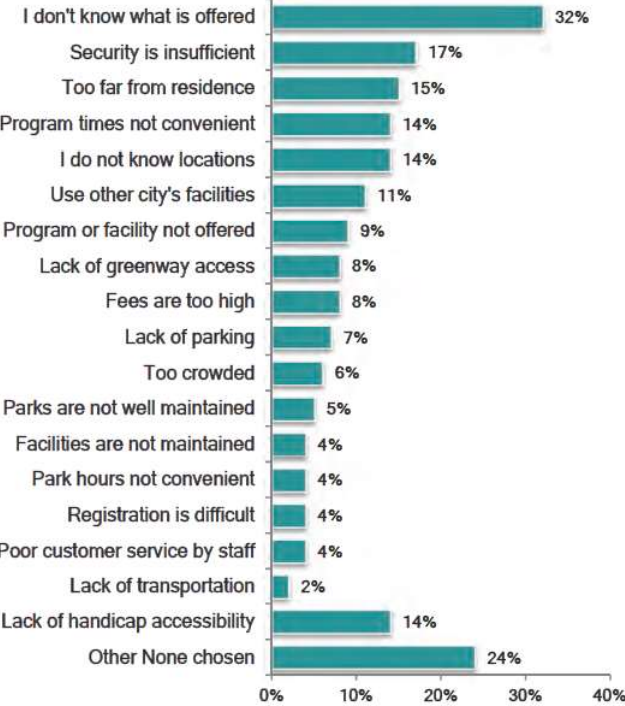


Reasons that prevent you or other members of your household from using parks, greenways trails, recreation facilities or programs of the City of Raleigh Parks, Recreation and Cultural Resources Department more often.

Thirty-two percent (32%) of households indicated they do not use Raleigh’s parks, facilities, etc. more often because they do not know what is being offered. Other reasons preventing more frequent usage include: insufficient security (17%); parks/facilities are too far from residence (15%); program times are not convenient (14%); and not knowing locations of parks/facilities (14%).

When households that have used a greenway in the last 12 months are analyzed separately, a lower portion of respondents replied that security was insufficient (14%) compared to households that have not used a greenway in the last 12 months (23.7%). This may indicate that the concern regarding insufficient security is not related to greenways security.

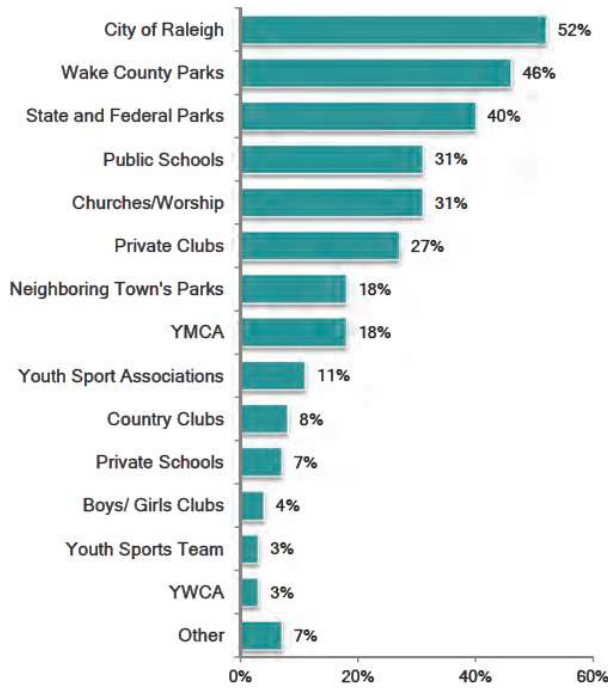
Table 43. What reasons prevent you from using park and recreation facilities?



ALL the organizations that you and members of your household use for parks and recreation programs and services.

Fifty-two percent (52%) of households indicated they use the City of Raleigh Parks, Recreation and Cultural Resources Department for programs and services. Other organizations used include: Wake County Parks (46%), State and Federal parks (40%), Wake County Public Schools (31%), and churches/places of worship (31%).

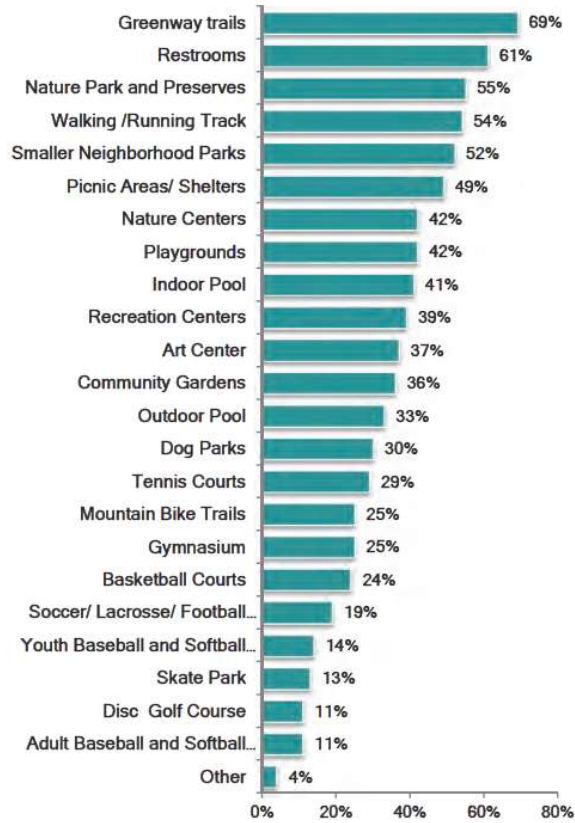
Table 44. Which organizations do you use?



Which park and recreation facilities do you or your household have a need for?

Sixty-nine percent (69%) of households have indicated a need for greenway trails. Other facilities with similar need include: restrooms (61%); nature park and preserves (55%); walking/ running track (54%); smaller neighborhood parks (52%).

Table 45. Which park and recreation facilities do you and your household have a need for?

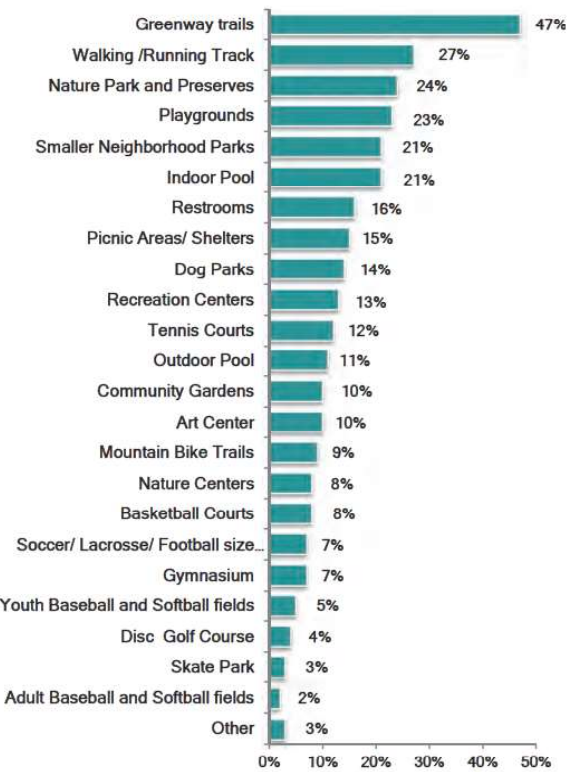




Which park and recreation facilities are most important to you or your household?

The parks and recreation facilities that are most important to households are: greenway trails (47%); walking/running tracks (27%); natural parks and preserves (24%); and playgrounds (23%).

Table 46. Which park and recreation facilities are most important to you and your household?

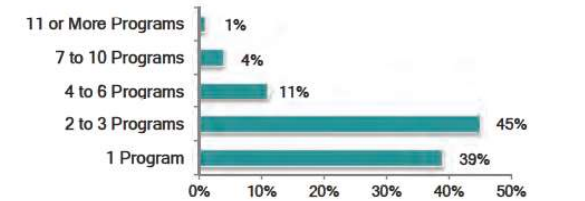


Recreation Activities Questions:

Approximately how many different recreation programs offered by the City of Raleigh Parks, Recreation and Cultural Resources Department have you or members of your household participated in over the last 12 months?

Of the 30% of households that indicated they had participated in recreation programs offered by the City of Raleigh Parks and Recreation during the past 12 months, 39% participated in one program. Forty-five percent (45%) participated in 2 to 3 programs; 11% participated in 4 to 6 programs; 4% participated in 7 to 10 programs, and the remaining 1% participated in 11 or more programs.

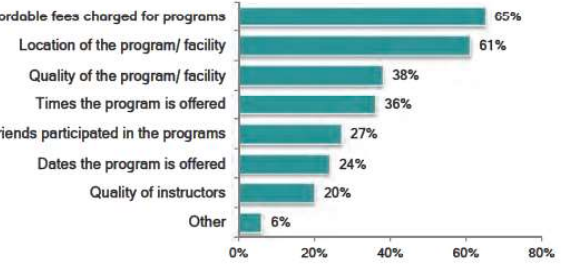
Table 47. How many different recreation programs have you participated in during the last 12 months?



Reasons why your household has participated in City of Raleigh Parks, Recreation and Cultural Resources Department program.

Of the 30% of households that indicated they had participated in recreation programs offered by the City of Raleigh Parks and Recreation during the past 12 months, 64% indicated that the affordable fees charged for programs was a primary reason. Other reasons for participating include: location of the program facility (61%); quality of the program/facility (38%); and times the program is offered (36%).

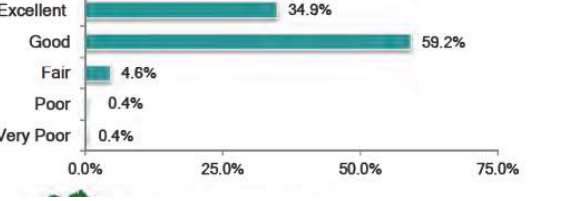
Table 48. What are the primary reasons you participated in recreation programs?



How would you rate the overall quality of the recreation programs that you and members of your household have participated in?

Of the 30% of households that indicated they had participated in recreation programs offered by the City of Raleigh Parks and Recreation during the past 12 months, 35% rated the overall quality of the programs as “excellent”. Sixty percent (60%) rated them as “good,” and the remaining 5% rated them as “fair”.

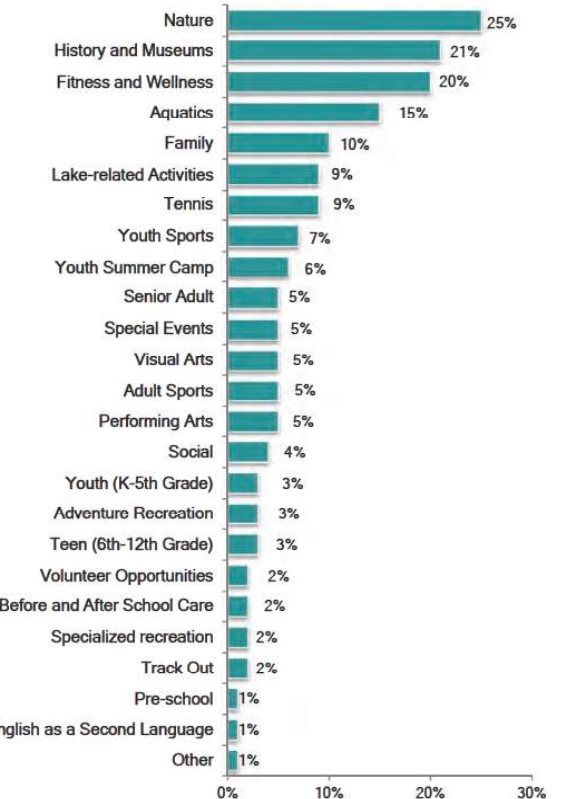
Table 49. How would you rate the overall quality of recreation programs?



Which recreation activities do you and members of your household participate in most often?

Based on the sum of their top four choices, the parks and recreation activities in which households participate most often include: nature (25%); history and museums (21%); fitness and wellness (20%); and aquatics (15%).

Table 50. Which programs do you participate in most often?

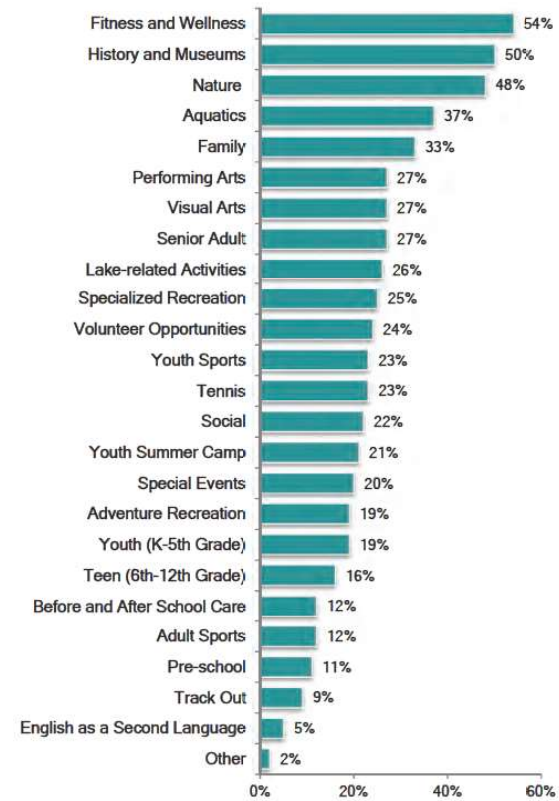




Which park and recreation activities do you or your household have a need for?

Sixty-nine percent (69%) of households have indicated a need for greenway trails. Other facilities with similar need include: restrooms (61%); nature park and preserves (55%); walking/ running track (54%); smaller neighborhood parks (52%).

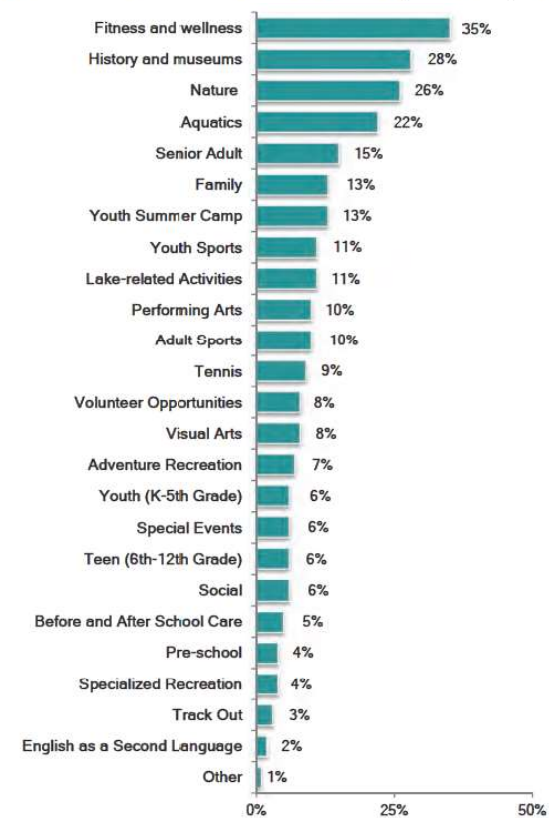
Table 51. Which park and recreation activities do you and your household have a need for?



Which park and recreation activities are most important to you or your household?

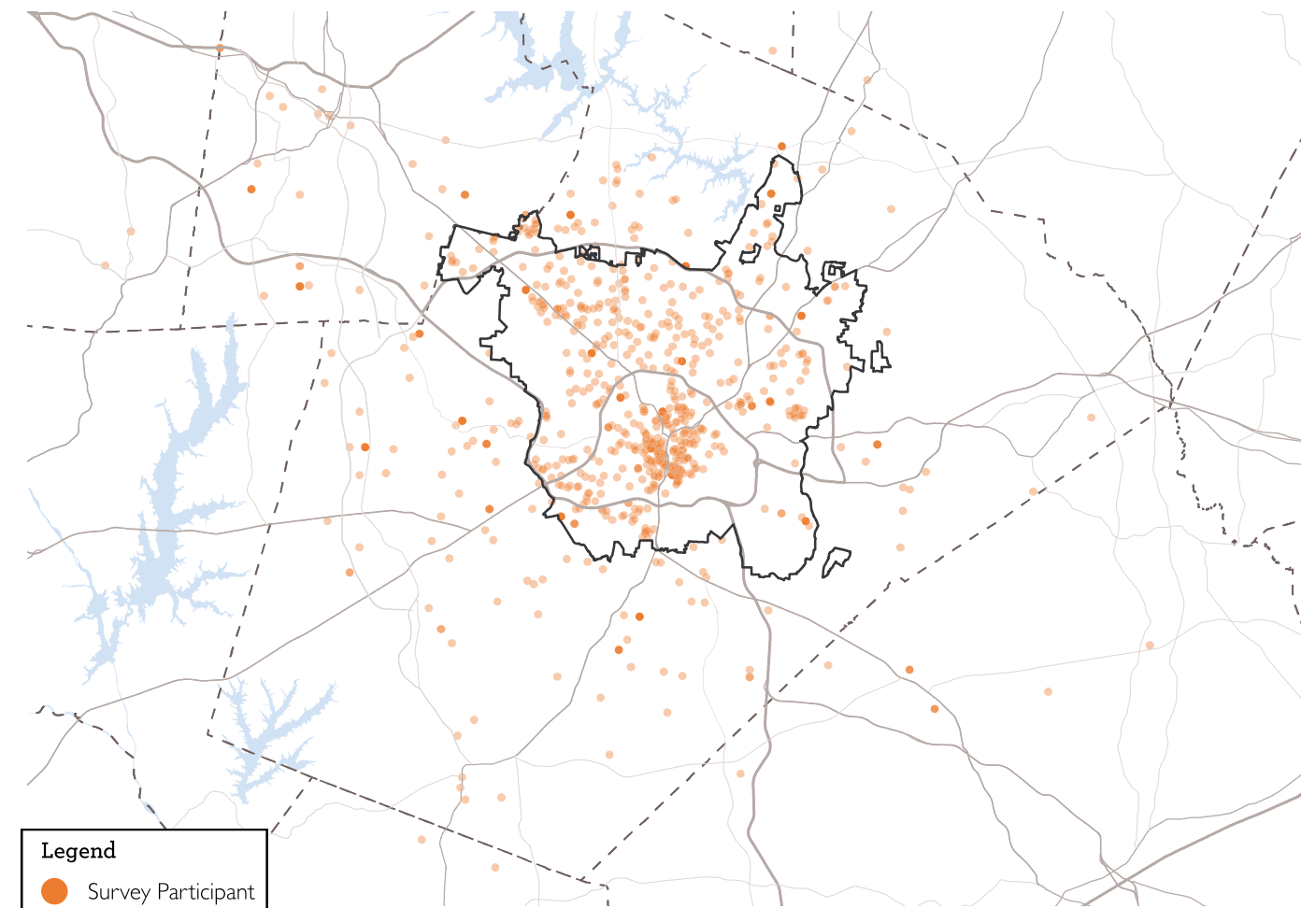
The parks and recreation activities in which households participate most often include: nature (26%); history and museums (28%); fitness and wellness (35%); and aquatics (22%).

Table 52. Which activities are most important to you?

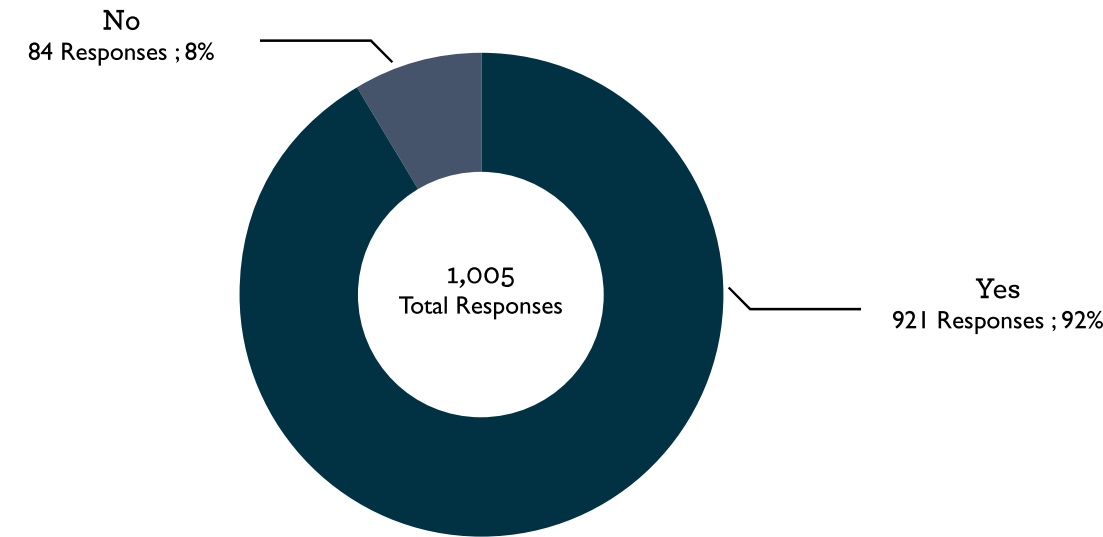


## APPENDIX C: COMMUNITY SURVEY RESULTS

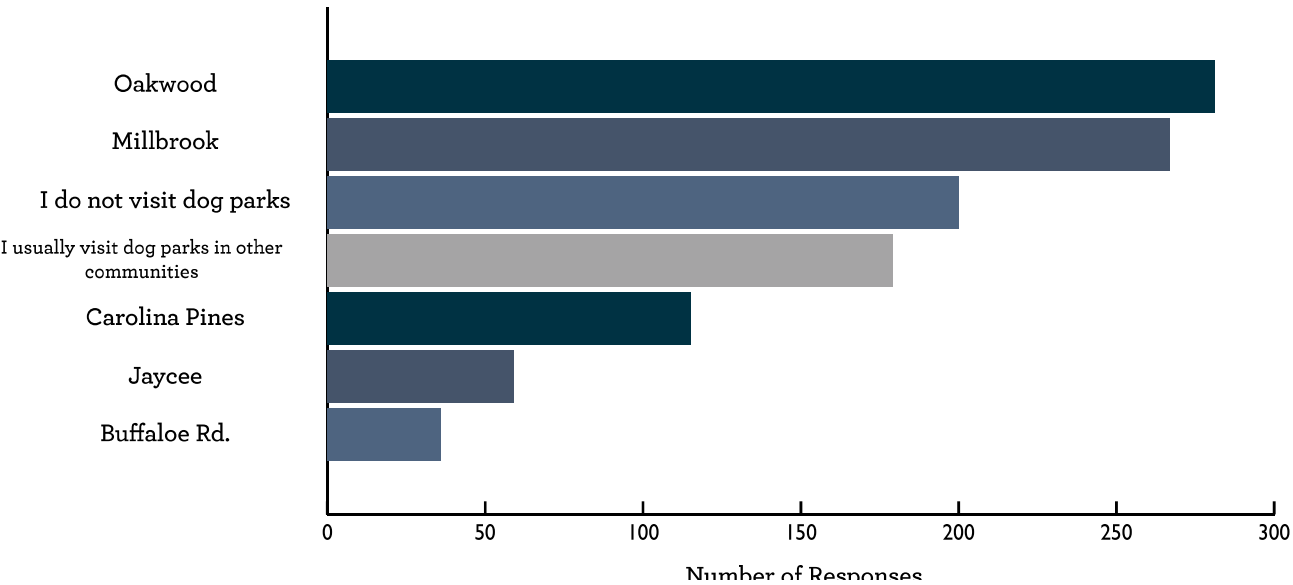
### Where do you live?



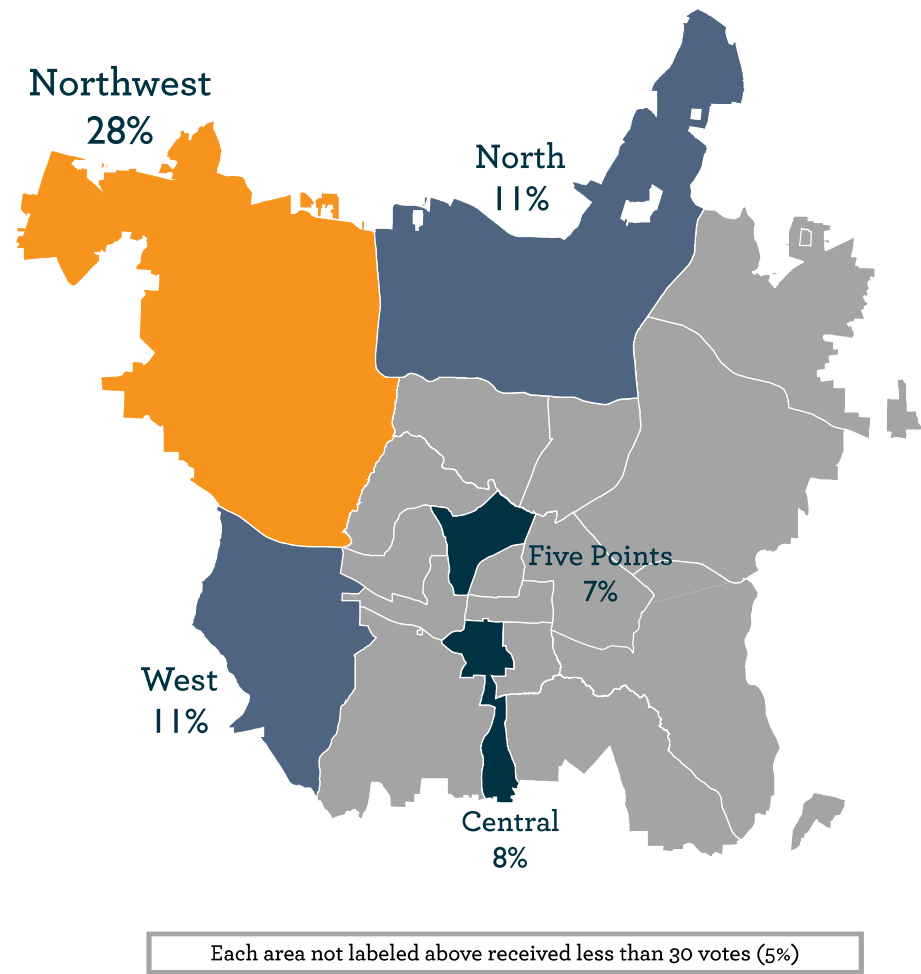
Do you currently have a dog(s)?



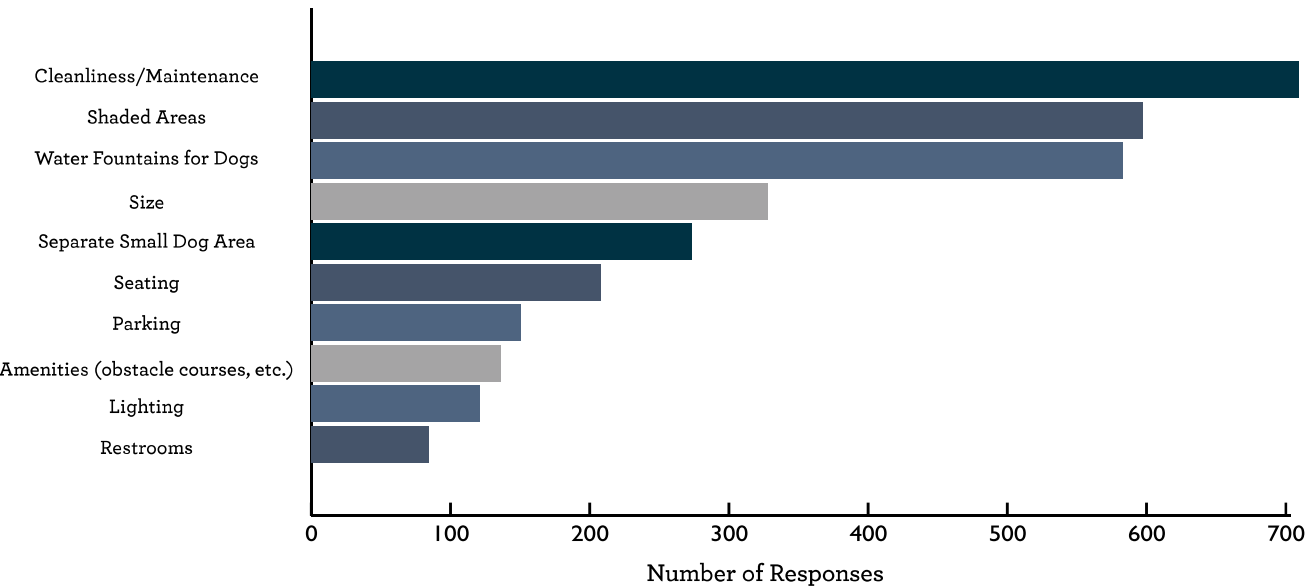
Which City of Raleigh dog park do you visit most often?



Where does Raleigh most need a dog park?

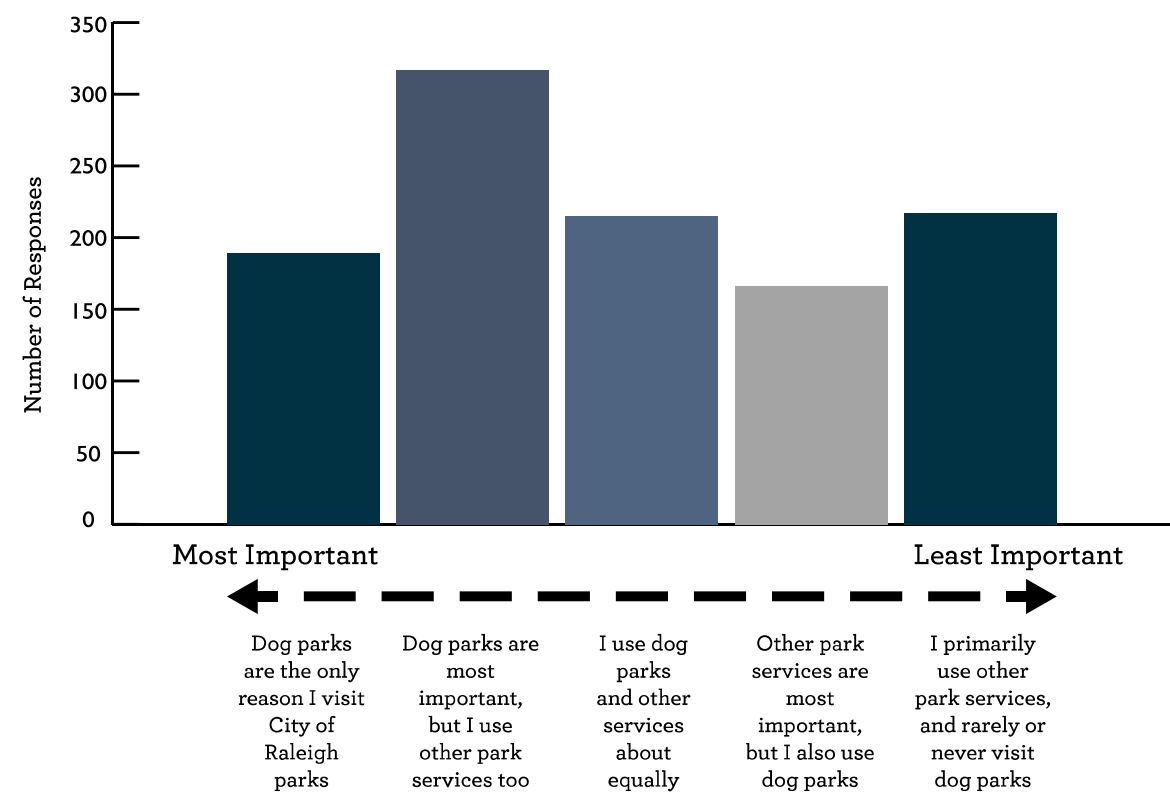


Choose the most important services to a successful dog park:

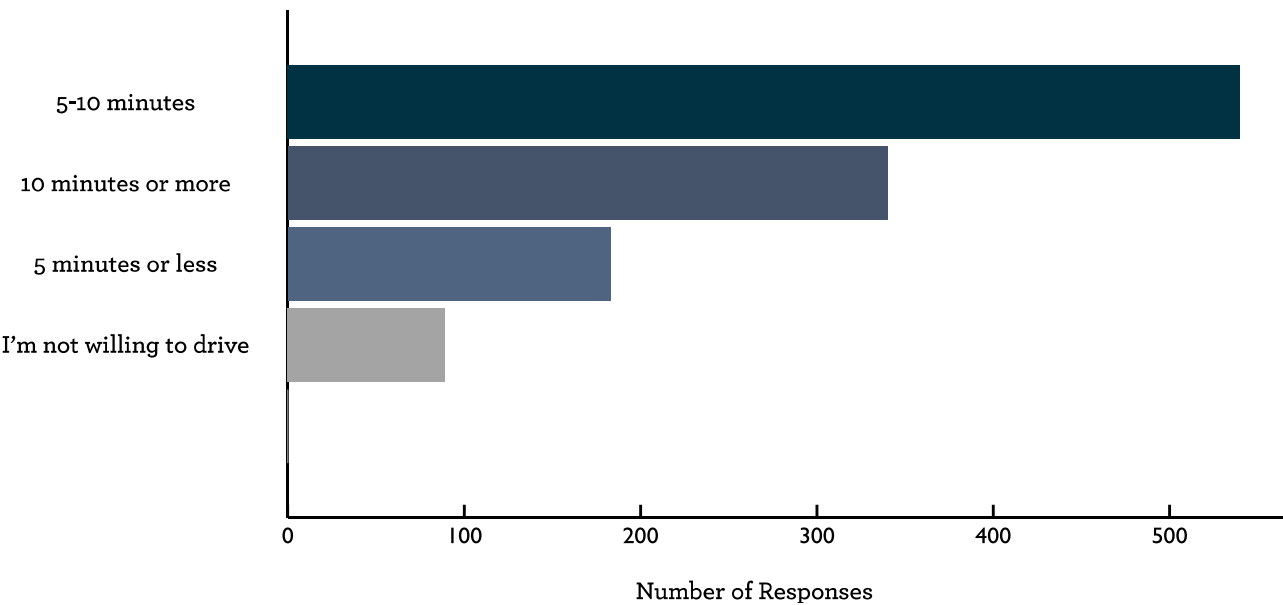




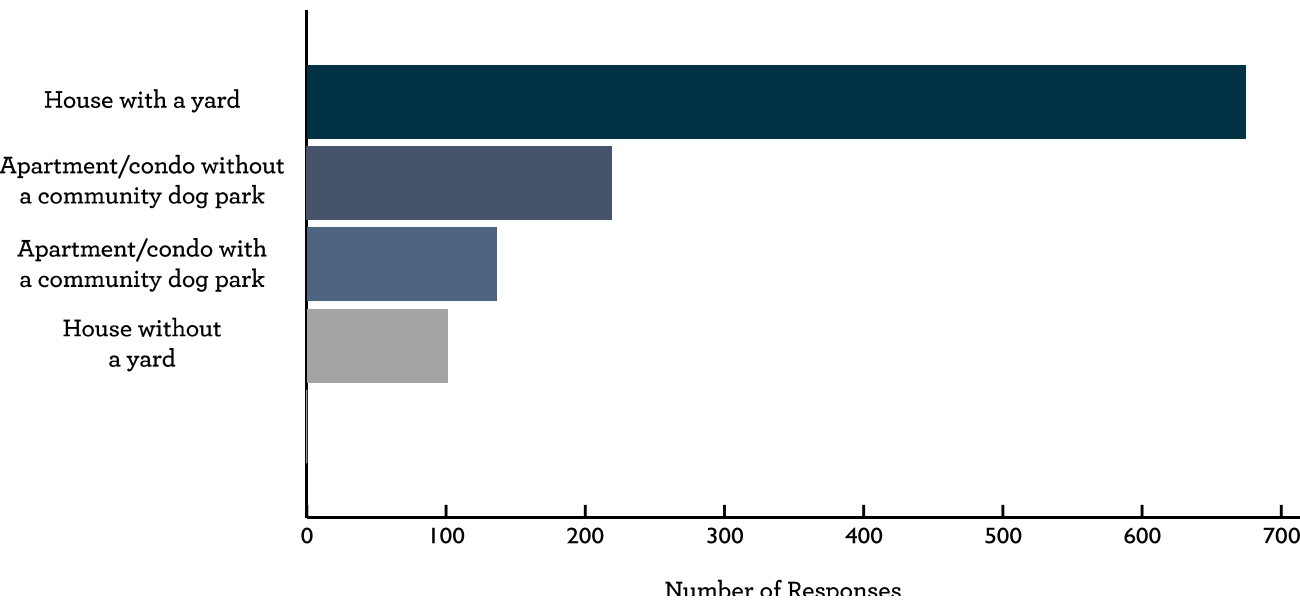
How important are dog parks to you?



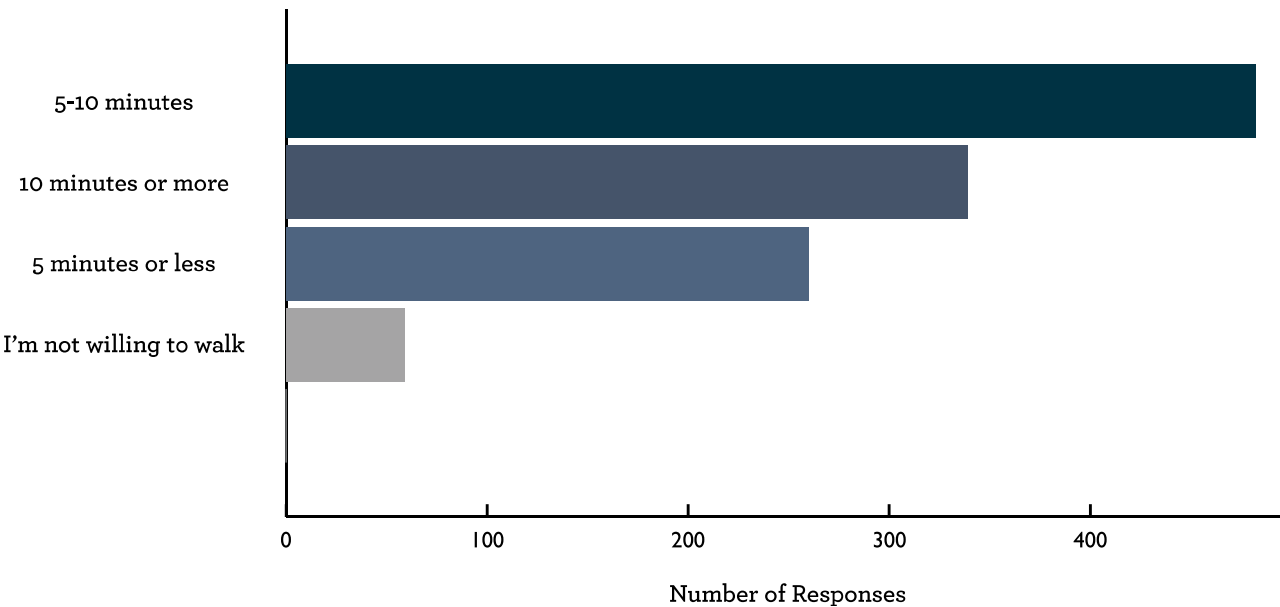
How far are you willing to drive to get to a dog park?



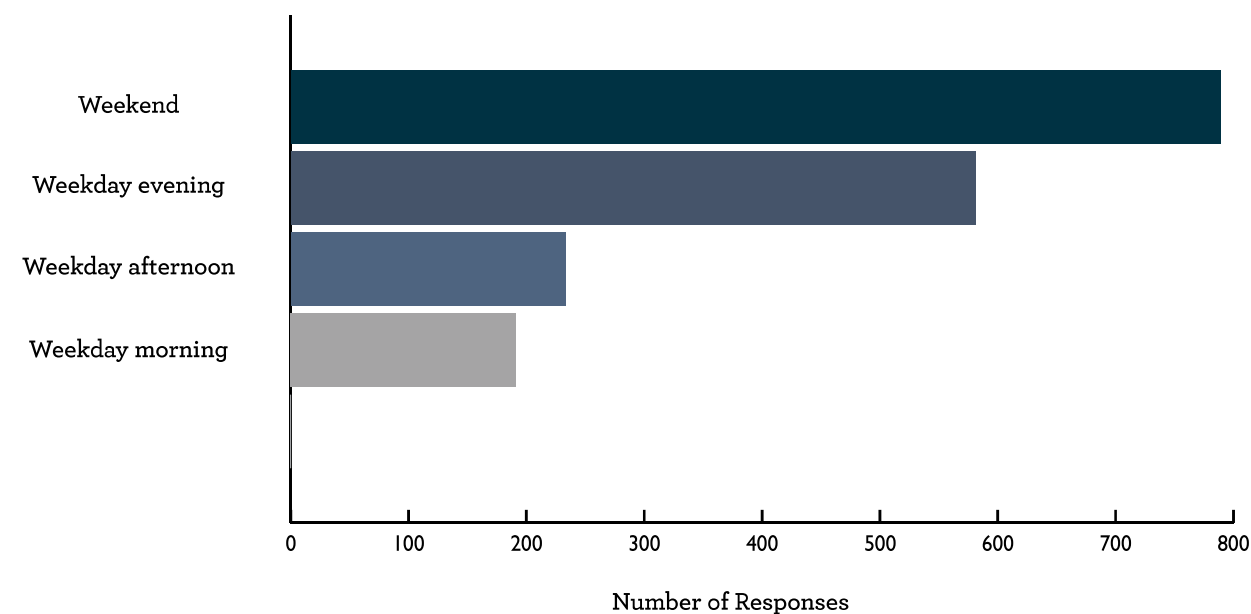
In which type of housing do you currently live?



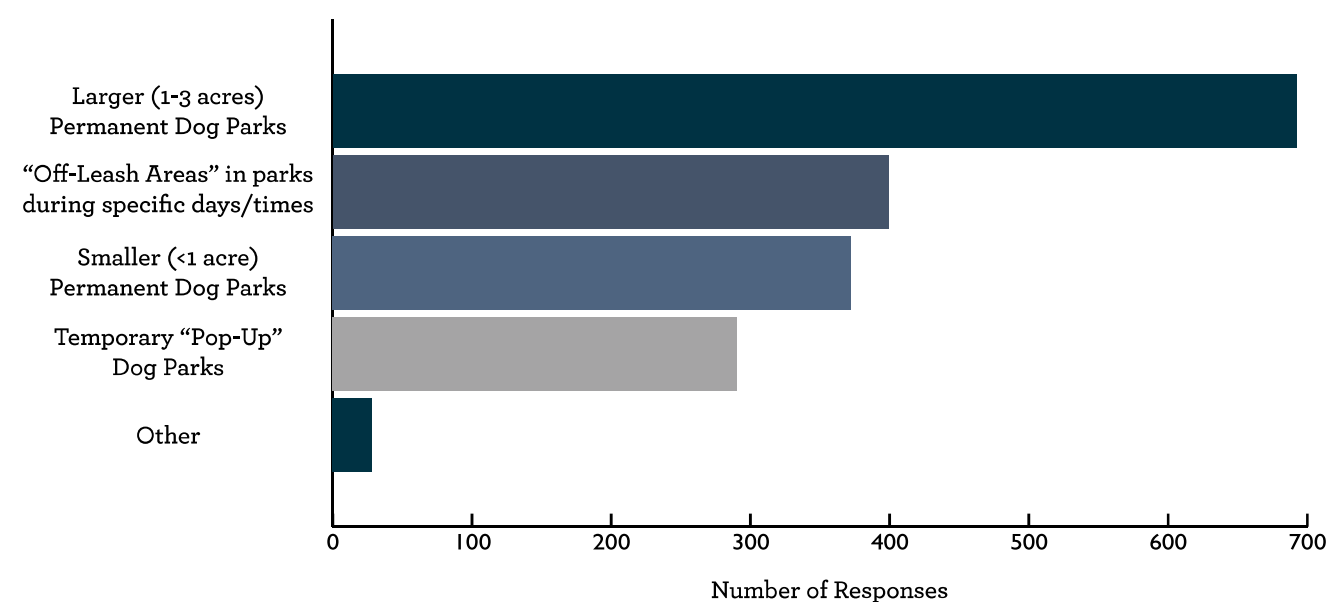
How far are you willing to walk to get to a dog park?



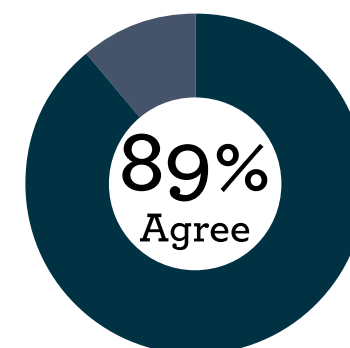
When are you most likely to visit a dog park?



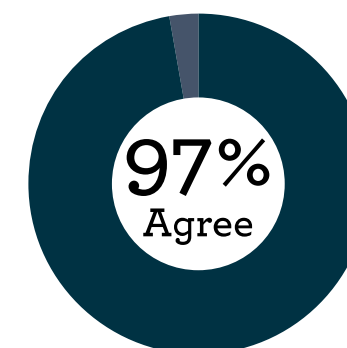
What type of dog park are you interested in?



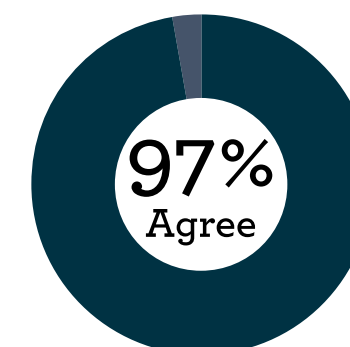
Raleigh dog parks feel safe.



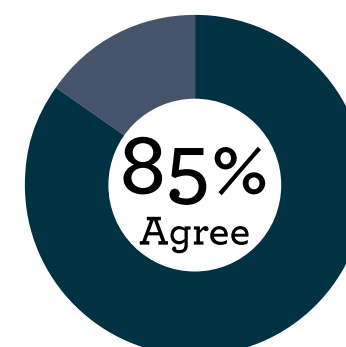
Dog parks help promote physical health in dogs.



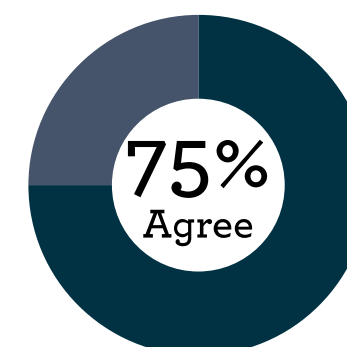
Dog parks build a sense of community.



Living close to a dog park is an important consideration to me.



Dog parks help promote MY physical health.





APPENDIX D: DOWNTOWN ANALYSIS

Building Name	Street Address	Type	Building Status	Num. of Units
St. Mary's Square	600 St. Mary's Street	Apartments	Complete	195
The Paramount	618 N. Boylan Ave	Condos	Complete	81
510 Glenwood	510 Glenwood Ave	Condos	Complete	36
The Devon Seven12	712 Tucker Street	Apartments	Complete	179
Four25 Devon	425 Boylan Ave	Apartments	Complete	261
The Gramercy	401 Glenwood Ave	Apartments	Complete	203
West Condominiums	400 W. North Street	Condos	Complete	170
West Lane Townhomes	701 W. Lane Street	Townhomes	Complete	7
222 Glenwood Ave	222 Glenwood Ave	Condos	Complete	117
Link Apartments	202 N. West Street	Apartments	Complete	203
St. Mary's Street Apartments	8 St. Marys Street	Apartments	Complete	8
Cameron Court	804 W. Morgan Street	Apartments	Complete	210
Boylan Apartments	817 Hillsborough Street	Apartments	Complete	54
The Dawson	317 W. Morgan Street	Condos	Complete	66
The Hue	300 W. Hargett	Apartments	Complete	208
Bloomsbury Estates	710 Independence Ave	Condos	Complete	56
Park Devereux	200 S. Dawson Street	Condos	Complete	46
Martin Place	320 W. Martin Street	Condos	Complete	12
Boylan Heights Condos	613 W. Cabarrus Street	Condos	Complete	8
The Atrium	112 Fayetteville Street	Condos	Complete	6
PNC Plaza	301 Fayetteville Street	Condos	Complete	144
The Hudson	319 Fayetteville Street	Condos	Complete	64
The L	205 W. Davie Street	Apartments	Complete	83
Sir Walter Raleigh	400 Fayetteville Street	Senior Living	Complete	140
Prairie Building	113 S. Wilmington Street	DHIC Apts	Complete	11
The Lincoln	408 E. Hargett Street	Apartments	Complete	224
SkyHouse	308 S. Blount Street	Apartments	Complete	320
Edison Lofts	131 E. Davie Street	Apartments	Complete	223
Founder's Row	200 E. Davie	Condos	Complete	48
Carlton Place	450 E. Davie	Apartments	Complete	80

Building Name	Street Address	Type	Building Status	Num. of Units
Palladium Plaza	444 S. Blount	Condos	Complete	65
927 W. Morgan	927 W. Morgan Street	Apartments	Complete	249
Person Pointe	508 S. Person Street	Condos	Complete	12
Peace St Townes	206 E. Peace Street	Townhomes	Complete	34
Elan City Center	510 N. Wilmington Street	Apartments	Complete	213
Murphey School Apartments	443 N. Person Street	Apartments	Complete	50
Bailey Building	200 E. Edenton	Apartments	Complete	11
New Bern Place	235 New Bern Pl	Condos	Complete	9
Capital Apartments	127 New Bern Pl	Apartments	Complete	31
The Ten at South Person	520 South Person Street	Townhomes	Complete	10
Blount Street Commons	520 John Haywood Lane	Townhomes	Complete	46
Quorum Center	323 W. Jones Street	Condos	Complete	44
The Dillon	W. Martin at Harrington Street	Apartments	Complete	260
Hargett Place	408 E. Hargett Street	Townhomes	Complete	19
West + Lenoir Townhomes	501 W. Lenoir Street	Townhomes	Complete	12
10 Arros	537 New Bern Ave	Townhomes	Complete	10
The Ware	500 E Davie	Townhomes	Under Construction	15
The Metropolitan Apartmtns	314 W. Jones Street	Apartments	Under Construction	241
Revisn	615 N. Boylan Ave	Extended Stay	Under Construction	48
FNB Tower	501 Fayetteville Street	Apartments	Under Construction	239
Peace	600 N West Street	Apartments	Under Construction	417
West + Lenoir Townhomes	501 W. Lenoir Street	Townhomes	Under Construction	9
The Saint	216 St Mary's	Townhomes	Under Construction	17
611 West South	611 West South Street	Apartments	Proposed	42
400H	400 Hillsborough	Apartments	Proposed	216
The Fairweather	525 S West Street	Condos	Proposed	45
The Willard	21 Glenwood	Condos	Proposed	25
Fourth Ward	722 S Saunders	Townhomes	Proposed	10
Saint Marys Subdivision	416 St Marys Street	Townhomes	Proposed	6
North Carolina FC Stadium	N Salisbury and Peace	Apartments	Proposed	Unannounced
Smokey Hollow Ph. 2 (Anticipated)	516 N West Street	Apartments	Proposed	250
Cabarrus St. Development (Estimated)	518 W Cabarrus Street	Apartments	Proposed	280 (Estimated)

# Downtown Residential Unit Density



This map is a visualization of residential unit density, created based on the location of 62 multifamily residential developments in Downtown Raleigh. This includes 46 existing developments, 7 currently under construction, and an additional 9 proposed. Density was calculated based on the concentration of total residential units: 6,398 units in all.  
(Data provided by the Downtown Raleigh Alliance)

## APPENDIX E: ESRI COMMUNITY ANALYST

The Input & Analysis Chapter of this report included a map of *Dog Ownership by Household* (p.38). This map illustrates the estimated percentage of total households within each Census Block Group that own at least one dog.

This section includes further detailed analysis of the population living within the 5-minute and 10-minute drive service areas of (1) all existing dog parks, (2) all planned dog parks, and (3) potential future dog park locations within gap areas as identified through the Service Area Analysis (p.20-21).

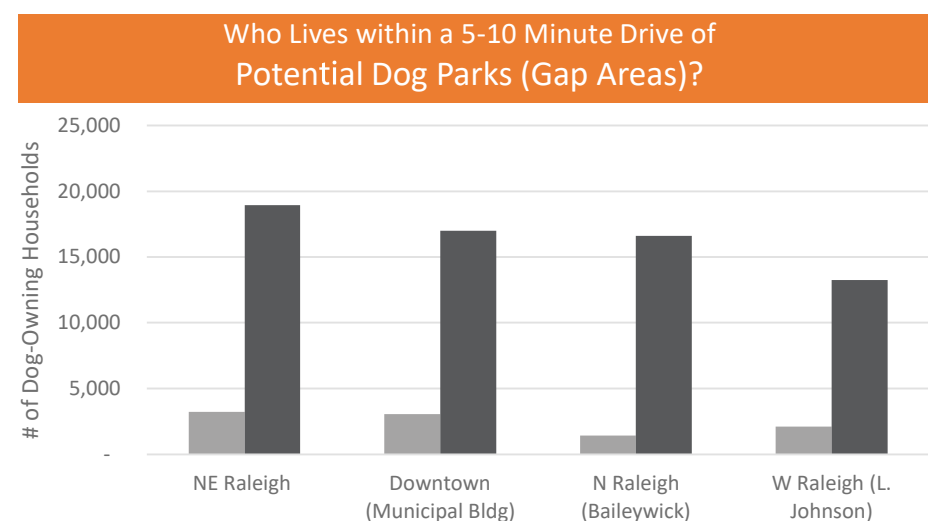
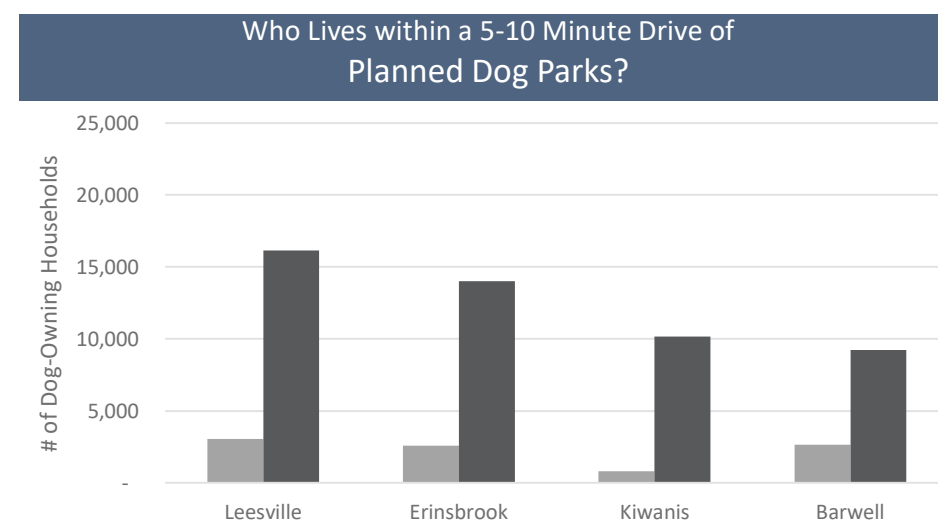
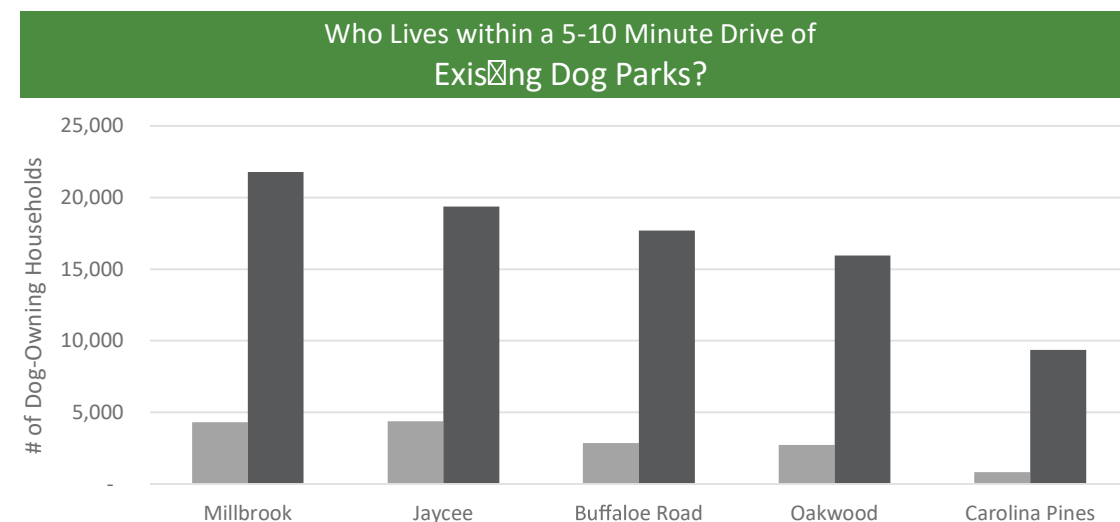
The table below shows the total number of households, the number of dog owning households, and the % of dog-ownership within a 5-minute and 10-minute drive of thirteen park locations throughout the City of Raleigh. Due to variations in population density and rates of dog ownership, these figures vary considerably between different parks. The charts on the following page illustrate these differences graphically, and can be used to compare multiple sites.

The estimates used throughout this section and in the *Dog Ownership by Household* map on page 38 were generated through Esri’s Community Analyst Toolset. Pages 110-119 of this section describe Community Analyst’s Market Potential Index and Consumer Spending methodologies, which are used to generate estimates of dog-ownership.

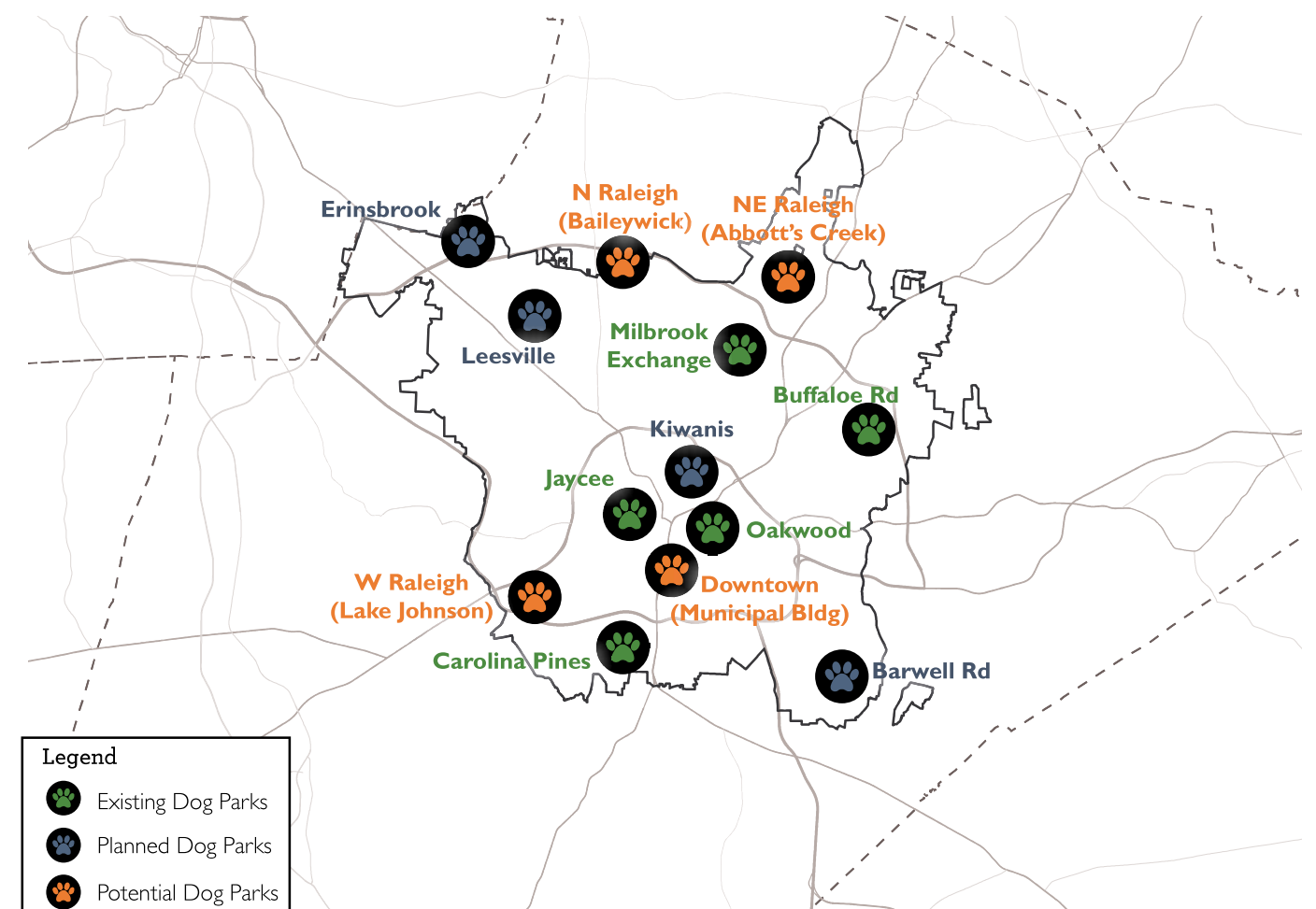
			5-Minute Drive			10-Minute Drive		
			# of Total Households	# of Dog-Ownning HH	% of HH with a Dog	# of Total Households	# of Dog-Ownning HH	% of HH with a Dog
City of Raleigh Dog Park Locations	Existing	Millbrook	12,913	4,327	34%	56,072	21,776	39%
		Jaycee	13,505	4,386	32%	61,638	19,375	31%
		Buffaloe Road	6,291	2,870	46%	41,751	17,700	42%
		Oakwood	8,090	2,740	34%	47,699	15,949	33%
		Carolina Pines	2,891	846	29%	32,786	9,362	29%
	Planned	Leesville	9,283	3,065	33%	44,289	16,150	36%
		Erinsbrook	5,217	2,591	50%	36,000	14,018	39%
		Kiwanis	2,104	806	38%	29,012	10,164	35%
		Barwell	5,585	2,662	48%	21,932	9,232	42%
	Potential (Gap Areas)	NE Raleigh (Abbott's Creek)	6,997	3,215	46%	44,516	18,962	43%
		Downtown (Municipal Bldg)	11,180	3,064	27%	54,582	17,003	31%
		N Raleigh (Baileywick)	3,562	1,431	40%	42,535	16,598	39%
		W Raleigh (L. Johnson)	8,315	2,112	25%	44,918	13,259	30%

For reference, the City of Raleigh as a whole is estimated to have a total of 189,787 households. 67,971 households are estimated to own at least one dog. This equates to a citywide dog-ownership rate of approximately 36%.





## Existing, Planned, & Potential Dog Park Locations



The charts on the opposite page show the relative number of dog-owning households within a 5-minute and 10-minute drive of each park location shown on the map above.

The first chart illustrates the dog-owning population living near each of the five existing dog parks. Note that Millbrook, Raleigh's oldest and most popular dog park, is located near the highest number of dog-owning households among all park locations analyzed.

The second and third charts illustrate the number of dog-owning households near each of the four master-planned

dog parks and a selection of other potential locations. This may be one useful tool in determining which of these dog parks should be implemented first.

Total dog-ownership rates are influenced by many factors. Social and cultural attitudes toward dog ownership, as well as variations in housing type and the built environment, account for a significant variation in dog-ownership rates across the city. It should be noted that dog-ownership alone is not necessarily directly correlated with actual dog park use. Broad community support should always be a necessary prerequisite to prioritizing dog park development in any community.



AN ESRI  
WHITE PAPER

June 2018

# Methodology Statement: Esri US—Market Potential Database

380 New York Street  
Redlands, California 92373-8100 USA  
909 793 2853  
info@esri.com  
esri.com



Copyright © 2018 Esri  
All rights reserved.  
Printed in the United States of America.

The information contained in this document is the exclusive property of Esri. This work is protected under United States copyright law and other international copyright treaties and conventions. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system, except as expressly permitted in writing by Esri. All requests should be sent to Attention: Contracts and Legal Services Manager, Esri, 380 New York Street, Redlands, CA 92373-8100 USA.

The information contained in this document is subject to change without notice.

Esri, the Esri globe logo, The Science of Where, Tapestry, ArcGIS, [esri.com](http://esri.com), and @esri.com are trademarks, service marks, or registered marks of Esri in the United States, the European Community, or certain other jurisdictions. Other companies and products or services mentioned herein may be trademarks, service marks, or registered marks of their respective mark owners.



# Methodology Statement: Esri US—Market Potential Database

## Market Potential Index

Esri's 2018 Market Potential data measures the likely demand for a product or service in an area. The database includes an expected number of consumers and a Market Potential Index (MPI) for each product or service. An MPI compares the demand for a specific product or service in an area with the national demand for that product or service. The MPI values at the US level are 100, representing overall demand. A value of more than 100 represents higher demand, and a value of less than 100 represents lower demand. For example, an index of 120 implies that demand in the area is likely to be 20 percent higher than the US average; an index of 85 implies a demand that is 15 percent lower.

## How Esri Calculates Market Potential

Esri calculates Market Potential by combining 2018 Tapestry™ Segmentation data with Doublebase® 2017 data from GfK MRI. Doublebase 2017 is an integration of information from four consumer surveys. Each survey respondent can be identified by Tapestry segment, so a rate of consumption by Tapestry segment can be determined for a product or service for any area.

The *Expected Number of Consumers* (households or adults) for a product or service in an area is computed by applying the consumption rate for Tapestry market segment "n" to households or adults in the area belonging to Tapestry segment "n," and summing across 67 Tapestry segments.

$$\text{Expected Number of Consumers} = \sum_{n=1}^{67} (\text{Count}_n \times \text{Consumption Rate}_n)$$

The *Local Consumption Rate* for a product or service for an area is computed as the ratio of the expected number of consumers for a product or service in the area to the total households or adults in the area.

$$\text{Local Consumption Rate} = \frac{\text{Expected Number of Consumers}}{\text{Base Count}}$$

The *Market Potential Index* for a product or service for an area is the ratio of the local consumption rate for a product or service for the area to the US consumption rate for the product or service, multiplied by 100.

$$\text{Market Potential Index} = \frac{\text{Local Consumption Rate}}{\text{US Consumption Rate}} \times 100$$

Esri's 2018 Market Potential database incorporates the next generation of Tapestry Segmentation with new and revised items from 2017 consumer surveys to provide a fresh outlook on local consumer preferences. Data for more than 2,300 items, organized into 35 categories, representing goods, services, attitudes, and activities collected from GfK MRI surveys, are included. Unless otherwise noted, each item refers to consumer spending or behavior in a 12-month period. Also note that items that refer to expenditures of "less than x dollars" or "under x dollars" refer to households or adults that spent \$1 or more on the item. The *a* or *h* following the five-digit product code denotes a consumer base of adults or households, respectively.

Products and services, such as apparel items and expenditures, electronics, civic activities and political affiliation, financial accounts and services, groceries and household products, health-related items, Internet activities, leisure activities, media-related items, personal care services, cell phones and service, shopping, sports, and travel activities are included. Information on consumer confidence, buying styles, values, and general attitudes are included as well. New items for 2018 include activity on social networks and other websites, wearable tech, household Internet devices, cell phone use, and digital payment services.

For more information about the Market Potential data, call 1-800-447-9778.

### About Esri's Data Development Team

Led by chief demographer **Kyle R. Cassal**, Esri's data development team has a 35-year history of excellence in market intelligence. The team's economists, statisticians, demographers, geographers, and analysts produce independent small-area demographic and socioeconomic estimates and forecasts for the United States. The team develops exclusive demographic models and methodologies to create market-proven datasets, many of which are now industry benchmarks such as Tapestry Segmentation, Consumer Spending, Market Potential, and annual Updated Demographics. Esri® demographics powers the ArcGIS® platform through dynamic web maps, data enrichment, reports, and infographics.



AN ESRI  
WHITE PAPER  
  
JUNE 2018

# Esri Consumer Spending Methodology 2018

380 New York Street  
Redlands, California 92373-8100 USA  
909 793 2853  
info@esri.com  
esri.com



Copyright © 2018 Esri  
All rights reserved.  
Printed in the United States of America.

The information contained in this document is the exclusive property of Esri. This work is protected under United States copyright law and other international copyright treaties and conventions. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system, except as expressly permitted in writing by Esri. All requests should be sent to Attention: Contracts and Legal Services Manager, Esri, 380 New York Street, Redlands, CA 92373-8100 USA.

The information contained in this document is subject to change without notice.

Esri, the Esri globe logo, The Science of Where, Tapestry, ArcGIS, [esri.com](http://esri.com), and @esri.com are trademarks, service marks, or registered marks of Esri in the United States, the European Community, or certain other jurisdictions. Other companies and products or services mentioned herein may be trademarks, service marks, or registered marks of their respective mark owners.



# Esri Consumer Spending Methodology 2018

Background

Since 1980, the Consumer Expenditure Surveys (CEX) program has provided the data to study consumer spending and its effect on the gross national product. The primary goal of the survey is the regular update of the Consumer Price Index. Nationally, the data is also used to measure the effects of economic policy changes or assess the welfare of populations such as the elderly or low-income families. For more than 30 years, Esri has leveraged the CEX survey microdata to model consumer spending estimates and measure local demand for goods and services.

Methodology

Esri has combined the latest Consumer Expenditure Surveys, 2015 and 2016, from the Bureau of Labor Statistics (BLS) to estimate current spending patterns. The continuing surveys include a Diary Survey for daily purchases and an Interview Survey for general purchases. The Diary Survey represents record keeping by consumer units for two consecutive weeklong periods. This component of the CEX collects data on small, daily purchases that could be overlooked by the quarterly Interview Survey. The Interview Survey collects expenditure data from consumers in five interviews conducted every three months. Esri integrates data from both surveys to provide a comprehensive database of all consumer expenditures. To compensate for the relatively small CEX survey bases and the variability of single-year data, expenditures are averaged from the 2015 and 2016 surveys.

Esri has updated the models used to estimate consumer spending with its 2018 demographic updates and the next generation of its market segmentation system, Tapestry™ Segmentation. The model that links the spending of consumer units in CEX surveys to all households with similar socioeconomic characteristics is a conditional probability model that integrates consumer spending with Tapestry to differentiate consumer spending by market. The distinction is effective among the smallest US market areas, where differences in consumer spending can be difficult to measure, and for the largest ticket items, where consumer preferences are more pronounced.

Direct comparison with previous CEX databases is affected not only by changes in consumer spending but also by changes in the source data. Two major changes, beginning with the 2013 CEX survey, effectively preclude comparison to estimates released with the 2016 Esri® data. The surveys were updated in 2013 to consolidate a number of items. This change produced the deletion of more than 90 Esri product codes and the addition of almost 50 new codes.

The other change introduced a different calculation for federal and state taxes. In 2013, the CEX survey changed from reported tax payments to estimated taxes, based on TAXSIM, a program from the National Bureau of Economic Research.

Taxes that were reported by survey respondents were considered too low.<sup>1</sup> Accurate tax data is important in estimating after-tax income and the effects of taxes on consumer spending.

Spending patterns are developed by Tapestry markets and adjusted to current levels of income. Expenditures represent the annual averages and totals for the 2017 calendar year. Data is reported by product or service and includes total expenditures, average spending per household, and a Spending Potential Index (SPI).

Total expenditure represents the aggregate amount spent by all households in an area. Therefore, the average expenditure reflects the average amount spent per household in the area. It should be noted that the average expenditure for any item consumed by only a small percentage of households will be lower than the price of the item. The SPI compares the average amount spent locally for a product to the average amount spent nationally. An index of 100 reflects the average. An SPI of 120 indicates that average spending by local consumers is 20 percent above the national average.

CEX data for 2018 is reported for 723 products and services summarized in the spending categories below. Esri updates its list of product codes to reflect changes in not only the list of items reported by the survey but also reevaluates the sample size of low-frequency items.

- Food at Home
- Food Away from Home
- Alcoholic Beverages
- Housing
- Household Services
- Household Goods
- Apparel & Services
- Transportation excluding Trips
- Travel
- Health Care
- Entertainment/Recreation
- Personal Care
- Education
- Miscellaneous Expenses
- Life & Other Insurance/Pensions & Social Security
- Financial
- Retail Goods

<sup>1</sup> US Bureau of Labor Statistics, Consumer Expenditure Interview Survey Public Use Microdata, 2013 User Documentation, September 2014.

### Data Development Team

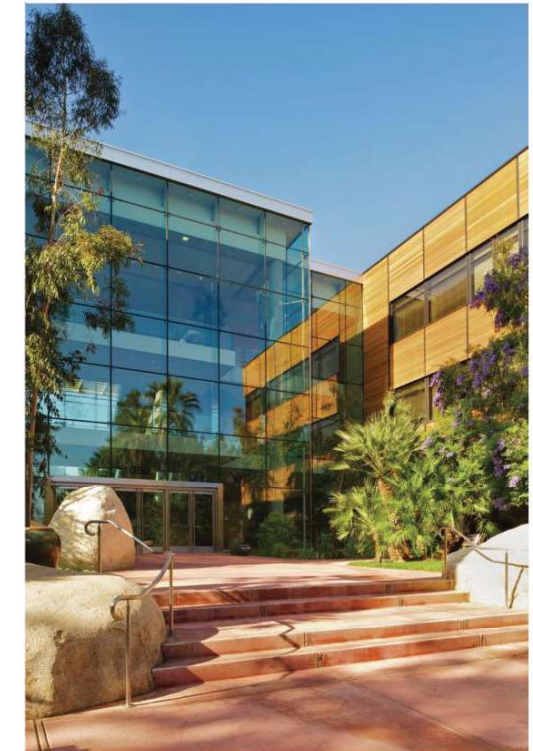
Led by chief demographer **Kyle R. Cassal**, Esri's data development team has a 35-year history of excellence in market intelligence. The team's economists, statisticians, demographers, geographers, and analysts produce independent small-area demographic and socioeconomic estimates and forecasts for the United States. The team develops exclusive demographic models and methodologies to create market-proven datasets, many of which are now industry benchmarks such as Tapestry Segmentation, Consumer Spending, Market Potential, and annual Updated Demographics. Esri demographics powers the ArcGIS® platform through dynamic web maps, data enrichment, reports, and infographics.



Esri, the global market leader in geographic information system (GIS) software, offers the most powerful mapping and spatial analytics technology available.

Since 1969, Esri has helped customers unlock the full potential of data to improve operational and business results. Today, Esri software is deployed in more than 350,000 organizations including the world's largest cities, most national governments, 75 percent of Fortune 500 companies, and more than 7,000 colleges and universities. Esri engineers the most advanced solutions for digital transformation, the Internet of Things (IoT), and location analytics to inform the most authoritative maps in the world.

Visit us at [esri.com](https://esri.com).



### Contact Esri

380 New York Street  
Redlands, California 92373-8100 USA

1 800 447 9778  
T 909 793 2853  
F 909 793 5953  
[info@esri.com](mailto:info@esri.com)  
[esri.com](https://esri.com)

Offices worldwide  
[esri.com/locations](https://esri.com/locations)

For more information, visit  
[esri.com/data/esri\\_data](https://esri.com/data/esri_data).



APPENDIX F: FAQ

What are the hours of the dog park?

Dog Parks are open seven (7) days a week, sunrise to sunset. Any changes to the hours of service for any reason will be posted at the park, and updated to the Parks, Recreation & Greenway Alerts page at

Is the park supervised?

No. Owners and handlers are responsible for their dogs and their dog’s behavior at all times. It will be up to the users of the dog parks to ensure that the rules are being followed. The Raleigh Police Department will monitor the dog parks on a periodic basis.

What are the Dog Park rules?

Dog park rules are posted at the entrance of all our dog parks. A full list of all dog park rules is also made available at <https://www.raleighnc.gov/parks/content/ParksRec/Articles/Projects/DogParkStudy.html> Familiarizing yourself with these rules is an important first step toward guaranteeing a safe and positive experience.

Are all breeds of dog welcome?

All dogs, regardless of breed, are welcome as long as they are spayed or neutered, and their shot records are up-to-date. However if any dog becomes aggressive, its owner must remove the dog immediately.

How many pets can I have?

No more than three dogs are permitted, per handler, at one time. It is very difficult for one person to effectively control and supervise more than three dogs at once. If you have more than three dogs and wish to use our Dog Parks, we recommend that you bring a friend or family member to assist you.

Is my dog required to have a city license?

No. The City of Raleigh does not require dog owners to apply for a city pet license.

Can I keep my dog on a leash?

All dogs must be on a leash until they are inside the dog park entrance and the gate has closed behind them. However, as a precaution, we require all owners and handlers to unleash their dogs in the enclosed, double-gated holding pen at the entrance BEFORE they enter the dog-run area. This is designed to ensure that off-leash dogs do not scare a leashed dog by running up and saying hello!

What should I do about aggressive dogs?

First, remove your dog from the situation immediately. When it is safe, report the incident to community center staff and call 9-1-1, if an emergency. If you do not believe the area is safe, or feel that your request has not been handled satisfactorily, call the Raleigh Police Department at (919) 831-6311. It is expected of patrons to work with each other in a friendly, respectful manner to keep the park safe for all.

What should I do if someone is bitten at the park?

Dog bites are rare at Dog Parks, especially if users are following all the rules. But in the event of a dog bite, there are three things you should do:

1. Immediately provide medical attention, if necessary. If the bite(s) are serious, call 9-1-1.
2. Record the identity of the dog and its owner.
3. Report the incident to community center staff or call Animal Control at (919) 996-1449.

If I observe a problem at the park, what should I do?

For maintenance, please call: (919) 996-4115  
For disruptive dogs, please call: (919) 996-1449  
For customer service, please call: (919) 996- 4810  
For an emergency, please call: 9-1-1

Can I bring toys, food and furniture into dog parks?

Toys, food, and treats are NOT permitted inside the off-leash area as it can trigger aggressive behavior between dogs. Outside furniture, including lawn chairs, are also prohibited.

Can a newborn puppy come to the dog park?

No. Puppies under four (4) months of age have not received all the necessary vaccinations. Consequently, their immune systems are vulnerable to potentially dangerous forms of bacteria from other dogs.

Is there an area for shy or small dogs?

Yes! Oakwood, Millbrook, Buffaloe Road and Carolina Pines Park are divided into two size-appropriate areas – one for smaller pooches (30lbs and under), and the other for larger canines (over 30lbs). Jaycee Park’s Dog Run, however, has no such restriction, therefore allowing all dogs - regardless of size - to play together in a shared space.

How can I help?

Volunteers are always needed to help with ongoing maintenance costs and clean-up efforts. If you are interested in making a difference in your community and enhancing the quality of our parks, contact Mary Owens at 919-996-3292 or [mary.owens@raleighnc.gov](mailto:mary.owens@raleighnc.gov)

Does the park provide waste bags for clean up?

Yes. All City of Raleigh dog park facilities offer bags and a place to deposit waste at each site.

How many Dog Park locations are in Raleigh?

The City of Raleigh has five (5) unleashed dog areas - four (4) dog parks and one (1) dog run. Further information for each of these sites can be found below:

Millbrook Dog Park  
Phone: (919) 996-4156  
Location: 1905 Spring Forest Road, Raleigh, NC 27615

Oakwood Dog Park  
Phone: (919) 831-6995  
Location: 910 Brookside Drive, Raleigh, NC 27604

Carolina Pines  
Phone: (919) 831-6435  
Location: 2305 Lake Wheeler Road, Raleigh, NC 27603

Buffaloe Road Park  
Location: 5900 Buffaloe Road, Raleigh, NC 27604

Jaycee Dog Run  
Phone: (919) 996-6833  
Location: 2405 Wave Ave., Raleigh, NC 27607

# APPENDIX G: DOG PARK DESIGN GUIDELINES

## Definitions

- A. Dog Park

B. Dog Run

C. Urban Dog Park

D. Temporary Dog Park

E. Designated Off-Leash Dog Area
- A) An **Dog Park** is a larger fenced area designated for dogs to exercise and socialize off leash. Design elements shall include a five (5') foot perimeter fence; double gates for entry; separate areas for small dogs and large dogs; appropriate surfacing for the chosen location; seating; shade; dog fountain or other appropriate water source; benches; covered trash receptacles; dog waste bag dispensers; and regulatory signage.
- B) A **Dog Run** is a smaller fenced area designated for dogs to exercise and socialize off leash. Design elements shall include a five (5') foot perimeter fence; double gates for entry; appropriate surfacing for the chosen location; shade; covered trash receptacles; dog waste bag dispenser(s); and regulatory signage.
- C) An **Urban Dog Park** is a smaller fenced area similar to a Dog Run but located in a densely developed urban environment. Design elements required for an Urban Dog Park will be responsive to the surrounding built environment, and may include design features that are compatible with the aesthetics and safety concerns of an urban setting. Design elements may include a four or five (4'-5') foot perimeter fence; double gates for entry; appropriate surfacing for a high-traffic location in an urban environment; covered trash receptacles; dog waste bag dispenser(s); and regulatory signage.
- D) A **Temporary Dog Park** is a smaller area temporarily designated for dogs to exercise and socialize off leash. A Temporary Dog Park may be established for as little as a few hours or few days at a time (a “pop-up” dog park), or it may remain in place for up to several months. Design elements will typically include only basic features such as a temporary perimeter fence; double gates for entry; covered trash receptacles; dog waste bag dispenser(s); and regulatory signage.
- E) A **Designated Off-Leash Dog Area** is a delineated area within a park that is identified by signage as available for off-leash dog activity during designated hours. The space is not enclosed by fencing, but defined by park elements such as topography, landscaping, pathways, signage, bollards, or other features.

## Dog Park Design Criteria

- 1.The planning guideline for a Dog Park is an area of approximately two (2) acres.

2.The distance between the proposed fenced dog park and adjacent park features, homes, and businesses will be evaluated for conflicts associated with noise. A minimum separation of two hundred (200) feet is preferable; however changes in topography or intervening landscape screening can reduce the distance of spatial separation.

3.Fenced dog parks will require well drained soils with a maximum slope of 5%. Fenced dog parks are not recommended for placement in floodplains.

4.If located within a city park, a fenced dog park shall not be placed in any area where it will negatively impact primary uses of the park, unless the impact can be mitigated by regulating the hours of operation. Sites will be evaluated for noise conflicts with adjacent park uses, adjacent residences, and businesses. Potential use conflicts include but are not limited to the following:
  - Playgrounds and other children’s play areas
  - Athletic fields and courts
  - Sensitive habitats and wildlife areas
  - Areas directly upslope from community gardens
  - Greenway trails or internal park pathways
  - Historic sites or other cultural resources

5.A fenced dog park shall have permanent signage displaying hours of operation, rules and regulations and contact information for both PRCR and Animal Control.

6.Design of a fenced dog park shall include a potable water source for dogs to drink or play. It can provide a water source for cleaning and maintenance depending on the surface material utilized to insure proper sanitation.

7.Design of a fenced dog park shall consider an accessible route from designated parking if provided or available.

8.A fenced dog park shall comply with all applicable codes, ordinances and regulations.

9.If open after dusk, fenced dog parks may be lighted facilities or receive light spillage from adjacent street or building lights. Light levels shall be adequate to allow for safe use of the facility and general public safety after dark.

10.Hours of operation will be set to comply with the general operating hours of the park in which it is located or if freestanding, will comply with city noise ordinance requirements.

11.Consideration should be given to potential amount of fecal material and ammonia that would be generated from this type of park. Coordination with the Stormwater Management Division to protect water quality could be an option. <https://www.raleighnc.gov/home/content/PWksStormwater/Articles/Stormwater.html>

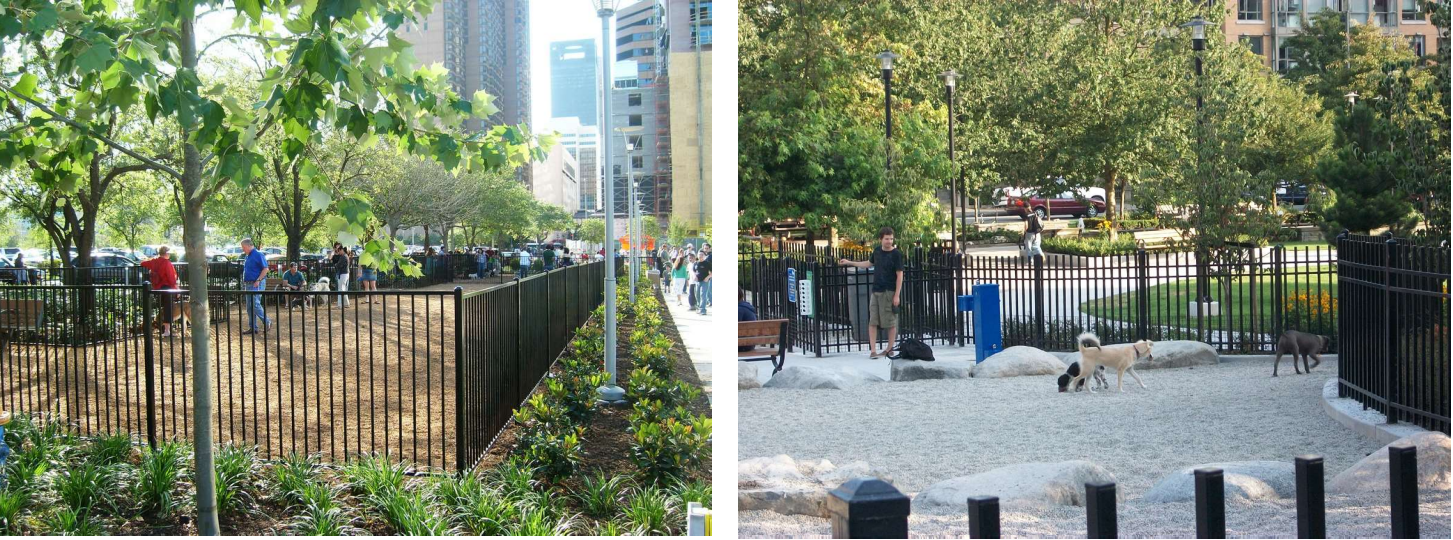


Dog Run Criteria

- 1.The planning guideline for a Dog Run is approximately three thousand (3000) square feet or more in area.
- 2.The distance between the proposed fenced dog run and adjacent park features, homes, and businesses will be evaluated for conflicts associated with noise. A minimum separation of two hundred (200) feet is preferable; however changes in topography or intervening landscape screening can reduce the distance of spatial separation.
- 3.Fenced dog runs will require well drained soils with a maximum slope of 5%. Fenced dog runs are not recommended for placement in floodplains.
- 4.If located within a city park, a fenced dog run shall not be placed in any area where it will negatively impact primary uses of the park, unless the impact can be mitigated by regulating the hours of operation. Sites will be evaluated for noise conflicts with adjacent park uses, adjacent residences, and businesses. Potential use conflicts include but are not limited to the following:
- Playgrounds and other children’s play areas
  - Athletic fields and courts
  - Sensitive habitats and wildlife areas
  - Areas directly upslope from community gardens
  - Greenway trails or internal park pathways
  - Historic sites or other cultural resources
- 5.A fenced dog run shall have permanent signage displaying hours of operation, rules and regulations and contact information for both PRCR and Animal Control.
- 6.Design of a fenced dog run may include a potable water source for dogs to drink or play. It can provide a water source for cleaning and maintenance depending on the surface material utilized in order to insure proper sanitation.
- 7.Design of a fenced dog run shall consider an accessible route from designated parking if provided or available.
- 8.A fenced dog run shall comply with all applicable codes, ordinances and regulations.
- 9.Fenced dog runs, especially in urban areas, may be lighted facilities or receive light spillage from adjacent street or building lights. Light levels shall be adequate to allow safe use of the facility and general public safety after dark.
- 10.Hours of operation will be set to comply with the general operating hours of the park in which it is located or as otherwise posted.
11. Consideration should be given to potential amount of fecal material and ammonia that would be generated from this type of park. Coordination with the Stormwater Management Division to protect water quality could be an option. <https://www.raleighnc.gov/home/content/PWksStormwater/Articles/Stormwater.html>

Urban Dog Park Design Criteria

- 1.The planning guideline for a Urban Dog Park is approximately three thousand (3000) square feet or more in area located in a densely developed urban enviornment.
- 2.The style of fencing used for an Urban Dog Park should be responsive to the surrounding built environment and compatible with the aesthetics and safety concerns of an urban setting.The fencing should be of higher quality than the fencing used for other dog parks.



Examples of Urban Dog Park Design Elements

3. Urban Dog Parks should have appropriate surfacing for a high-traffic location in an urban enviornment.

Types of Surfacing	Pros	Cons	Cost
Ntatural Turf	Soft	Digging; subject to wear; loss of turf	\$\$\$
Pea Stone, Stone Dust, Rice Stone	Drains well	Sticks in dogs paws	\$\$
Mulch,Wood Chips	Inexpensive	Frequent replacement	\$
Synthetic Turf	Consistent look	Requires sanitizing system	\$\$\$\$
Dirt, Sand	Inexpensive	Digging; requires adding additional materials	\$

4. Urban Dog Parks shall have a more intensive maintenance schedule to help prevent any issues that may arise from the close proximity of the Urban Dog Park to other uses.
5. Urban Dog Parks shall display signage indicating hours of operation, rules and regulations and contact information for both PRCR and Animal Control.
- 6.Design of an Urban Dog Park may include a potable water source for dogs to drink or play, but will not necessarily provide water access. Most often, Temporary Dog Parks will be limited to only the most basic amenities of waste disposal bags and trash cans.
- 7.Design of an Urban Dog Park shall consider an accessible route from designated parking if provided or available.  
7.Design of an Urban Dog Park shall consider an accessible route from closest sidewalk or other pedestrian way. Urban Dog Parks may be designed as walk-to only facilities, and as such may not necessarily be developed adjacent to parking.
- 8.An off leash dog area shall comply with all applicable codes, ordinances and regulations. Special Event permits may be required.
9. Off leash dog areas may be lighted facilities or receive light spillage from adjacent street or building lights.
10. Hours of operation will be set to comply with the general operating hours of the park in which it is located, or as otherwise posted.
11. Consideration should be given to potential amount of fecal material and ammonia that would be generated from this type of park. Coordination with the Stormwater Management Division to protect water quality could be an option. <https://www.raleighnc.gov/home/content/PWksStormwater/Articles/Stormwater.html>

**Temporary Dog Park Design Criteria**

- 1.A Temporary Dog Park should be designed to enclose an area between 2000 and 5000 sq. ft.
- 2.Areas significantly smaller than 2000 sq. ft. should only be considered if the number of users will be limited.Areas significantly larger than 5000 sq. ft. should be designed to take advantage of existing structures such as permanent fencing or buildings already in place, to mitigate the need for excessive temporary fencing.
- 3.The surface of Temporary Dog Parks can include natural turf, mulch, or a hard paved surface.
4. In-ground sleeves should be installed to secure any fence posts in natural surfaces.Where in-ground sleeves are not feasible (such as over sidewalks or other hard surfaces), fence post stands should be used and secured with sand bags or other means of stabilization. Temporary Dog Park fencing should be sufficiently secure to contain animals and should be designed to withstand significant impact from running dogs.
- 5.Temporary Dog Parks shall display signage indicating hours of operation, rules and regulations and contact information for both PRCR and Animal Control.
- 6.Design of Temporary Dog Park may include a potable water source for dogs to drink or play, but will not necessarily provide water access. Most often, Temporary Dog Parks will be limited to only the most basic amenities.
- 7.Design of a Temporary Dog Park shall consider an accessible route from designated parking if provided or available. Temporary Dog Parks may be designed as walk-to only facilities, and as such may not necessarily be developed adjacent to parking.
- 8.An off leash dog area shall comply with all applicable codes, ordinances and regulations. Special Event permits may be required.
9. Off leash dog areas may be lighted facilities or receive light spillage from adjacent street, ballfield, court or building lights.
10. Hours of operation will be set to comply with the general operating hours of the park in which it is located, or as otherwise posted.
11. Consideration should be given to potential amount of fecal material and ammonia that would be generated from this type of park. Coordination with the Stormwater Management Division to protect water quality could be an option. <https://www.raleighnc.gov/home/content/PWksStormwater/Articles/Stormwater.html>



**Designated Off-Leash Dog Area Design Criteria**

Currently, the City of Raleigh does not operate any Designated Off-Leash Dog Areas in public parks. If such a facility is considered in the future, the following design guidelines should be used.

1. Ideally, an off leash dog area shall be no less than one (1) acre in size.
  
2. The distance between the proposed off leash dog area and adjacent park features, homes, and businesses will be evaluated for conflicts associated with noise. A minimum separation of two hundred (200) feet is preferable; however changes in topography or intervening landscape screening can reduce the distance of spatial separation.
  
3. The surface of off leash dog areas can include natural turf or a hard surface. Off leash dog areas are not recommended for placement in floodplains.
  
4. If located within a city park, an off leash dog area shall not be placed in any area where it will negatively impact primary uses of the park, unless the impact can be mitigated by regulating the hours of operation. Sites will be evaluated for noise conflicts with adjacent park uses, adjacent residences, and businesses. Potential use conflicts include but are not limited to the following:
  - Playgrounds and other children’s play areas
  - Athletic fields and courts
  - Sensitive habitats and wildlife areas
  - Areas directly upslope from community gardens
  - Greenway trails or internal park pathways
  - Historic sites or other cultural resources
  
5. An off leash dog area shall have permanent signage displaying hours of operation, rules and regulations and contact information for both PRCR and Animal Control.
  
6. Design of an off leash dog area may include a potable water source for dogs to drink or play.
  
7. Design of an off leash dog area shall consider an accessible route from designated parking if provided or available.
  
8. An off leash dog area shall comply with all applicable codes, ordinances and regulations.
  
9. Off leash dog areas may be lighted facilities or receive light spillage from adjacent street, ballfield, court or building lights. Light levels shall be adequate to allow for safe use of the facility and general public safety after dark.
  
10. Hours of operation will be set to comply with the general operating hours of the park in which it is located.
  
11. Consideration should be given to potential amount of fecal material and ammonia that would be generated from this type of park. Coordination with the Stormwater Management Division to protect water quality could be an option. <https://www.raleighnc.gov/home/content/PWksStormwater/Articles/Stormwater.html>

**APPENDIX H: POP-UP DOG PARK HANDBOOK**

Planning a pop-up dog park is not only easy, but fun! Just think of all the people and happy, romping dogs that will soon be enjoying this previously under-utilized area!

The main considerations when planning a pop-up dog park are site selection, layout, and materials. Make sure to pick an area that would be suitable for play. Have the site laid out with enough room for dogs to fit comfortably without too much crowding. And don’t forget to plan for the proper amount of fencing materials so we can keep the dogs safely enclosed.



Site Selection

Site selection is the first important step in planning a pop-up dog park. The fencing requires a fairly level area to effectively contain the dogs. The area you choose should not be too close to dangerous areas such as roadways. The site shouldn't have anything that could harm the dogs such as broken glass or debris, so thoroughly screen the area beforehand.

The site you choose should be able to accommodate a fenced in area of approximately 2000-5000 sq. ft. An area much smaller than that may be too crowded, and an area much larger than that may require too much temporary fencing to adequately enclose the space.

The site you choose will also dictate whether you use **stands** or **sleeves**.

The stands should be used where it isn't feasible to drill holes into the ground. An example would be Nash Square, because of the large tree root systems, or the Municipal Building Plaza or Moore Square, which requires fencing to be placed over sidewalks. Be sure to locate any underground utilities before digging.

If the site has no limitations underground, then you should choose to use sleeves. You will need to plan to have someone come out before hand to drill the holes for the sleeves with an auger.

The other major difference between using stands versus sleeves is the size of the post associated with each system. The stands require 5' posts and the sleeves require 7' posts. This adjusts for the two feet of post that will be within the sleeve underground. The final system set up should result in a 5' tall fence no matter which system you use.

***Make sure to grab the right size post for the system that you select.***

Below are the pros and cons of using stands vs sleeves:

Stands	Sleeves
Pros: No digging needed	Pros: Has a cleaner aesthetic No sandbags that might get utilized by the dogs
Cons: Doesn't look as nice as sleeves Requires sandbags on the stands	Cons: Requires extra planning beforehand to dig the holes



This site is a great example of using the stand and the sleeve system simultaneously.

To maximize the enclosed area for the dogs, we had the fencing come up onto the sidewalk for part of the perimeter.

Most of the fencing was secured in the ground by the sleeves, but some of the fencing was on stands.

The Tucker House site was chosen and set up with minimal advance notice, so stands were used since we didn't have the time to drill holes for the sleeves.

Stands were weighed down with sand bags to provide extra stability, in case any dogs jumped on or ran into the fence structure. This set up was secure enough to stay in place, unstaffed, for an entire weekend without any incident.





Layout

The layout of the enclosed area should:

- Be at least 2,000 sq ft.
- Have posts spaced every 10’
- Locate the double-gate system in a flat area that is near the existing entrance to the site
- Avoid acute angles that would lead to a decrease in structural integrity of the fencing



Materials

The materials needed to build a pop-up dog park include:

- Stands and/or Sleeves
- Sandbags(if using stands)
- Posts (appropriately sized for the system you choose)
- Fencing Mesh
- Zip ties (3 per post, plus extras)
- Stakes (to secure fencing mesh to the ground, at least one between each pair of posts)
- Double-Gate System

There are also secondary materials needed to facilitate the pop-up dog park:

- Signage: rules, welcome, waste disposal, and wayfinding signage directing people to the site
- Temporary dog waste bag dispensers
- Trash cans
- Chairs (optional)
- Shade tents (optional)

The materials themselves are not complicated and are currently stored at the Northeast Remote Operation Center. The thing to be careful in is making sure you grab the right amount of materials.

The amount of materials you need is dependent on the size of the pop-up dog park you plan to host. The recommended amount of materials is straightforward once you know the linear feet of the area you plan to enclose.

One post (with stand/sleeve) should be placed for every 10’ of fencing. It’s recommended that you use at least 3 zip ties per post and 1 sandbags per stand. There should be at least 1 stake between each post, to secure the fence mesh to the ground, if the hardness of the ground permits.

Make sure to bring extra zip ties for attaching the fencing to the gate unit.

A team of four people can set up a 4,000 sq. ft. pop-up dog park in approximately 2 hours (once materials are delivered to the site).

When taking down a pop-up dog park, clip all zip ties and roll up the fencing mesh separately from the posts. The fencing mesh on the Double-Gate system should remain in place.



This site had to only use stands to help preserve the root systems of the large historic trees at Nash Square.



APPENDIX I: PLANNED DOG PARK INVENTORY







### **Future Park Development**

The area between the proposed location of the Hilburn Drive extension and the western stream is identified for future park development. This could include a picnic facility, dog park, and trails. However, it is recommended that this portion of the site be preserved as much as possible. The configuration of these elements will depend on the final location and implementation of the Hilburn Drive extension.

### **Future Park Development**

The area between the proposed location of the Hilburn Drive extension and the western stream is identified for future park development. This could include a picnic facility, dog park, and trails. However, it is recommended that this portion of the site be preserved as much as possible. The configuration of these elements will depend on the final location and implementation of the Hilburn Drive extension.

