

Virginia Commonwealth University VCU Scholars Compass

Master of Urban and Regional Planning Capstone Projects

Urban and Regional Studies and Planning

2022

Chesterfield County Parks and Recreation Sustainability Plan

Kyle A. Gilmer Virginia Commonwealth University

Follow this and additional works at: https://scholarscompass.vcu.edu/murp_capstone

Part of the Urban Studies and Planning Commons

© Kyle A. Gilmer

Downloaded from

https://scholarscompass.vcu.edu/murp_capstone/52

This Professional Plan Capstone is brought to you for free and open access by the Urban and Regional Studies and Planning at VCU Scholars Compass. It has been accepted for inclusion in Master of Urban and Regional Planning Capstone Projects by an authorized administrator of VCU Scholars Compass. For more information, please contact libcompass@vcu.edu.

CHESTERFIELD COUNTY PARKS & RECREATION

SUSTAINABILITY PLAN

MAY 2022

Chesterfield County Parks & Recreation Sustainability Plan

A Capstone Professional Plan Prepared By:

Kyle Gilmer, Master of Urban & Regional Planning Candidate Master of Urban & Regional Planning Program L. Douglas Wilder School of Government & Public Affairs Virginia Commonwealth University



L. Douglas Wilder School of Government and Public Affairs

Prepared For:

Chesterfield County Parks & Recreation Department



Professional Panel Members:

Dr. Damian Pitt, Capstone Advisor

Associate Professor of Urban and Regional Studies and Planning Virginia Commonwealth University

Dr. Niraj Verma, Capstone Coordinator *Professor of Urban and Regional Studies and Planning Virginia Commonwealth University*

Janit Llewellyn, Client Planning Manager Chesterfield County Parks & Recreation Department

Top photo on cover page taken by Chesterfield County Parks & Recreation Department

© Kyle Gilmer 2022 All Rights Reserved.

ACKNOWLEDGMENTS

I would first like to thank everyone who contributed their time and efforts to the creation of this plan. To my panel members, Dr. Meghan Gough, Dr. Niraj Verma, Dr. Damian Pitt, and Professor Janit Llewellyn, thank you for the feedback, support, and guidance throughout this entire process. Additionally, thank you to Janit for this opportunity, starting out as a volunteer project and evolving into this plan, working with you has been the outmost pleasure.

To the Chesterfield County Parks and Recreation staff and residents, thank you for partaking in the planning process and for sharing your thoughts and experiences of Chesterfield County Parks and Recreation sites and facilities. This plan, and especially its recommendations, would not have been possible without your firsthand knowledge. I hope that this plan will truly benefit and enhance the parks and recreation system.

Secondly, I would like to thank all the professors I learned from and worked with during my time in the MURP program at VCU. Thank you for broadening my horizons and teaching me the interconnected world of planning.

To my classmates, family, and friends, thank you for everything. To my fellow MURPs, I am grateful to have met you all and learned, gained, and experienced planning throughout the course of the program. From the beginning of the COVID-19 pandemic living through the world of Zoom, to finally meeting in person and finishing out the semester strong, I look forward to the seeing everyone's future accomplishments.

Lastly, to my dad, Brittany, and Christopher. I immensely appreciate and cherish your constant love and support. Dad, thank you for everything since the beginning of time. You have always pushed me to excel and become the best I could be, I will forever be grateful for you. Brittany, a huge shoutout to you for guiding me and leading me down the path of becoming a geographer and planner. You have helped me navigate through my college journey, being the best mentor and stepmom, thank you for everything. Chris, words cannot describe how incredibly appreciative I am to have your love and support, you have been my rock and best friend, I am so grateful for you. Without you all, I could not have gotten through these past two and a half years of schooling, working, plus a global pandemic. I love you guys.

TABLE OF CONTENTS

List of Figures	6
List of Tables	7
1 Introduction	8
1.1 Plan Purpose	8
1.2 Client Description	8
1.3 Outline of the Plan	9
2 Background	10
2.1 Literature Review	10
2.1.1 The Three Pillars	10
2.1.2 Agency Sustainability Plans	11
2.1.3 Best Practices	12
2.1.4 Key Measures of Park and Recreation Agencies Sustainable Practices	14
2.1.5 Barriers Preventing Implementation of Sustainable Activities	14
2.2 Theoretical Framework	14
2.3 Existing Conditions	16
2.3.1 Study Area	16
2.3.2 History	17
2.3.3 Demographics	19
2.3.4 Parks and Recreation	24
2.4 Precedent Plans	25
2.4.1 Parks and Recreation Master Plan	25
2.4.2 CAPRA Accreditation	26
2.4.3 Sustainability Initiatives	28
3 Methods	29
3.1 Research Questions	28
3.2 Data Collection and Analysis	30
4 Research Findings	32
4.1 Who Uses the Chesterfield County Parks and Recreation Sites?	32
4.2 Why Do Users Visit and How Do Users Use Park Sites?	35
4.3 What Do Users Want in Chesterfield County Park and Recreation Sites?	39
4.4 How Familiar are Users with Sustainability?	
	4

4.5 Outreach Strategies for Underrepresented Communities	41
5 Recommendations	42
5.1 Vision Statement	42
5.2 Goals, Objectives, and Actions	42
6 Implementation	52
References	61
Appendix A: Chesterfield County Park System Sites and Acreage Table	66
Appendix B: CAPRA Accreditation List of Standards	72
Appendix C: Chesterfield County Parks and Recreation User Survey	78
Appendix D: Chesterfield County Parks and Recreation Sustainability User Survey Results	84
Appendix E: Timeline for Completion	95

LIST OF FIGURES

Figure 1: 2016 NRPA Survey on Agencies with a Documented Sustainability Plan	. 12
Figure 2: Chesterfield County and Surrounding Areas	. 16
Figure 3: Chesterfield County with Park and Recreation Sites	. 17
Figure 4: 1888 Map of Chesterfield County with Eight Magisterial Districts	. 18
Figure 5: Rockwood Park, Chesterfield County	. 19
Figure 6: Chesterfield County 2000 – Projected 2040 Total Population	. 20
Figure 7: 2010 & 2020 Census Total Population by Age	. 21
Figure 8: 2010 & 2020 Census Race & Ethnicity	. 22
Figure 9: Chesterfield County 2020 Race & Ethnicity Including Hispanic or Latino	. 23
Figure 10: Chesterfield County 2020 Race & Ethnicity Excluding Hispanic or Latino	. 23
Figure 11: Chesterfield County Parks and Athletic Complexes	. 24
Figure 12: What is Your Racial/Ethnic Identity?	. 32
Figure 13: What is Your Age Range?	. 33
Figure 14: What is Your Gender Identity?	. 34
Figure 15: What Zip Code Do You Live in?	. 35
Figure 16: What Park(s) Sites Do You Visit Often?	. 36
Figure 17: How Do You Travel to Park Sites?	. 36
Figure 18: How Frequently Do You Visit Parks?	. 37
Figure 19: What is Your Main Purpose for Visiting Parks?	. 38
Figure 20: What Features Do You Enjoy About Park(s)?	. 38
Figure 21: How Familiar Are You with the Term "Sustainability"?	. 40
Figure 22: Would You Be Interested in Learning More About How Sustainability Can Help	
Parks?	. 40

LIST OF TABLES

Table 1: Generalized Best Practices Matrix	13
Table 2: Research Questions, Sources of Information, Outreach Method, Timeline for Process	30
Table 3: Potential Strategies for Reaching Traditionally Underrepresented Populations	41
Table 4: Timeline for Completion	96

1 | INTRODUCTION

1.1 | PLAN PURPOSE

This plan seeks to guide the County Parks and Recreation staff in developing a foundation for a sustainability plan that will support the accreditation process and implementation of the Parks and Recreation Master Plan. This project focuses on long-term environmental sustainability practices, recommendations, park lands, and topics relevant to Parks and Recreation outreach and management.

The main goal of the sustainability plan is to address department needs for long-term environmental sustainability by analyzing current practices and proposing recommendations per the 2018 Parks and Recreation Comprehensive Master Plan. In efforts to further reach and enhance sustainable outcomes, the plan supports the Parks and Recreation department's environmental stewardship efforts to address conservation, environmental monitoring, health, and wellness, and to promote sustainable practices to the community. The plan is broken up into "pillars of sustainability," which are economics, environment, and social issues. Topics that fall under these pillars include recycling/upcycling, park maintenance, energy independence, flood protection, urban tree canopy (UTC), and more. Overall, the plan is focused on a set of goals/elements that will help determine how the community will look and function in the future according to set sustainable practices.

1.2 | CLIENT DESCRIPTION

The *Chesterfield County Parks and Recreation Sustainability Plan* has one client: Chesterfield County Parks and Recreation Department – represented by its Planning Manager, Janit Llewellyn.

The Parks and Recreation Department is organized into two divisions, parks and recreation. Each division is supported by administration and finance, working together to support the Department's mission and vision. There are also other subdivisions of the department such as community recreation, outdoor recreation, athletics and sports tourism, historical facilities/sites and programs, parks maintenance and operations, and planning and construction services. The Department's mission statement is "to enhance the quality of life for citizens and vision statement is "to become the First-Choice destination for quality parks, facilities, sites, and programs."¹

The Department's mission and vision statement focuses on environmental outcomes of park planning projects, while the department operates on a manual of environmental management standard operating procedures. The department is also tasked with managing conservation easements held by the Department of Historic Resources and Capital Region Land Conservancy.

¹ Parks & Recreation | Chesterfield County, VA. (2021). https://www.chesterfield.gov/150/Parks-Recreation.

Per the 2018 Chesterfield County Parks and Recreation Master Plan, the development of a sustainability plan and report is to be completed by the department under operation measures, as defined in the master plan. The Department manages over 5,600 acres of land including environmentally valuable land and resources. The operation, maintenance, and programming of the park land and facilities are highly significant. The development of a sustainability plan and report will help analyze current operations and recommend department-wide, long-term sustainable practices. In addition, Chesterfield is the first Parks and Recreation Department in the Richmond Region, and the 11th in the state of Virginia, to earn the Commission for Accreditation of Parks and Recreation Agencies (CAPRA) accreditation.

1.3 | OUTLINE OF THE PLAN

The *Chesterfield County Parks and Recreation Sustainability Plan* will include an analysis of research findings and best practices and provide recommendations to help build the foundation for a sustainability plan to be adopted. The main components of this plan are:

SECTION 2 | BACKGROUND: This section gives a brief description of the scholarly and professional literature on parks and recreation sustainability plans and a general overview of best practices, key measures, and barriers to the implementation of the *Chesterfield County Parks and Recreation Sustainability Plan*. Additionally, the theoretical framework explains the three main planning theories that the plan will draw from.

SECTION 3 | METHODOLOGY: The plan's framework and methodology are explained in this section. The section also lists the research questions, methods of data collection, and the analysis of data.

SECTION 4 | RESEARCH FINDINGS: The results of the user survey are presented and discussed in this section. This includes analyzing each survey question and addressing the connection between a sustainability plan.

SECTION 5 | RECOMMENDATIONS: Based on the findings and additional research, this section outlines and describes the recommended goals, objectives, and actions.

SECTION 6 | IMPLEMENTATION PLAN: This section defines the actions and timeline required to implement the recommendations stated in Section 5.

2 | BACKGROUND

2.1 | LITERATURE REVIEW

What is sustainability? Sustainability is a broad term used often and by many but universally defined as "meeting the needs of the present without compromising the ability of future generations to meet their needs."² As most cities are experiencing limited amounts of space, resources, and time, sustainability is becoming more important in improving the quality of communities' lives, protecting ecosystems, and preserving natural resources for today and for future generations.

Parks are a key community resource when it comes to addressing environmental issues such as the effects of climate change.³ From protecting resources (e.g., water, land, air) through green practices, to reducing stormwater runoff through more open/green space, parks play a critical role in ensuring communities adapt and thrive with the rapidly changing environment. Critical topics such as health and wellness, social equity, and conservation (the Three Pillars of Parks and Recreation) are addressed daily by parks and recreation agencies across the country, leading to the process and implementation of sustainability plans.⁴

In addition, the *Chesterfield County Parks and Recreation Sustainability Plan* incorporates various themes and best practices from existing plans and other agencies that have proven to be effective. A few key themes from the literature review include knowledge from the National Recreation and Park Association (NRPA), existing sustainability plans across the country, general overview of best practices, key measures of sustainability, and any barriers to the implementation of a sustainability plan.

2.1.1 | THE THREE PILLARS

Sustainability at the parks and recreation level is framed around NRPA's three pillars: conservation, health and wellness, and social equity.⁵ These themes, or values, incorporate many thousands of programs, facilities, and policies implemented by parks and recreation departments across the country:

Conservation - Local park and recreation agencies play an important role in environmental protection by providing green infrastructure, maintaining public lands, preserving wildlife habitats, and more. Local parks, in addition to connecting people to nature, create essential environmental stewards who advocate for and protect our most valuable public resources — our land, water, trees, open spaces, and wildlife.

² United Nations Brundtland Commission, 1987.

³ Kruijsen et al., 2012.

⁴ Basiago, 1999.

⁵ The Four Pillars of Sustainability, 2021; Our Three Pillars, Impacting Communities | National Recreation and Park Association, 2021; admin, 2006. Background | 10

Health and Wellness - Local park and recreation agencies in communities across the country provide critical health and wellness opportunities for all populations. As many people in the United States face serious health issues, such as rising rates of chronic disease, sedentary lifestyles, and poor nutrition habits, parks and recreation provide an affordable and accessible solution.⁶

Social Equity - The idea that all people, regardless of race, ethnicity, age, income level, or physical ability, have access to programs, facilities, places, and spaces that make their lives and communities better is central to the philosophy of public parks and recreation. Parks and recreation facilities truly help to build communities — communities for everyone.⁷

2.1.2 | AGENCY SUSTAINABILITY PLANS

Current literature discusses sustainability plans at the local, regional, and federal levels. Very limited literature includes sustainability plans at agency department levels such as parks and recreation. Without a sustainability plan, park and recreation agencies struggle to support activities that would improve sustainable practices in their communities. According to NRPA, parks are key components to a community and overall sustainability.⁸ Sustainability plans play an important role in the growth of a city, starting at the parks and recreation level. In 2016, NRPA conducted a survey on agencies with a documented sustainability plan (Figure 1). The results showed that most agencies do not have a documented plan, and some agencies are either referring to an existing regional plan, in the process of implementing a plan, or currently have their own.⁹

Researching existing parks and recreation sustainability plans resulted in successful and implemented plans including the NRPA, National Park Service (NPS), City of Sacramento (California), City of Westerville (Ohio), New York City (New York), Prince George's County (Maryland), Kansas City (Missouri), and Washington State. In particular, the parks and recreation sustainability plans of the City of Sacramento and Kansas City cover topics or 'elements' that break down the entire plan and recommendations needed to achieve a sustainable community. Both examples reviewed their local park master plan, regional master plan, and/or existing sustainability plan. Reviewing these two areas as case studies will help the process of data collection/research and the recommendations of the *Chesterfield County Parks and Recreation Sustainability Plan*.

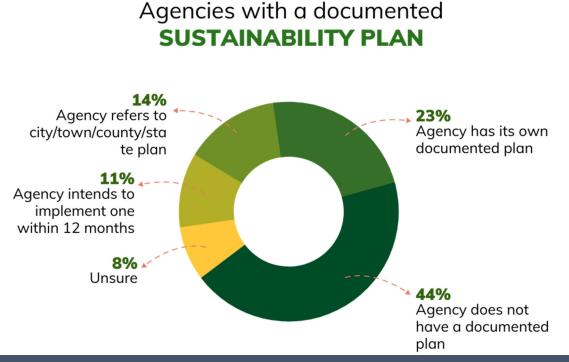
⁶ Lavallee, Sustainable Parks - Park Planning and Design, 2021.

⁷ McCole & Vogt, 2011

⁸ NRPA, 2017.

⁹ National Park Service U.S. Department of the Interior - Green Parks Plan, 2016.

Figure 1: 2016 NRPA Survey on Agencies with a Documented Sustainability Plan



2.1.3 | BEST PRACTICES

In their communities, park and recreation agencies implement a variety of sustainable practices. Some of the common best practices among the existing parks and recreation sustainability plans include creating opportunities for healthy outdoor activity, protecting and managing wildlife and habitats, natural land management, reducing/repurposing landfill waste, using environmentally friendly building practices, public engagement, and education, and implementing green infrastructure practices.¹⁰ Some of these actions require policy changes and strategic thinking to move towards formalizing a sustainable plan for a community to meet its sustainability goals. According to a review of several case studies such as New York City, Sacramento, and Kansas City, the top 5 ways parks and recreation departments are acting on creating sustainable practices are:

- Offering transportation alternatives that reduce carbon footprint.
- Protecting watersheds by adopting natural resource management practices.
- Improving air quality by increasing tree canopy.
- Educating the public on sustainability.
- Reducing stormwater runoff and flooding through green infrastructure.¹¹

 ¹⁰ Our Sustainability Efforts | MNCPPC, MD, 2021; City of Westerville Sustainability Plan, 2021; A Plan for Sustainable Practices within NYC Parks, 2010; City of Sacramento, CA Department of Parks & Recreation Sustainability Plan 2008 - 2015, 2008; Sustainable Development, 2021; Report of the World Commission on Environment and Development: Our Common Future, 2021.
 ¹¹ Sustainable Copenhagen, 2021; Sustainable City | SF Planning, 2021; University of California -Policy on Sustainable Practices, 2020; Stockholm Royal Seaport Sustainability Report 2017, 2017; University of California - Sustainability Annual Report 2020, 2020.

Common best practices amongst the precedent plans are focused on green and sustainable features, geared toward the environment and improving the quality of life. In summary, the best practices are:

- 1. Minimizing the impacts to the natural environment, including the landscape, slopes, hillsides, forest and tree cover, rocks features, native vegetation, and soil structure.
- 2. Promote groundwater infiltration. Manage stormwater naturally by green structure: rain gardens, bioswales, rain barrels, permeable surfacing, etc.
- 3. Enhancing riparian buffers to improve flood control.
- 4. Increasing the tree canopy, planting trees wherever possible.
- 5. Managing invasive plants and introducing more native vegetation.
- 6. Use regional materials during construction and sustainable products like recycled content.
- 7. Providing opportunities for passive recreation and interaction with nature.
- 8. Improving the public infrastructure for network connectivity through walkways, bikeways, greenways, etc.
- 9. Educating the public of sustainable practices at the sites through signage and/or programming.
- 10. Reducing energy usage on the sites and introducing more renewable energy sources.

Below is a best practice matrix that is generalized in topics and subtopics according to the review of existing parks and recreation sustainability plans:

Topic/Subtopic	Notes		
Renewable Energy	Introducing 1 out of 5 of the different		
	renewable energies (solar, geothermal, wind,		
	biomass, hydropower).		
Green Buildings	LEED or similar certified buildings,		
	incorporating green infrastructure into the		
	park sites.		
Agriculture and Sustainable Site	Community gardens, green parks, open space,		
Development	etc.		
Strong Community Participation	Community outreach, survey(s), newsletter		
	for upcoming projects/events, placemaking,		
	etc.		
Transportation	Bikeways, walking & running trails, and		
	water access and water trails. Increasing more		
	walkability and ways for mobility countywide		
	and to and from park sites.		
Waste Reduction & Recycling	Recycling bins, recycling programs,		
	composting, community projects for garden		
	events, and educational outreach in parks.		

 Table 1: Generalized Best Practices Matrix

2.1.4 | KEY MEASURES OF PARK AND RECREATION AGENCIES SUSTAINABLE PRACTICES

The literature is heavy on measuring sustainability activities to gauge the growth and future of the community. The saying goes, "if you cannot measure it, you cannot manage it,"¹² which is why agencies measure sustainability practices in a variety of ways:

- Identifying and tracking electric meters
- Energy usage audits
- Community member outreach and education
- Urban tree canopy (UTC)
- Stormwater runoff/detention/infiltration/prevention
- Green building certifications
- Environmental surveys

There are other quantifying measures that are key to park and recreation sustainability plans.¹³ Understanding and knowing the analytics of sustainable practices in parks and recreation inventory is important to a sustainability plan when it comes to implementing and accrediting the plan in a community.

2.1.5 | BARRIERS PREVENTING IMPLEMENTATION OF SUSTAINABLE ACTIVITIES

Parks and recreation agencies have a role in implementing and promoting sustainable practices. Nevertheless, most agencies come across some barriers that prevent their ability to expand on any sustainable efforts. Some of these barriers may include a lack of resources, which can be related to funding or staff dedicated to sustainability activities.¹⁴ Another challenge that an agency faces are the general lack of knowledge and expertise related to sustainability practices and activities. With ongoing global climate changes occurring, the barriers preventing sustainable activities at parks and recreation agencies can be easily adjusted through funding, education, and support from the staff members and community.

2.2 | THEORETICAL FRAMEWORK

The *Chesterfield County Parks and Recreation Sustainability Plan* will draw on three major ideas as they are manifest in planning theory. These are "Communicative Action",¹⁵ "Just City",¹⁶ and "Sustainable Development".¹⁷ The three theoretical frameworks will help build the foundation for the implementation of the plan and overall success of the recommendations for Chesterfield County parks and recreation facilities.

¹² Peter Drucker, 2022.

¹³ The Four Pillars of Sustainability, 2021; admin, 2006; Manning et al., 2011.

¹⁴ Kinzer, 2018.

¹⁵ Foley, 1997.

¹⁶ Fainstein, 2010.

¹⁷ ASLA, 2016.

Communicative Action influences how planners and stakeholders engage in collective decisionmaking in an environment of mutual respect. The process of involving the community and decision-makers in a setting that allows both parties to provide input and come to a mutual agreement. In terms of a sustainability plan, Communicative Action will allow the community to voice their concerns and issues while the decision-makers can address these issues and provide feedback on how these issues can/cannot be addressed. Just City provides a goal and emphasizes equity in the outcomes of the deliberative processes, and by so doing it moves beyond deliberation to actual implementation. The process of providing both sustainability and justice, leading to creating a plan that will aim to support the tools for decision-makers, administrators, activists, and other city-makers in their works towards an equal, inclusive, and sustainable future.

Sustainable Development will be the central thrust of the plan, which includes ideas of economics, environment, and social issues all together in one theory.¹⁸ Since Communicative Action theory is rooted heavily in equitable processes, involving the residents of Chesterfield County will be crucial to gain personal knowledge and experiences from public participation. This plan cannot be formulated and implemented without public input and hearing what the residents envision their community looking like through the lens of sustainability. Sustainability is most likely already familiar to Chesterfield County residents, but they probably don't recognize the practices at first glance until educated and shown what sustainability looks like around the county.¹⁹

¹⁸ Central University of Kashmir, 2021.

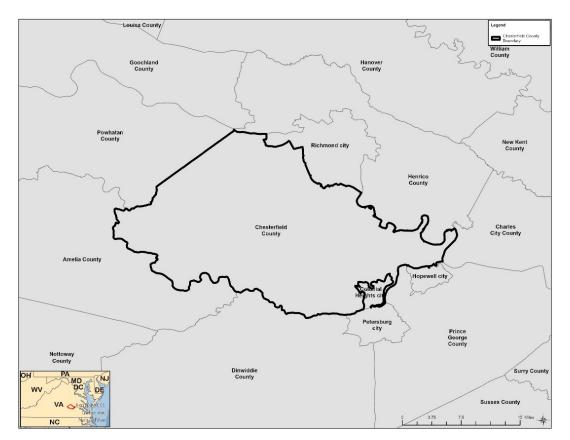
¹⁹ Sustainable Development, 2021; Creating Sustainable Community Parks : ConservationTools, 2021.

2.3 | EXISTING CONDITIONS

2.3.1 | STUDY AREA

Chesterfield County and its surrounding areas are shown in Figure 2 and Figure 3. Located south of Richmond in the Commonwealth of Virginia, the county's borders are primarily defined by the James River to the north and the Appomattox River to the south. Surrounding/adjacent counties include Henrico County (northeast), Richmond (northeast), Charles City County (east), Hopewell (southeast), Prince George County (southeast), Colonial Heights (southeast), Petersburg (southeast), Dinwiddie County (south), Amelia County (southwest), Powhatan County (northwest), and Goochland County (northwest).

Figure 2: Chesterfield County and Surrounding Areas



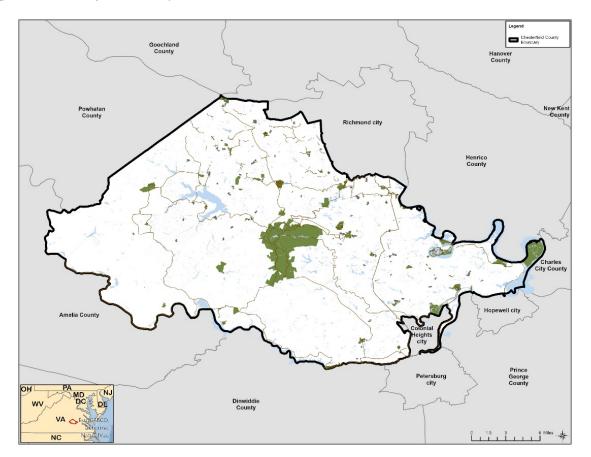


Figure 3: Chesterfield County with Park and Recreation Sites

2.3.2 | HISTORY

On May 25, 1748, Chesterfield was separated from Henrico County and declared as a new county, shown in Figure 4. Flashforward to 1874, the City of Manchester split from Chesterfield to become an independent city and later merged with the City of Richmond in 1910. Also, Colonial Heights was formerly an incorporated town in Chesterfield County and became an independent city in 1948.

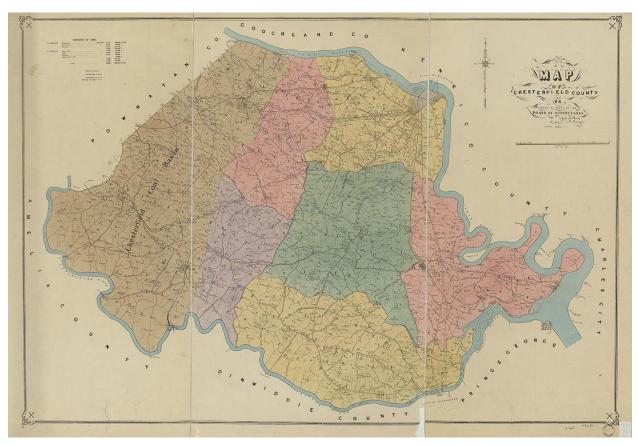
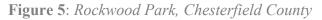
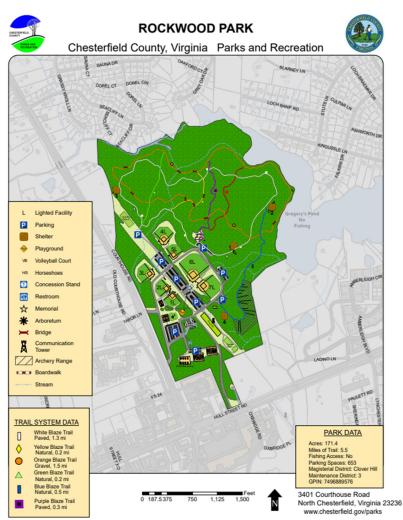


Figure 4: 1888 Map of Chesterfield County with Eight Magisterial Districts

On June 12, 1969, the Board of Supervisors approved the Open Space and Recreation Plan for the Richmond Region, for acquiring and developing regional parks, putting Chesterfield in the forefront to becoming a leading successful park agency in the region. On April 14, 1971, Carl Wise, the first Director for the Parks and Recreation Department was hired in Chesterfield County. The County's Recreation Resources Open Spaces Plan identified the need for the development of regional and local parks, which lead to the purchase and creation of the first public park, Rockwood Park (Figure 5). Recently, the department has celebrated its 50th anniversary, with its 6th parks and recreation director, leading to the need for the department's first sustainability plan.²⁰

²⁰ Chesterfield County, VA, 2021; Chesterfield County Park Map, 2021; Parks & Recreation | Chesterfield County, VA, 2021; Map of Chesterfield County, Va., 2021.





2.3.3 | DEMOGRAPHICS

Chesterfield County's total population is steadily increasing, from 316,236 in 2010 to 364,548 in 2020 (around $\pm 10\%$ increase),²¹ with a projected total population of 433,508 in 2040²² shown in Figure 6. With this growing population projected over the next coming years, land use and parks and recreation inventory will be crucial to help steer the development of the county in a sustainable way.

²¹ U.S. Census, 2010 & 2020.

²² University of Virginia – Weldon Cooper Center, 2019.

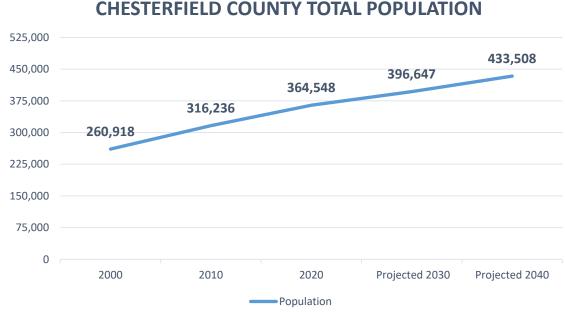


Figure 6: Chesterfield County 2000 – Projected 2040 Total Population

Analyzing the age groups of Chesterfield County between 2010 and 2020 shows that every age group has grown steadily (Figure 7). There is one age group, 45 to 54, that is showing a negative growth rate between 2010 and 2020, yet a significant jump in age groups 55 to 64 and 65 and up. In 2010, 14 and under accounted for 21% of the total population, 19% in 2020 while 65 and up

growth rate between 2010 and 2020, yet a significant jump in age groups 55 to 64 and 65 and up. In 2010, 14 and under accounted for 21% of the total population, 19% in 2020 while 65 and up accounted for 10% of the total population in 2010, 14% in 2020. According to the U.S. Census Bureau, 13% of the U.S. population was at least 65 years old in 2010, suggesting the need for senior-oriented parks and recreation systems.²³ Most of the

2010, suggesting the need for senior-oriented parks and recreation systems.²³ Most of the population in Chesterfield County lies between the age group infant to 34, with the largest age group being 14 and under and the second largest being 65 and up. Because of this wide range of different age groups, park variety is important, whether it range from playgrounds to hiking trail and water point accesses. The need for parks and recreation agencies to offer facilities, activities and programming catered to older adults is important for recognizing this growing age group in Chesterfield County. These activities can vary greatly, which promote older adults to socialize with others, stay healthy and active, and gives opportunities to serve others in their communities. Having this wide variety of park inventory in the community will ensure equitable and inclusive access to all.

²³ NRPA, Parks and Recreation: Serving a Growing, Older Population, 2017.

Figure 7: 2010 & 2020 Census Total Population by Age

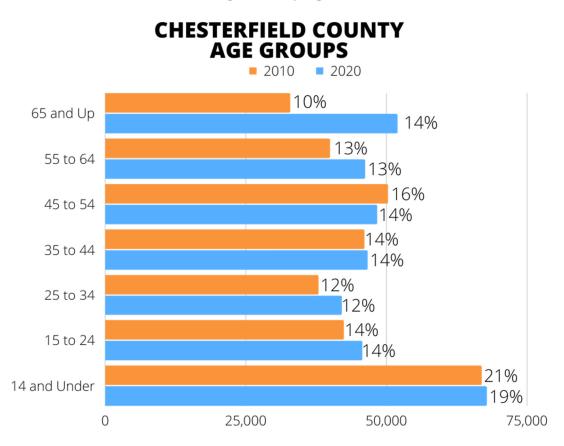


Figure 8 shows the total racial and ethnic composition of Chesterfield County in 2010 and 2020. White is the most common race with Black or African American being the second most common. Chesterfield County, while still predominantly white, is becoming significantly more racially and ethnically diverse, according to the American Community Survey (ACS) and trending data. It is important to note not only the current population composition of Chesterfield County, but also how these populations have grown more diverse over time.

In Virginia, Hispanics have seen the greatest increase in ethnic groups since 1980, with a +2,564% increase.²⁴ One in every ten Virginians is now Hispanic, as the ethnic group has grown significantly in the state over the last decade. People of color now make up 41% of the state's population, up from 35% a decade ago, thanks in large part to overall growth of the Commonwealth.²⁵

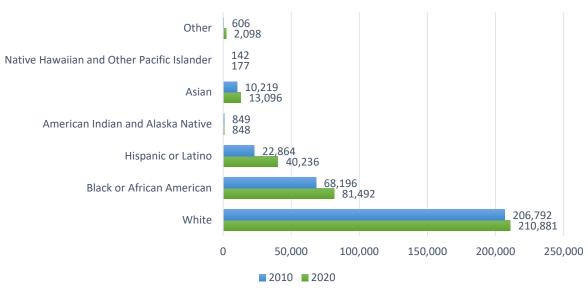
In Chesterfield County, the White (61.8%), Black or African American (22.7%), Hispanic or Latino (8.8%), and Asian (3.4%) demographic groups are the largest in the area. The White and Black or African American racial groups have seen a slight increase from 2010 to 2020, while the biggest jump was within the Hispanic or Latino group with around double the population size

²⁴ Chesterfield County Demographic Report, 2020.

²⁵ Leonor, 2021.

(+56% increase). Growth in major metropolitan areas (e.g., Richmond) is likely to have spillover effects, stimulating growth in surrounding areas, assuming the link to the growth of the Hispanic or Latino group. Other factors that could contribute to the rise of Hispanic or Latino groups in Chesterfield County is immigration, income, housing affordability, employment, education, and many others that steer minority groups into clusters in and around Chesterfield County. Because of the diverse racial and ethnic population groups, having parks and recreation systems placed throughout the county evenly for all to visit and enjoy will further support communities and a sustainable park system. Overall, the increasing rates of population and racial/ethnic group is a big push to creating a sustainability plan that will support all groups of people who use parks and recreation sites.

Figure 8: 2010 & 2020 Census Race & Ethnicity



CHESTERFIELD COUNTY RACE & ETHNICITY

Please note, extracting racial and ethnic data from the U.S. Census data website does not contain Hispanic or Latino data, this dataset is separate due to a federal requirement from the U.S. Office of Management and Budget (OMB).²⁶ Identifying as Hispanic or Latino origin or Not Hispanic or Latino origin are two separate and distinct concepts when it comes to the U.S. Census. Because of this distinction, 2 graphs have been produced to show racial and ethnic groups including Hispanic or Latino percentage (Figure 9), and racial and ethnic groups excluding Hispanic or Latino percentage (Figure 10). For chart readability, the racial categories American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, and Some Other Race were combined. It is important to note these differences in population percentage because the Hispanic or Latino group accounts for 8.8% of the total population and is steadily growing.

²⁶ U.S. Census, *About the Hispanic Population and it's Origin*, 2022.

Figure 9: Chesterfield County 2020 Race & Ethnicity Including Hispanic or Latino

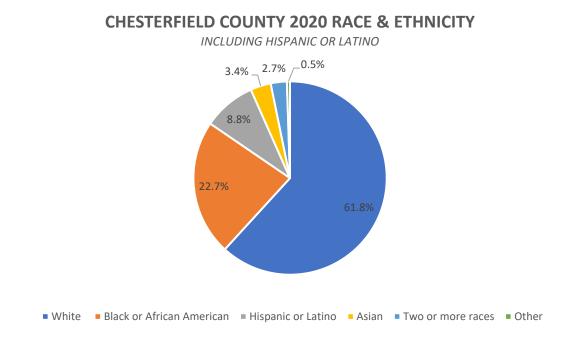
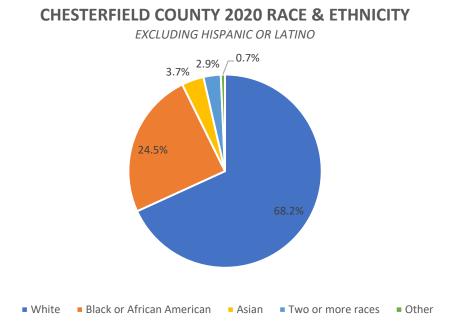


Figure 10: Chesterfield County 2020 Race & Ethnicity Excluding Hispanic or Latino



Lastly, income and poverty status are social and economic issue that should be addressed when considering a parks and recreation sustainability plan as they are addressed in the 'social equity' section of the NRPA's three pillars of sustainability. Median household income in 2010 was

around \$69,000 and \$85,000 in 2020²⁷. This increase shows that Chesterfield County is a thriving community that is a place to work, live, and enjoy. According to 2010 and 2020 Census data, Chesterfield County is majority at or above the poverty line, with around 6.6% in 2010 and 6.8% in 2020 below the poverty line. In comparison, the United States' poverty was around 15.1% in 2010 and 11.4% in 2020.²⁸ Even though there is a small percentage of the population living below the poverty line, recognizing, and incorporating all economic and social classes into a parks and recreation sustainability plan is important to create an equitable and overall achieving outcome.

2.3.4 | PARKS AND RECREATION

Chesterfield County's park and recreation amenities include numerous athletic complexes, conservation areas, county parks, fishing sites, historical sites, orienteering courses, picnic shelters, recreation centers, trails, and undeveloped park sites (Figure 11). There are a total number of 140 sites (including parks, school complexes, and leased/shared spaces), with a total acreage of 5,630 (Appendix A).

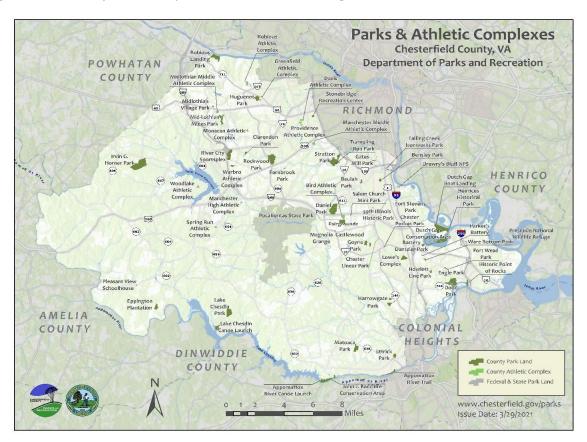


Figure 11: Chesterfield County Parks and Athletic Complexes

²⁷ U.S. Census, 2010.

²⁸ U.S. Census Bureau QuickFacts, 2022.

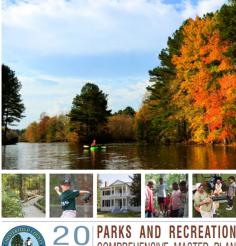
2.4 | PRECEDENT PLANS

The comprehensive plan for Chesterfield County addresses the county's long-range guide for growth, development, and revitalization. The plan is used to guide overall land development and public infrastructure investment decisions, as well as revise/align county policies, programs, services, and processes. Overall, the plan ensures Chesterfield County will continue to be a healthy, thriving community for the residents to enjoy. Within the comprehensive plan, parks and recreation is addressed in several instances such as:

- Historical/cultural resources.
- Conservation/preservation.
- Transportation planning issues involving bikeways and trails.
- Crime prevention.
- Funding and maintenance.
- Public sites/facilities.
- Providing enhanced health/wellness activities for the residents.²⁹

2.4.1 | PARKS AND RECREATION MASTER PLAN

Chesterfield's parks and recreation master plan was adopted on April 25, 2018 and is geared toward moving the county forward as an outstanding place to live, work, and play. Parks are key for the community, bring attraction to the county, and are essential for healthy living. Overall, the master plan examines the current conditions of parks, facilities, programs, and operational procedures. The analysis of the parks and recreation system shows that there is a need to focus



20 18 COMPREHENSIVE MASTER PLAN CHESTERFIELD COUNTY VIRGINIA

attention and future growth where needed to serve all citizens of Chesterfield. The master plan is guided by three key topics: conservation, health and wellness, and access to opportunities.

The goals of the master plan are a 4-step process:

- 1. Evaluate community needs.
- 2. Align needs with existing resources.

3. Identify improvements required to accommodate current and future needs.

4. Meet Commission for Accreditation of Parks and Recreation Agencies (CAPRA) national accreditation standards.

In summary, the master plan recommended system-wide priorities, broken up into three categories: facilities,

programs, and operations.

Facilities:

- Repairs & improvements
- Trail network expansion

²⁹ Chesterfield County Planning Department, 2019.

- Water access
- Sports tourism
- Indoor recreation
- Community recreation

Programs:

- Core programs
- Tracking lifecycles
- Health and wellness
- Active adult programming
- Cost recovery
- Marketing and promotion

Operations:

- Track material/amenity lifecycles
- Budget for maintenance/replacement
- Integrate objectives with other departments
- Sustainability

With these goals and priorities in place, the focus on meeting the CAPRA national accreditation standards and sustainability is the outcome for the *Chesterfield County Parks and Recreation Sustainability Plan*. It is noted numerous times throughout the master plan for the department to develop a sustainability plan on their short-term goals and to produce an environmental sustainability report analyzing current operations and recommending department-wide long-term sustainable practices. To start the process of creating the department's first sustainability plan, analysis of the CAPRA standards of Chesterfield is important to find any strengths, weaknesses, and opportunities.

2.4.2 | CAPRA ACCREDITATION

In September 2018, Chesterfield County Parks and Recreation department was awarded the

prestigious Commission for Accreditation of Parks and Recreation Agencies (CAPRA) accreditation,³⁰ becoming the first Parks and Recreation Department in the Richmond Region, 11th in the state of Virginia, to earn this accreditation. The accreditation is based on an agency's compliance with the 154 standards for national accreditation. To earn this accreditation, an agency must achieve all 36 Fundamental Standards, and 106 of the 118 Non-Fundamental Standards (reaccreditation requires 112 or the 118 Non-Fundamental Standards). The department's next review for accreditation is in Spring 2023,³¹ which



³⁰ Chesterfield Parks and Recreation Receives CAPRA Accreditation, 2018.

³¹ NRPA CAPRA Accredited Agencies, 2022.

allows time for the adoption and implementation of the *Chesterfield County Parks and Recreation Sustainability Plan*.

The list of standards is long, and includes items such as agency goals and objectives, involvement in local planning, park and recreation system master plan, recreation programming plan, outreach to diverse underserved populations and others (Appendix B). Within these 36 fundamental standards are subsections of other non-fundamental standards that must be met to achieve CAPRA accreditation. The accreditation period is a five-year cycle that includes three phases: development of the agency self-assessment report, the onsite visitation, and the Commission's review and decision. Overall, this accreditation allows for the community to demonstrate that the agency meets national standards of best practices, recognizes the community as a great place to live, provides public and political recognition, improves internal and external funding, increases overall operations and efficiency, and creates an environment for regular review of operations, policies, and procedures.

Reviewing the CAPRA accreditation for Chesterfield County Parks and Recreation department shows that overall, the department meets a handful of sustainability components, yet there is still a lack of a sustainability plan. Chesterfield County is committed to environmental stewardship and conservation, as stated in the county's comprehensive plan, parks and recreation master plan, and other departments sustainability initiatives. The Chesterfield County Parks and Recreation department reinforces this commitment through administrative policies, which generally state that the department shall:

- 1. Comply with all local, state, and federal rules, regulations, and laws, as well as County and Department policies and procedures in all Department activities and operations.
- 2. Design, construct, operate, and maintain all facilities, equipment, and programs in an environmentally responsible manner.
- 3. Identify environmental issues and periodically review policies and procedures, targets, plans, and objectives to ensure the provision of adequate resources.
- 4. Continually improve systems by finding new and innovative ways to improve operation, mitigate environmental impacts, and conserve natural resources.
- 5. Establish, implement, maintain, and continually improve an employee training program and communicate roles and responsibilities to staff.
- 6. Establish, implement, and maintain a department-wide recycling program.
- 7. Create and implement initiatives and programs to educate the public on the importance of conservation.
- 8. Work with other County agencies and explore public and private partnerships to further the environmental goals of the Department and the County.³²

Overall, the fundamental and non-fundamental standards that were met (or not) with the CAPRA accreditation will be considered with the analysis of the parks and recreation master plan, case studies, and survey results. The CAPRA accreditation is majority the foundation of the *Chesterfield County Parks and Recreation Sustainability Plan* as the accreditation lists all components the parks and recreation department are addressing.

³² Chesterfield Parks and Recreation CAPRA Self-Assessment, 2018.

2.4.3 | SUSTAINABILITY INITIATIVES

Currently, Chesterfield County is partaking in existing sustainability initiatives through several departments that could help guide the Parks and Recreation department. Each department has implemented a minimum of one sustainable best practice that could be brought together into one sustainability plan and applied to the parks and recreational sites.³³

The department of Cooperative Extension is a joint program of Virginia Tech, Virginia State University, the U.S. Department of Agriculture, and state and local governments. This department focuses on lawn and gardening (especially water resources), programs like Landscape for Life, Grass Roots, and Virginia Conservation Assistance Program (VCAP).

The department of Environmental Engineering works with residents, businesses, and the development of the community to protect natural resources and enhance communities while accommodating growth and development. This department educates the community through rain barrel and rain garden workshops, instructions on best practices for car washing, lawn care, and others.

The department of General Services is responsible for reporting on the cost and consumption of electricity, natural gas, propane, and water in county government facilities. This department conducts and produces an energy management annual report, has water and recovery centers, and provides an easy and convenient curbside recycling program.

The department of Risk Management assures effective and sustainable management systems are implemented across the county government and public schools to identify, evaluate and control operational and organizational risks to minimize potential loss and liabilities associated with operations and activities. This department focuses on energy conservation techniques, waste reduction skills, and pollution prevention.

Based on the NRPA three pillars (conservation, health and wellness, and social equity), the county departments practice initiatives that incorporate the three pillars, yet the county does not have an overall sustainability plan. The adoption and implementation of the *Chesterfield County Parks and Recreation Sustainability Plan* will help advance the sustainability practices for the Parks and Recreation department and the county in general. As for precedent plans and best practices, the county is lacking in existing policies and implementation procedures to protect the resources, environment, and educating the community.

³³ Sustainability | Chesterfield County, VA, 2021.

3 | METHODS

3.1 | RESEARCH QUESTIONS

The *Chesterfield County Parks and Recreation Sustainability Plan* will focus on an equitable process and outcome to achieve a successful plan that is geared toward the community and future needs for the county. Residents and stakeholders provided key input for this plan to evolve into a fully functional sustainability plan, therefore the planning processes covered the theoretical framework component of the sustainability plan. Including the community in the process is important because it gives an idea of what residents know about sustainability and where improvements can be placed to augment longevity of resources, while the decision-makers give the process a further push toward becoming a living, breathing plan for the community.

With these two groups included in the development of the plan, the following questions arise:

- 1. Why become a sustainable parks and recreation community?
- 2. What does it take to become a sustainable parks and recreation community?
- 3. What sustainability strategies are Chesterfield County Parks and Recreation currently using in their parks?

To answer these questions, various methods of data collection and analysis will be used. As shown in Table 2, the first question will be answered by conducting a community-wide user survey (Appendix C), while the second question will be answered by holding stakeholder meetings and/or interviews. The current sustainability strategies will be assessed via individual research after receiving input from the user surveys, stakeholder meetings/interviews, and field visits to produce future recommendations of best sustainable practices. All three of these methods will help support and create the *Chesterfield County Parks and Recreation Sustainability Plan*.

Research (Question	Source of Information	Outreach Method	Timeline for Process
1. Why beco	ome a	Community/residents and	Online Survey (Google,	1-3 months
	le parks and	decision-makers who use parks	etc.), Zoom meetings.	
recreation	a community?	and recreation sites.		
2. What doe	s it take to	Decision-makers who use	Stakeholder meetings,	2-4 months
become a	sustainable	control/regulate parks and	individual interviews, phone	
parks and	recreation	recreation systems.	calls, Online Survey	
communi	ty?		(Google, etc.).	
3. What sus	tainability	Precedent plans (CAPRA, Parks	Individual research and	Ongoing throughout the entire
strategies	are	and Recreation Master Plan,	analysis.	plan process.
Chesterfi	eld County	etc.), field visits.		
Parks and	Recreation			
currently	using in their			
parks?				

Table 2: Research Questions, Sources of Information, Outreach Method, Timeline for Process

3.2 | DATA COLLECTION & ANALYSIS

Data collection involved multiple types of methods, mostly engaging, and listening to input from the community. The results come from the community residents and decision-makers, the key stakeholders for this plan. Having these two expert groups involved in the process helps support the theoretical framework and gives an insight into the understanding of the parks and recreation systems at a local level. Though there were differing opinions and perspectives from both groups, the survey/interviews helped form the foundation of the *Chesterfield County Parks and Recreation Sustainability Plan*.

To gather information from the community, one type of method was used (due to the nature of the global COVID-19 pandemic and restrictions on community meetings), which was a community-wide survey via Google Survey. This survey allowed the residents and professionals to share what they enjoy about parks and recreation sites, what sustainable features are lacking, and if there is a vested interest in the *Chesterfield County Parks and Recreation Sustainability Plan*. The survey was distributed through many platforms, including parks and recreation monthly newsletter, Facebook, Twitter, and internal stakeholder meetings. Using the survey data, alongside the technical experts input and analysis of the existing Chesterfield County Parks and Recreation Master Plan and CAPRA accreditation, helped form and build the foundation to create the recommendations of the plan.

The opinions of the decision-makers are the bulk of the data collection and analysis. According to a 2017 NRPA survey, most park and recreation agencies do not have a sustainability plan because there is a lack of funding, a lack of dedicated staff, and limited expertise on sustainable practices.³⁴ Internal buy-in from the Chesterfield County Parks and Recreation department is key to starting the formation of the sustainability plan, while the public outreach/feedback is supporting data. Extensive outreach was not needed for this process as most of the technical experts were already composed in the County's Parks and Recreation Technical Advisory Committee and Internal Parks and Recreation Sustainability Committee, created by Chesterfield County Parks and Recreation department. Stakeholder meetings were held with both committees' multiple times throughout the process of creating the sustainability plan that allowed a full panel of buy-in for the plan, knowledge, input, and feedback to help support the final product of the sustainability plan. Individual meetings with other departments (e.g., Planning, Environmental Engineering, etc.) were held to further process any issues throughout the plan and to finalize any feedback into the proposed recommendations.

While conducting the survey(s) for the community and decision-makers, dissecting the parks and recreation master plan and CAPRA accreditation application resulted in a better understanding of the current sustainable practices in place and where improvements are needed. The CAPRA accreditation application gave a thorough look into what was submitted to obtain the accreditation and cross references that information to what sustainable practices from precedent plans and survey results helped form the recommendations. Feedback from the community/staff and the existing data presented in the master plan and CAPRA accreditation came together to create the most accurate and precise recommendations in sustainability for Chesterfield County.

³⁴ Park and Recreation Sustainability Practices - A Summary of Results from an NRPA Member Survey, 2017.

4 | RESEARCH FINDINGS

The following findings are based on the results of the Chesterfield County Parks and Recreation Sustainability Plan User Survey. The survey was open for about a month and collected a total of 128 responses. Due to the nature of the global COVID-19 Pandemic and limited resources/time, the survey results represent only a small percentage of the total population. Some demographic groups are overrepresented, while other demographic grounds are underrepresented. In theory, extra data collection methods (e.g., focus groups, public meetings) would be conducted to gather the underrepresented demographic groups shown in the research findings below. The formulation of recommendations is based on the survey results, existing knowledge, precedent plans, research, and best sustainability practices being used in benchmark cities. The complete survey results can be found in Appendix D.

4.1 | WHO USES THE CHESTERFIELD COUNTY PARKS AND RECREATION SITES?

The majority respondents of the survey (69.5%) identify their racial/ethnic identity as White (Figure 12). This survey result compares to the county at 61.8%, indicating that this is well over the majority White population in Chesterfield County. Because of this overrepresentation, the Black or African American and Hispanic or Latino groups are vastly underrepresented. At the county level, the total population of Black or African American's account for 22.7% and Hispanic or Latino's account for 8.8%. Compared to the survey results, there were only around 5.4% Black or African American and 6.2% Hispanic or Latino respondents, leading to the underrepresentation of these demographic groups. The overrepresentation of the White population will skew the survey results for the underrepresented community, underestimating the actual needs of the minority population.

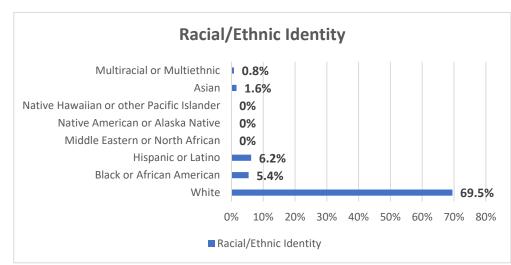


Figure 12: What is Your Racial/Ethnic Identity?

Research Findings | 32

The age group results were a majority (25%) 55 to 64, yet all age groups are seen to engage in the survey (Figure 13). Reviewing the survey results shows that there is a highly overrepresented group of 55 to 64 and an underrepresented group of under 18 to 34. The missing gap of individuals within under 18 to 34 distorts the survey results and leads to the interpretation that park and recreation sites are suited for older generations only. In a perfect world, another data collection method would be used to concentrate on the younger generations.

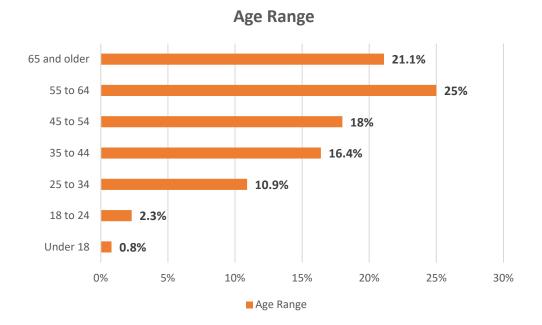
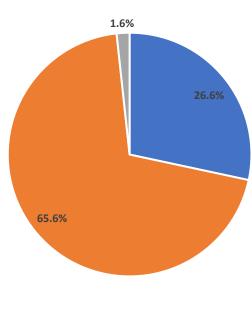


Figure 13: What is Your Age Range?

The gender identity of the respondents is almost all Female (65.6%), with only 26.6% identify as Male (Figure 14). The gender disparity for this survey result can be connected to numerous factors, with the key factor being that more than likely, most of the females are likely mothers or grandparents. From the age group survey question, there is a higher number of older individuals that could potentially be mothers or grandparents that have children or grandchildren. 46.1% of survey respondents use the park and rec sites to spend time with family (Figure 19), correlating to mothers/grandparents using the park sites to take their children/grandchildren out for recreation and to spend time together. Meanwhile, 26.6% of the respondents identify as male can be related to the older generation of males engaging in nature, spending time with family, and exercise.



Gender Identity

Regarding the zip code survey results, the respondents are dispersed almost evenly across the county with the highest (18%) located in zip code 23112, Woodlake and Hallsboro, Virginia (Figure 15). The importance of this survey result is to assess where the respondents live and possibly potential for further analysis of park inventory in any underserved/overlook zip codes and communities.

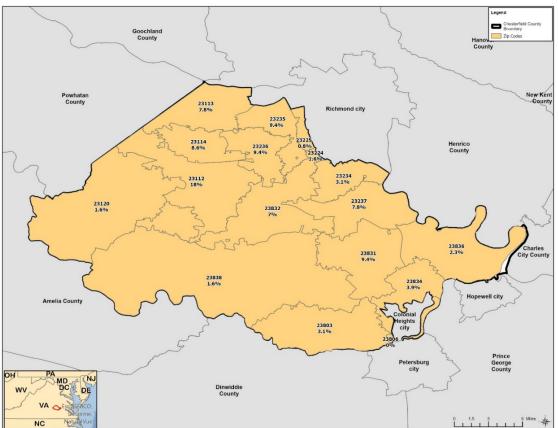
According to Census, Internal Revenue Service (IRS), and United States Postal Service (USPS), zip code 23112 is 79.5% White, 52% female, and has a median household income of around \$80,000³⁵, compared to the other zip codes in Chesterfield County. The lowest survey responses (1.6%) are in zip code 23838. 23838 is 85% White, 50% female, and has a median household income of around \$103,000, which also represents most of the survey respondents. According to a study in a Southern California city, parks in middle-class areas are used more than parks located in lower-class and upper-class areas³⁶, relating to the zip codes 23112 and 23838 respondents. Meanwhile, zip code 23224 contains 15.8% Hispanic or Latino, the highest concentration within the county, and only contributed to about 1.6% survey responses. 23224 also has around 70.2% Black or African American, 15.3% White, 52% female, and a median household income of around \$33,000. These survey results showcase the overrepresentation of one demographic group and the underrepresentation of another demographic group, which are captured and respected when recommendations were formed.

³⁵ Unitedstateszipcodes.org, 2022.

Male Female Non-binary

³⁶ NCBI NLM, Neighborhood Poverty, Park Use, and Park-Based Physical Activity in a Southern California City, 2012.

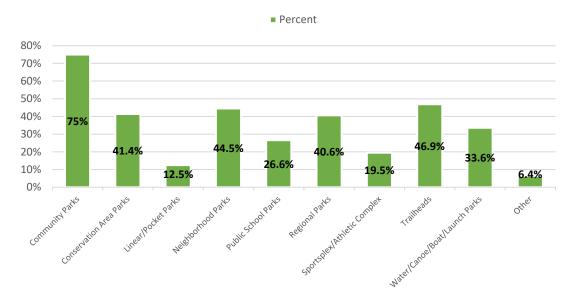
Figure 15: What Zip Code Do You Live in?



While comparing the survey results to 2020 Census data, the results fall short on the overall county demographics. The county is mostly White, with a split younger and older generation, and growing minority groups like Black or African American and Hispanic or Latino. The survey results do not fully capture this trend and in term show that the respondents are mostly white, older generation, and female. This overrepresentation of one demographic group does not support the balance of the growing minority groups, especially the Hispanic or Latino group. Because of the survey results, future research methods and analysis should be conducted to focus on the underrepresented communities.

4.2 | WHY DO USERS VISIT & HOW DO USERS USE PARK SITES?

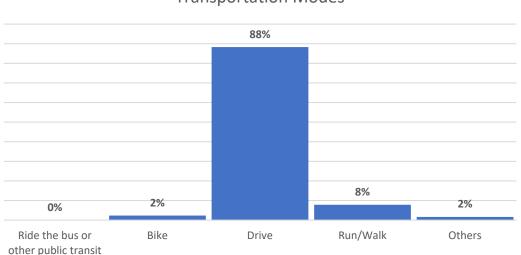
Assessing the users on why use park sites and how users use these park sites helps gain an insight of knowledge to use for the proposed recommendations. Asking questions on the park and recreation sites, in terms of sustainability, ensures that the sustainability recommendations reflect what the community has voiced. In Figure 16, respondents share what type of park sites are often visited, reflecting the inventory of Chesterfield County park sites. This data set is important for the plan as it will allow the future development of popular/in-demand parks for the county.



Frequency of Park Types

Traveling to park sites is an important key to the *Chesterfield County Parks and Recreation Sustainability Plan* as it gauges how users are getting to park sites and what type of transportation mode is being used. In Figure 17, 88.3% of respondents drive to park sites, while only around 10.9% run, walk, and/or bike to park sites. While also looking at this, respondents note that there is a need for more sidewalks, bike paths, trails, and overall connectivity between the parks in order to switch from cars to a healthy, sustainable alternative.

Figure 17: How Do You Travel to Park Sites?



Transportation Modes

Frequent visits to park sites are also important as it allows the understanding of how frequent the parks are being visited and if there is a need for more awareness, capital investment improvements (e.g., replacement/modernization of park infrastructure), and how engaged the community is with the park sites. Figure 18 shows that a majority (43.8%) of the respondents' frequent park sites at least a couple times a month and the next highest (21.1%) visit at least a couple times a week. This data shows that the community is engaged with the park sites but could increase more of the couple times a week frequency by having a sustainability plan to define best practices, infrastructure, and overview park inventory.

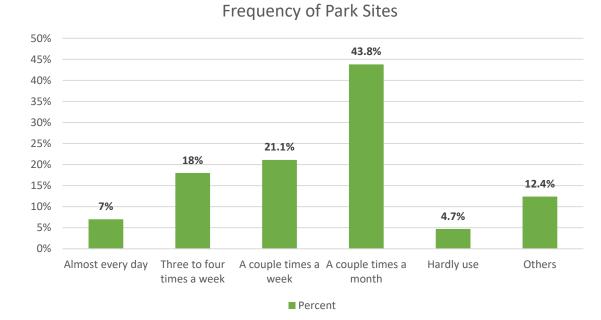
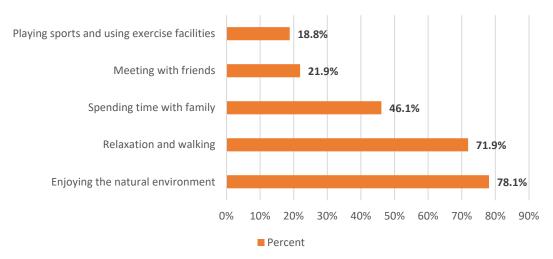


Figure 18: How Frequently Do You Visit Parks?

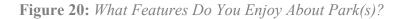
The main purpose of visiting park sites helped guide the recommendations and it engages what activities are occurring, and how can sustainability better this. The respondents had the choice to choose multiple options and not restricted to one main purpose. In general, the top main purposes of visiting park sites are to enjoy the natural environment (78.1%), relax and walk (71.95%), and to spend time with family (46.1%). Figure 19 shows the top 5 main purposes and Appendix D includes every survey response.

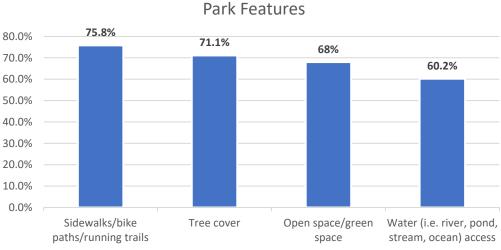
Figure 19: What is Your Main Purpose for Visiting Parks?



Purpose of Visiting Parks

Features of the park sites is the key factor to insight of what the community loves about park sites and what features could be included in the plan to create a more sustainable park system. Respondents were not restricted to one option; they could select multiple features to gain more knowledge of which feature would rank the highest. Figure 20 shows that sidewalks/bike paths/running trails are the most enjoyed features of park sites (75.8%), while tree cover (71.1%), open space/green space (68%), and water (i.e., river, pond, stream, ocean) access (60.2%) are the next top contenders. These initial top features relate to sustainability regarding mobility, green infrastructure, and health/wellness aspect.





4.3 | WHAT DO USERS WANT IN CHESTERFIELD COUNTY PARK AND RECREATION SITES?

When asked an open response to what is lacking in park sites, respondents had common and very similar answers across the board. This question is asked to gain knowledge of what features and what the community feels is lacking in the local park sites and in the end, how the sustainability plan can address these issues. Following the question of what features do you enjoy about park(s) allows the survey respondents to choose and think about what features are missing from their local parks. Most of the responses are summarized and grouped into the following topics:

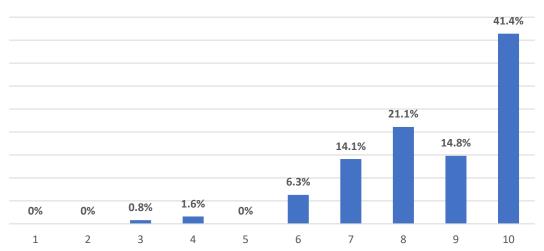
- Americans with Disabilities Act (ADA) compliant areas.
- Community gardens/natural landscaping.
- Connectivity issues between parks (e.g., sidewalks, bike paths, running trails).
- Educational programs/activities.
- More restrooms (fewer portable toilets)/water fountains.
- Playgrounds/splash pads.
- Recreational fields/courts.
- Recycling bins.
- Tree cover/open space.

Overall, there were many comments made that there is a general sense of love and enjoyment of the parks and recreation system in Chesterfield County, but there were also comments made about the features lacking and the need for sustainable practices throughout. Most of the above topics helped form the recommendations for the *Chesterfield County Parks and Recreation Sustainability Plan* and are addressed under the vision, goals, and/or objectives. Appendix D shows the full survey question responses.

4.4 | HOW FAMILIAR ARE USERS WITH SUSTAINABILITY?

One component of the NRPA's 2016 sustainability survey is educating the public and staff members on sustainable actions. As stated earlier, 44% of agencies do not have a documented plan due to the lack of funding, dedicated staff, and expertise on practices. To gauge the community on the familiarity of the term, "sustainability", the question was posed as a rated scale. In Figure 21, the majority (41.4%) of responses are familiar with the term. This leads to the understanding that the survey respondents are familiar with sustainability, and per the previous survey question responses, there is a push for a defined sustainability plan by the parks and recreation staff and public.

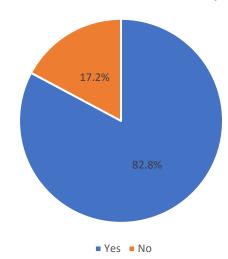
Figure 21: How Familiar Are You with the Term "Sustainability"?



Familiar with Sustainability

The survey ended with a question asking the respondents if they would be interested in learning more about how sustainability can help parks. There was a link provided to the current Chesterfield County Environmental Stewardship Program which briefly reviews the sustainable measures from each department. Because the previous survey question responses highlight that the respondents use different types of parks, frequently use parks, and enjoy the current available features of the parks, then this will show to the decision-makers that there is a vested interest in the final sustainability plan. Figure 22 shows that 82.8% of respondents are interested in further information.

Figure 22: *Would You Be Interested in Learning More About How Sustainability Can Help Parks?*



Vested Interest in Sustainability Plan

4.5 | OUTREACH STRATEGIES FOR UNDERREPRESENTED COMMUNITIES

Due to the global COVID-19 Pandemic and limited resources/time, the ideal research findings would have resulted in a full representation of Chesterfield county demographics. Based on the research findings and analysis of the geographic distribution and community input, a set of specific outreach strategies geared towards reaching and engaging those who have traditionally been underrepresented in the planning process have been developed. These strategies are tailored to the community where traditionally underrepresented populations, specifically minority and/or low-income persons live, work, and play. It is important to note, specific outreach approaches should be adjusted and considered for each community. Listed below and in Table 3 are outreach strategies Chesterfield County Parks and Recreation department should implement to engage the minority underrepresented communities in any plan:

- 1. Publish ads and notices in newspapers, radio and other media, specifically media targeted to minority and low-income communities.
- 2. Develop language-outreach strategies, as determined by Title VI of the Civil Right Act of 1964, Limited English Proficiency (LEP).
- 3. Hold public meetings in location that are accessible to public transit.
- 4. Hold meetings outside core business hours and transit-accessible locations throughout the county.
- 5. Partnerships with local churches, schools, and community groups.

Chesterfield County Parks and Recreation department is also under contract with VCU's Survey and Evaluation Research Laboratory to conduct a juried and crowd source survey for the 2022 Parks and Recreation Master Plan that will include a question about sustainability.

	Minority	Low- Income	LEP	Disabled	Elderly	Carless	Public Assistance	Female/Children
Targeted Ads	Х	Х						Х
& Notices								
Language-	Х		Х					
Outreach								
Strategies								
Transit-		Х		Х		Х	Х	
Accessible								
Meetings								
Convenient		Х			X	Х	Х	Х
Meeting								
Times &								
Locals								
Partnerships	Х	Х	X	Х	X	Х	Х	X
with Other								
Organizations								

Table 3: Potential Strategies for Reaching Traditionally Underrepresented Populations

5 | RECOMMENDATIONS

Based on the research and analysis of the Chesterfield County Parks and Recreation Master Plan, CAPRA Accreditation, existing sustainable practices, and survey results, a list of recommendations is provided below to help encourage a sustainable parks and recreation community. The specific goals and objectives are geared towards creating best practices in sustainability while also encouraging Chesterfield County to be the First-Choice destination in parks and recreation. The methods and findings of this plan establish a foundation for continuing better development of the parks and recreation system, while also achieving reaccreditation for the CAPRA Accreditation. The findings also revealed that there is an overarching want and need for a parks and recreation sustainability plan, leading to the objective of becoming one of the top agencies having a implemented and successful sustainability. By doing so, the Parks and Recreation department will be engaging other department in the county which may lead to a county-wide sustainability initiative.

5.1 | VISION STATEMENT

The vision for the Chesterfield County Parks and Recreation department is to become the First-Choice destination for quality parks, facilities, sites, and programs. The *Chesterfield County Parks and Recreation Sustainability Plan* supports and enhances the department's vision statement by promoting a high-quality life for the community through equitable park and recreation access and a commitment to parks and the environment. The adoption and implementation of the following recommendations will create a sustainable park and recreation system that meets the needs of the community.

5.2 | GOALS, OBJECTIVES, & ACTIONS

The Chesterfield County Parks and Recreation Sustainability Plan incorporates 11 key elements into the recommendations. The goals, objectives, and actions were established to provide an outline on how to achieve the vision statement and relate to the three "pillars of



sustainability": education/community outreach, health and wellness, and infrastructure and operations.

- 1. Education and Community Outreach
- 2. Open and Community Green Space
- 3. Conservation
- 4. Energy Independence
- 5. Energy-efficient Facilities
- 6. Water Resources and Flood Protection
- 7. Health and Wellness
- 8. People, Places, and Neighbors
- 9. Recycling
- 10. Urban Tree Canopy (UTC)/Greenhouse Gas Emissions
- 11. Park Maintenance

These 11 elements describe what the community desires to achieve long term, therefore, they are incorporate into almost every goal, objective, and action below.

GOAL 1: ENGAGE AND CONNECT RESIDENTS AND VISITORS WITH THE COUNTY PARKS AND RECREATION SYSTEM.

Objective 1.1. Continue to develop programs, based on the needs of the community, that is engaged with the natural environment and sustainable practices.

- a. Identify and provide services in core program areas where the Department of Parks and Recreation and Chesterfield County Public Library plays a significant role: art, culture, enrichment and learning, health and wellness, older adult and senior programs, special events, sports, and youth programs.
- b. Develop a variety of programs and engage the Youth Advisory Board to engage people that are not typical park users, such as recycling, rain gardens, rain barrel, home gardening, solar systems, etc.
- c. Create an annual county-wide sustainability day to engage residents in sustainable practices and the importance of parks and recreation sustainability.
- d. Develop youth programs that include education programs, day camps, youth and teen development, and leadership workshops. Focus on partnerships to facilitate youth and teen before and after-school recreation programs.
- e. Increase programs for all demographics and populations, including Hispanic or Latino residents. Create culturally diverse programming such as events, activities, classes, and bilingual programs that celebrate or promote all cultures.
- f. Facilitate master gardener outreach at local libraries to educate the community, increase participation, and engage the volunteers through the development of a "seed library".
- g. Create an app that includes interactive parks and recreation sites, calendar of programs/events, health and wellness tips, and sustainable practices.

Objective 1.2: Educate and engage the youth on sustainability and sustainable practices.

- a. Continue to support and partner with local schools and churches.
- b. Promote events and activities focused on sustainability at park sites that are educational and engaging.
- c. Provide educational information and signage at park sites on sustainable practices.
- d. Create a rain barrel/recycling bin contest at public schools to promote sustainable practices, education, and public art.
- e. Participate in local schools and churches Career Day to educate and spread awareness on sustainability.
- f. Partner with local schools and churches to establish a scratch cooking program to increase education, community gardens, community involvement, and skills in sustainability, gardening, and cooking.
- g. Provide a volunteer program to maintain and participate in park and recreation activities and projects, enhancing the importance of sustainable practices.
- h. Partner with local organizations to engage immigrant children.

Objective 1.3: Develop partnerships with organizations to connect to populations that are currently underrepresented as park users.

- a. Continue identify key organizations that include a mission to reach underrepresented populations and implement outreach planning goals.
- b. Consider and observe languages spoken in the community and establish alternatives to communicate with limited English communities.
- c. Work with partners and organizations to reduce barriers to park use by underrepresented users.
- d. Work with partners and organizations to develop programs and infrastructure that meet the needs of underrepresented groups.

Objective 1.4: Provide and improve information, communication and relationships with park users, county residents, and employees.

- a. Conduct satisfaction surveys and post-program follow-up to track and measure park use, satisfaction, and the benefits that parks and recreation programs provide.
- b. Continually update website pages, signage, and communication materials. Provide bilingual information, where warranted.
- c. Reach out to employees and businesses to identify employee-oriented program opportunities.

GOAL 2: PROMOTE SUSTAINABILITY KNOWLEDGE AND AWARENESS WITHIN THE PARKS AND RECREATION DEPARTMENT.

Objective 2.1: Educate and train park and recreation employees on sustainability and sustainable practices.

- a. Dedicate a sustainability departmental staff liaison.
- b. Provide sustainability training for all employees through staff meetings, workshops, and education videos hosted on internal department sites.
- c. Set sustainable goals for the department to reach annually.
- d. Attend NRPA and other workshops providing sustainability information and education.
- e. Create incentives for staff to recommend and stay up to date on sustainable practices, for example: earn department "credits" for new recommendations and staying knowledgeable to exchange for a full day off work.

Objective 2.2: Develop a community engagement resource guide to support equitable and inclusive access to parks and recreation.

- a. Hire and dedicate one or two staff who reflect the community and are dedicated to community engagement to increase the agency's accountability and enhance the community's trust with projects and plans.
- b. Incorporate a community engagement fund into budgets when applying for grant funds and set aside internal funds for relationship building.
- c. Build leadership support and internal buy-in by inviting the mayor's office, other municipal agencies, and department leadership to community events.
- d. Establish a framework for community engagement planning such as plan elements on project description, budget, related community planning efforts, community sentiment, community participation, community snapshot, community engagement strategies, goals and metrics, and evaluations.
- e. Engage community members early in park and recreation planning processes, even before a project scop has been decided, if possible, and involve the community in creating the scope and identify project funding.
- f. Employ a combination of communication methods for outreach such as focus groups, social media, knock on doors/visit houses, fun events for the community, host stakeholder meetings, interviews, design charrettes, email/mail, and apps/text messaging.

GOAL 3: IMPROVE COMMUNITY LIVABILITY THROUGH AN EQUITABLE AND INCLUSIVE SOCIETY AND A HEALTHY ENVIRONMENT.

Objective 3.1: Improve health and wellness of Chesterfield County residents and visitors.

- a. Evaluate the current level of education/recreational outreach opportunities on health, nutrition and gardening and increase level to meet the needs of Chesterfield County residents.
- b. Work towards the improvement of the health of the residents through access to a diverse mix of wellness activities, education, and healthy foods.
- c. Expand opportunities, programs, and activities that provide outdoor physical fitness to reduce obesity levels.
- d. Develop community gardens at more park sites to encourage and demonstrate the concept of edible landscapes, place making, and food security.
- e. Identify and provide partners for learn-to-play sports classes and camps to help prepare and connect children to physical activity and local sports leagues.
- f. Offer or expand adult sports leagues (e.g., kickball, dodgeball, softball) to connect and improve the health and fitness of residents and employees.
- g. Expand older generation recreational and leisure opportunities.
- h. Establish more informative and healthy events catered toward the disabled, low-income, and minority groups.
- i. Support walks, races, markets, fitness challenges, and other healthy lifestyle and fitness programs and events to support the overall health and wellness and enhance tourism.
- j. Create more park sites that include outdoor exercise equipment for active recreation, accessibility to free healthy activities, disability friendly sites, and diverse park systems from other counties.
- k. Expand little free library locations and establish a little free pantry program in parks and in partnership with Chesterfield Public Libraries.

Objective 3.2: Improve neighborhood and community livability.

- a. In the Parks and Recreation Comprehensive Master Plan, evaluate the level of parks, recreational facilities, and open space areas and increase the ratio of park land to county population, particularly in underserved neighborhoods.
- b. Develop, maintain, and improve access to public spaces that promote social interactions.
- c. Establish an Urban Tree Canopy (UTC) study to examine the current tree cover and develop a program to increase trees, green space, air and water quality, and the natural aesthetic.
- d. Based on the Parks and Recreation Comprehensive Master Plan, increase the inventory of pocket parks and linear parks for accessibility and connectivity in urban and urbanizing areas.
- e. Host community day for National Get Outdoors Day (second Saturday in June).
- f. Partner with local landscaping and artist to create welcoming aesthetic of underdeveloped park land, park sites, trail heads, recreation centers, and water access points.
- g. Dedicate areas within and outside of parks for creative placemaking for cooperative, community-based processes that uses arts and cultural expression to revive and rejuvenate parks and open spaces.

h. Enhance the neighbor connectivity based on the connectivity study completed for libraries to neighborhoods, schools to neighborhoods and parks to neighborhood study.

GOAL 4: ENSURE THAT CHESTERFIELD COUNTY PARK AND RECREATION SITES ARE ACCESSIBLE AND INCLUSIVE.

Objective 4.1: Provide accessible and inclusive parks and facilities to support community needs.

- a. Follow or exceed ADA guidelines to ensure equal accessibility for all users.
- b. Increase parks, natural areas and/or recreation resources within ½ mile of residents to ensure active transportation opportunities.
- c. Continue to integrate and increase trails, greenways, shared use paths, linear parks, bikeways, sidewalks, and connectivity to the regional trail system by implementing Chesterfield's Bikeways and Trails Plan.
- d. Conduct accessibility studies for parks, recreation and natural areas for people of varying abilities.
- e. Plan parks and facilities based on demographic, cultural, and neighborhood needs.
- f. Encourage other county departments through the zoning and site plan development processes to develop "Complete Streets" that incorporate regional trail routes.

Objective 4.2: Enhance transportation and connectivity

- a. Continue to track the implementation of the County's Bikeways and Trails Plan implementation and neighborhood connectors.
- b. Leverage local funding with matching fund opportunities for projects on trail, sidewalk, and bike path connectivity.
- c. Consider all types of connectivity users and surface types when planning for new transportation infrastructure.

GOAL 5: PROMOTE STRATEGIES TO HELP OFFSET AND MITIGATE ANY EXISTING AND EXPECTED ENVIRONMENTAL IMPACTS.

Objective 5.1: Increase, conserve, and restore natural areas to support natural habitats, ecosystems, and connect the community to the environment.

- a. Determine neighborhoods that are underserved for open green space and acquire land for additional open green space in these neighborhoods and infill development areas with the help of the Department of Community Revitalization.
- b. Seek grant funding to enhance or restore natural areas in existing parks.
- c. Identify and protect Chesterfield's natural resources.
- d. Expand opportunities to experience nature in Chesterfield county through a "Nature in the City" program.
- e. Develop management plans and staff knowledge to manage and maintain undeveloped and natural areas.
- f. Remove invasive species by prioritizing areas of significant biodiversity.
- g. Plant native, local genotype species.
- h. Continue to provide access to major water bodies for expansion of water recreation opportunities.

Objective 5.2: Conserve and protect water quality.

- a. Increase educational programs to inform the community on how to landscape using native and low water use plants.
- b. Conduct an evaluation of water use and track historical and on-going consumption of water at parks and facilities.
- c. Incorporate landscape park design opportunities for recharging ground water (e.g., rain gardens, bioswales, rain capturing infrastructure, etc.).
- d. Establish and make use of recycled water (e.g., greywater, stormwater runoff, rain capturing, etc.) for facility non-potable use and landscape irrigation.
- e. Convert older irrigation systems to centrally located irrigation systems or drip irrigation methods.
- f. Incorporate a design standard of new parks to use less turf and more naturalized, drought-tolerant plant in park designs to minimize water use.
- g. Partner with regional organizations to test water quality of high-use and low-use water parks and recreation sites to maintain a safe and protect environment.

Objective 5.3: Become a zero-waste park system.

- a. Implement waste reduction and recycling at all park and recreation sites, facilities, and operations.
- b. Partner with local schools and churches to educate zero-waste.
- c. Incorporate recycled and upcycled art into park sites.
- d. Implement composting for green waste at local parks and schools.
- e. Expand water bottle refill station infrastructure at all park sites and facilities.

Objective 5.4: Improve vehicle efficiencies and reduce vehicle use.

- a. Conduct an evaluation of energy consumption of fleet vehicles.
- b. Establish baseline standards to increase fuel economy, reduce trip mileage, and increase percentage of hybrids, plug-in, and alternative fuel vehicles within the department.
- c. Conduct park user commute survey to identify emissions associated with park commutes.
- d. Promote active transportation opportunities to residents and employees.

Objective 5.5: Establish renewable energy sources and improve energy efficiency.

- a. Replace and use equipment with energy efficient technology.
- b. Adopt new standard for infrastructure to assure they are as energy efficient as possible (e.g., LEED standards, green infrastructure, natural lighting, etc.).
- c. Evaluate conversions to renewable energy sources within park sites (e.g., biofuels, wind energy, tidal energy, and solar energy).
- d. Coordinate with Dominion Energy to explore partnerships in developing renewable energy sources within park sites.
- e. Establish a Greenhouse Gas (GHG) Emissions study and analysis to identify GHG risks, reduction opportunities, and voluntary programs.

GOAL 6: MANAGE AND MAINTAIN QUALITY PARKS, FACILITIES, AND PROGRAMS THROUGH MAINTENANCE, CUSTOMER SERVICE, AND SUSTAINABLE PRACTICES.

Objective 6.1: Ensure long-term maintenance of parks.

- a. Develop administrative, fiscal, and maintenance standards to ensure ongoing, long-term maintenance and management of park sites and facilities.
- b. Maintain an accurate Capital Improvement Plan (CIP).
- c. Provide accurate revenue projections for all project funding sources.
- d. Utilize construction methods and materials that will maximize the long-term value.
- e. Implement park maintenance and operation practices through methods such as Integrated Pest Management (IPM).
- f. Conduct a lifecycle management assessment for all assets system wide.
- g. Keep up to date on maintenance standards based on CAPRA standards requirements.
- h. Use native plants and natural landscapes throughout park and recreation sites.

Objective 6.2: Create welcoming environments in recreation centers and facilities.

- a. Provide vending machines and/or concessions with healthy snacks and drinks.
- b. Develop excellent guest experience talking points and cues for staff.
- c. Incorporate informative boards/TVs on programs and services.
- d. Create welcome packets for the recreation centers and facilities which highlight other programs and facilities that are offered.
- e. Incorporate green building design standards into recreation centers and facilities.

6 | IMPLEMENTATION

The implementation of the *Chesterfield County Parks and Recreation Sustainability Plan* recommendations is summarized and categorized into *short-term* (0-2years), *mid-term* (3-4 years), *long-term* (5+ years), and *ongoing*. When these recommendations are put into action, the social, economic, and environmental impacts of Chesterfield County Parks and Recreation will be enhanced by using these sustainable approaches relevant to park and recreation sites and its current and potential users.

Chesterfield County Parks & Recreation Sustainability Plan Implementation Plan	Short Term	Mid Term	Long Term	Ongoing
GOAL 1: ENGAGE AND CONNECT RESIDENTS AND VISITORS WITH THE COUNTY PARI	KS AND	RECRE	ATION	SYSTEM.
1.1 Continue to develop programs, based on the needs of the community.				
1.1: a) Identify and provide service in core program areas.				
1.1: b) Develop a variety of programs toward non-park users.				
1.1: c) Create a sustainability day to engage and educate residents.				
1.1: d) Develop youth programs.				
1.1: e) Increase programs for all demographics and populations.				
1.1: f) Create a master gardener table at local libraries.				
1.1: g) Create an interactive and informative app for park and recreation information.				
1.2 Engage and educate the youth.				
1.2: a) Support and partner with local schools and churches.				
1.2: b) Promote events and activities at park sites.				
1.2: c) Create educational signage at park sites on sustainable practices.				
1.2: d) Create a rain barrel/recycling bin contest.				
1.2: e) Participate in Career Day to educate and spread awareness on sustainability.				
1.2: f) Create a scratch cooking program.				
1.2: g) Provide volunteer programs to maintain park and recreation activities.				

Chesterfield County Parks & Recreation Sustainability Plan Implementation Plan	Short Term	Mid Term	Long Term	Ongoing
GOAL 1: ENGAGE AND CONNECT RESIDENTS AND VISITORS WITH THE COUNTY PARI	KS AND	RECRE	ATION	SYSTEM.
1.3 Engage and educate the underrepresented population.				
1.3: a) Identify key organizations to reach underrepresented population.				
1.3: b) Establish alternative language communications for limited English communities.				
1.3: c) Identify barriers to park use by underrepresented users.				
1.3: d) Develop programs and infrastructure that meet the needs of the underrepresented population.				
1.4: Provide and improve information, communication, and relationships.				
1.4: a) Conduct satisfaction surveys on programs, park sites, and overall satisfaction.				
1.4: b) Update websites, signage, and communication materials. Provide bilingual information.				
1.4: c) Identify employee-oriented program opportunities.				

	Chesterfield County Parks & Recreation Sustainability Plan Implementation Plan	Short Term	Mid Term	Long Term	Ongoing
C	OAL 2: PROMOTE SUSTAINABILITY KNOWLEDGE AND AWARENESS WITHIN THE PARKS AN	ND RECR	EATION I	DEPARTN	AENT.
	2.1 Engage and educate the staff.				
	2.1: a) Dedicate a sustainability departmental liaison.				
	2.1: b) Provide sustainability training for all employees.				
	2.1: c) Set sustainable goals for the department to reach annually.				
	2.1: d) Attend NRPA workshops catered toward sustainability.				
	2.1: e) Create incentives for staff.				
	2.2: Develop a community engagement resource guide.				
	2.2: a) Hire staff who reflect the community and are dedicated to engagement.				
	2.2: b) Incorporate a community engagement fund into budgets.				
	2.2: c) Build leadership support and internal buy-in.				
	2.2: d) Establish a framework for community engagement planning.				
	2.2: e) Engage community members early in planning processes.				
	2.3: f) Employ a combination of communication methods for outreach.				

Chesterfield County Parks & Recreation Sustainability Plan Implementation Plan	Short Term	Mid Term	Long Term	Ongoing
GOAL 3: IMPROVE COMMUNITY LIVABILITY THROUGH AN EQUITABLE AND INCLUSIVE SOCIETY	AND A I	HEALTH	Y ENVIR	ONMENT.
3.1 Improve health and wellness of Chesterfield County residents and visitors.				
3.1: a) Evaluate and increase the level of education/recreational opportunities on health, nutrition, and gardening.				
3.1: b) Provide access to a diverse mix of wellness activities and healthy foods.				
3.1: c) Expand opportunities, programs, and activities that reduce obesity levels.				
3.1: d) Develop community gardens at park and school sites.				
3.1: e) Provide learn-to-play sport classes and camps to connect children to physical activity and local leagues.				
3.1: f) Offer and expand adult sports leagues.				
3.1: g) Expand older generation recreational and leisure opportunities.				
3.1: h) Establish healthy events for disabled, low-income, minority population.				
3.1: i) Support walks, races, markets, fitness challenges, and other healthy lifestyle/programs				
3.1: j) Create more park sites with outdoor exercise equipment.				
3.1: k) Expand little free library locations and establish little free pantry program.				

	Chesterfield County Parks & Recreation Sustainability Plan Implementation Plan	Short Term	Mid Term	Long Term	Ongoing
(OAL 3: IMPROVE COMMUNITY LIVABILITY THROUGH AN EQUITABLE AND INCLUSIVE SOCIET	Y AND A	HEALTH	Y ENVIR	ONMENT.
	3.2: Improve neighborhood and community livability.				
	3.2: a) Evaluate and increase inventory of parks, facilities, and open spaces.				
	3.2: b) Maintain and improve access to public spaces that promote social interactions.				
	3.2: c) Establish an UTC study to examine and increase tree cover.				
	3.2: d) Increase inventory of pocket parks and linear parks.				
	3.2: e) Host National Get Outdoors Day event.				
	3.2: f) Create welcoming aesthetic of park sites and facilities.				
	3.2: g) Dedicate areas for creative placemaking.				
	3.2: h) Propose a pilot program for front yard gardens.				
	3.2: i) Enhance the people, places, and neighbor connections.				

	Chesterfield County Parks & Recreation Sustainability Plan Implementation Plan	Short Term	Mid Term	Long Term	Ongoing
(GOAL 4: ENSURE CHESTERFIELD COUNTY PARK AND RECREATION SITES ARE A	CCESS	IBLE A	ND INC	LUSIVE.
	4.1 Provide accessible and inclusive parks and facilities.				
	4.1: a) Follow or exceed ADA guidelines.				
	4.1: b) Increase park and recreation resources within 1/2 mile of residential neighborhoods.4.1: c) Increase trails, greenways, shared us paths to serve other areas of the county.				
	4.1: d) Ensure county parks, recreation, and natural areas are accessible to people of varying abilities.				
	4.1: e) Design parks and facilities based on demographic, cultural, and neighborhood needs.				
	4.1: f) Continue developing integrated network of linear parks, trails, sidewalks, etc. that allow active transportation access to destinations.				
	4.1: g) Develop trails to connect to regional trail system.				
	4.1: h) Acquire and develop a system of on and off-street bike and pedestrian paths.				
	4.1: i) Encourage other county agencies to develop "Complete Streets".				
	4.2 Enhance transportation and connectivity.			r	
	4.2: a) Determine gaps in park and recreation networks from neighborhoods to park sites.4.2: b) Leverage local funding with matching fund opportunities for projects.				
	4.2: c) Consider all types of connectivity users and surface types when planning new transportation infrastructure.				

Chesterfield County Parks & Recreation Sustainability Plan Implementation Plan	Short Term	Mid Term	Long Term	Ongoing
GOAL 5: Promote strategies to help offset and mitigate any existing and expected en	vironme	ntal imp	acts.	
5.1 Increase, conserve, and restore natural areas.				
5.1: a) Determine neighborhoods that are underserved for open space and acquire land for additional open space.				
5.1: b) Seek grant funding to enhance or restore natural areas.				
5.1: c) Identify and protect Chesterfield's natural resources.				
5.1: d) Expand opportunities to experience nature through "Nature in the City".				
5.1: e) Develop management plans and staff knowledge to manage and maintain undeveloped and natural areas.				
5.1: f) Remove invasive species.				
5.1: g) Plant native, local genotype species.				
5.1: h) Continue to provide access to water bodies for water recreation opportunities.				
5.2 Conserve and protect water quality.				
5.2: a) Increase educational programs to inform community on landscape and native, low water use plants.				
5.2: b) Evaluate water use and track historical and on-going consumption.				
5.2: c) Incorporate landscape park design for ground water recharge.				
5.2: d) Establish and make use of recycled water for facility non-potable use and landscape irrigation.				
5.2: e) Convert older irrigation systems to centrally located systems or drip methods.				
5.2: f) Incorporate design standards for new parks to use less turf and more natural, drought-tolerant plants.				
5.2: g) Test water quality of high-use and low-use water access points to maintain a safe environment.				

Chesterfield County Parks & Recreation Sustainability Plan Implementation Plan	Short Term	Mid Term	Long Term	Ongoing
GOAL 5: Promote strategies to help offset and mitigate any existing and expected en	vironme	ntal imp	acts.	
5.3 Become a zero-waste park system.				
5.3: a) Implement waste reduction and recycling at park sites and facilities.				
5.3: b) Partner with local schools and churches to educate zero-waste.				
5.3: c) Incorporate recycled/upcycled art into park sites.				
5.3: d) Implement composting for green waste.				
5.3: e) Expand water bottle refill station infrastructure.				
5.4 Improve vehicle efficiencies and reduce vehicle use.				
5.4: a) Conduct an evaluation of energy consumption of fleet vehicles.				
5.4: b) Establish baseline standards and increase percentage of hybrid, plug-in, and alternative fuel vehicles.				
5.4: c) Conduct park user commute survey to identify emissions associated with park commutes.				
5.4: d) Promote active transportation opportunities to residents and employees.				
5.5 Establish renewable energy sources and improve energy efficiency.				
5.5: a) Replace and use equipment with energy efficient technology.				
5.5: b) Adopt new standard for infrastructure to ensure energy efficiency.				
5.5: c) Evaluate park sites for renewable energy source projects and infrastructure.				
5.5: d) Coordinate with Dominion Energy to explore renewable energy sources.				
5.5: e) Use pool covers to reduce water and heat loss.				
5.5: f) Establish a GHG Emissions study/analysis to identify risks, reductions, and programs.				

Chesterfield County Parks & Recreation Sustainability Plan Implementation Plan	Short Term	Mid Term	Long Term	Ongoing
GOAL 6: Manage and maintain parks, facilities, and programs through maintenance ustainable practices.	e, custom	ner servi	ce, and	
6.1 Ensure long-term maintenance of parks.		-		
6.1: a) Develop maintenance standards to ensure ongoing, long-term maintenance of parks and facilities.				
6.1: b) Maintain an accurate CIP.				
6.1: c) Provide revenue projections for project funding sources.				
6.1: d) Utilize construction methods and materials that will maximize the long-term value.				
6.1: e) Implement park maintenance and operation practices.				
6.1: f) Conduct a lifecycle management assessment for all assets.				
6.1: g) Keep up to date on CAPRA maintenance standard requirements.				
6.1: h) Use native plants and natural landscapes throughout park and recreation sites.				
6.2 Create welcoming environments in recreation centers and facilities.				
6.2: a) Provide vending machines with healthy snacks and drinks.				
6.2: b) Develop excellent guest experience talking points and cues for staff.				
6.2: c) Incorporate informative boards/TVs on programs and services.				
6.2: d) Create welcome packets that highlight other programs and facilities.				
6.2: e) Incorporate green building design standards into recreation centers and facilities.				

REFERENCES

- A model for creating a campus sustainability plan Document Gale OneFile: Contemporary Women's Issues. (2021). Retrieved from https://go-galecom.proxy.library.vcu.edu/ps/i.do?p=CWI&u=viva_vcu&id=GALE|A449344849&v=2.1&it=r& sid=bookmark-CWI&asid=b7732669
- A Plan for Sustainable Practices within NYC Parks. (2010).
- https://www.nycgovparks.org/sub_about/sustainable_parks/Sustainable_Parks_Plan.pdf
- Accredited Agencies | CAPRA | National Recreation and Park Association. (2021). Retrieved from

https://www.nrpa.org/certification/accreditation/CAPRA/accreditedagencies/

admin. (2006, November 29). Three Dynamics of Sustainable Communities: Economy, Ecology,

and Equity [Text]. Round Tables.

https://www.ala.org/rt/srrt/tfoe/lbsc/librariesbuildsustainablecommunitiesthree

Basiago, A. (1999). Economic, social, and environmental sustainability in development theory and urban planning practice. *The Environmentalist*, *19*, 145–161.

https://www.amherst.edu/system/files/media/0972/fulltext.pdf

Chesterfield County Demographic Report. (2020). Chesterfield County Planning Department. https://www.chesterfield.gov/DocumentCenter/View/20197/Chesterfield-County-Demographic-Report-

2020#:~:text=Figure%204%3A%20Race%20%E2%80%93%202020&text=In%20addition%20t o%20noting%20the,with%20an%20increase%20of%202%2C564%25.

Chesterfield County Park Map. (2021). Chesterfield County Parks and Recreation.

https://www.chesterfield.gov/DocumentCenter/View/1914/County-Park-Map-PDF

- Chesterfield County Planning Department. (2019). The Comprehensive Plan for Chesterfield
 - County. https://www.chesterfield.gov/DocumentCenter/View/10647/Comprehensive-Plan-PDF

Chesterfield County, VA. (2021). Chesterfield County, VA.

https://www.chesterfield.gov/CivicAlerts.aspx?AID=1967

- *Chesterfield Parks and Recreation Receives CAPRA Accreditation*. (2021). MOBILERVINGTM. Retrieved from https://mobilerving.com/the-buzz-news-archives/the-news/chesterfield-parksand-recreation-receives-capra-accreditation
- City of Sacramento, CA Department of Parks & Recreation Sustainability Plan 2008 2015. (2008). https://www.ca-ilg.org/sites/main/files/file-attachments/sustainability-plan-08.pdf?1477686451

City of Westerville Sustainability Plan. (2021).

https://parks.westerville.org/home/showpublisheddocument/24235/635942575530030000

- Community Sustainability Plans to enable change towards sustainable practice a Scottish case study: Local Environment: Vol 19, No 7. (2021). Retrieved from https://www-tandfonlinecom.proxy.library.vcu.edu/doi/abs/10.1080/13549839.2013.792046
- *Creating Sustainable Community Parks : ConservationTools*. (202). Retrieved from https://conservationtools.org/guides/93-creating-sustainable-community-parks

Explore Census Data. (2021). https://data.census.gov/cedsci/

- Kinzer, K. (2018). How can we help? An exploration of the public's role in overcoming barriers to urban sustainability plan implementation. *Sustainable Cities and Society*, *39*, 719–728. https://doi.org/10.1016/j.scs.2018.02.028
- Leonor, M. (2021, August 14). Virginia is growing more diverse; population growth reserved for urban and suburban areas. *Richmond Times-Dispatch*. https://richmond.com/news/state-andregional/virginia-is-growing-more-diverse-population-growth-reserved-for-urban-and-suburbanareas/article_5176176f-7d62-54b2-940c-1ecc7dbc4f23.html

- Manning, R., Valliere, W., Anderson, L., McCown, R. S., Pettengill, P., Reigner, N., Lawson, S., Newman, P., Budruk, M., Laven, D., Hallo, J., Park, L., Bacon, J., Abbe, D., & Riper, C. van. (2011). Defining, Measuring, Monitoring, and Managing the Sustainability of Parks for Outdoor Recreation. *Journal of Park and Recreation Administration*, *29*(3). https://www.proquest.com/docview/1730175796/abstract/77978AE202C64FC7PQ/1
- Map of Chesterfield County, Va. (2021). [Image]. Library of Congress, Washington, D.C. 20540 USA. Retrieved from https://www.loc.gov/item/2012592116/
- McCole, D., & Vogt, C. (2011). Informing Sustainability Decisions: The Role of Parks, Recreation, and Tourism Scholars in Addressing Unsustainability. *Journal of Park and Recreation Administration*, 29(3).

https://www.proquest.com/docview/1730173769/abstract/31F7BCBFC6064759PQ/1

National Park Service U.S. Department of the Interior - Green Parks Plan. (2016).

https://www.nps.gov/subjects/sustainability/upload/NPS-Green-Parks-Plan-2016.pdf

Our Sustainability Efforts | MNCPPC, MD. (2021). Retrieved from

https://www.pgparks.com/4986/Sustainability

- *Our Three Pillars, Impacting Communities* | *National Recreation and Park Association.* (n.d.). Retrieved from https://www.nrpa.org/our-work/Three-Pillars/
- Park and Recreation Sustainability Practices A Summary of Results from an NRPA Member Survey. (2017).
 - https://www.nrpa.org/contentassets/f768428a39aa4035ae55b2aaff372617/sustainability-surveyreport.pdf
- Parks & Recreation | Chesterfield County, VA. (2021). Retrieved from https://www.chesterfield.gov/150/Parks-Recreation

- Parks and Recreation: Serving a Growing, Older Population | Research | Parks and Recreation Magazine | NRPA. (2021). Retrieved from https://www.nrpa.org/parks-recreationmagazine/2017/july/parks-and-recreation-serving-a-growing-older-population/
- Report of the World Commission on Environment and Development: Our Common Future. (n.d.). http://www.un-documents.net/our-common-future.pdf
- Stockholm Royal Seaport Sustainability Report 2017. (2017).
 - https://vaxer.stockholm/globalassets/omraden/-stadsutvecklingsomraden/ostermalm-norradjurgardsstaden/royal-seaport/media/sustainability report 2017 uppslag eng juni 2018.pdf
- Sustainable City | SF Planning. (n.d.). Retrieved from https://sfplanning.org/project/sustainablecity
- Sustainable Copenhagen. (2021). Wonderful Copenhagen. Retrieved from
 - https://www.wonderfulcopenhagen.com/convention-bureau/copenhagen/sustainable-copenhagen
- Sustainable Development. (2021). International Institute for Sustainable Development. Retrieved from https://www.iisd.org/about-iisd/sustainable-development
- The four pillars of sustainability. (2021). FutureLearn. Retrieved from
- https://www.futurelearn.com/info/courses/sustainable-business/0/steps/78337
- University of California Policy on Sustainable Practices. (2020).
 - https://policy.ucop.edu/doc/3100155/SustainablePractices
- University of California Sustainability Annual Report 2020. (2020).
 - https://www.ucop.edu/sustainability/policy-areas/2020-annual-report---no-locations.pdf
- U.S. Census Bureau QuickFacts: Chesterfield County, Virginia. (2022). Retrieved from https://www.census.gov/quickfacts/chesterfieldcountyvirginia

- U.S. Environmental Protection Agency Sustainability Report and Implementation Plan 2020. (2020). https://www.epa.gov/sites/default/files/2020-10/documents/srip_fy20_508.pdf
- *Virginia Population Projections* | *Weldon Cooper Center for Public Service*. (2022). Retrieved from https://demographics.coopercenter.org/virginia-population-projections
- Yowell, J. (2008). A descriptive study of sustainability strategies among local parks and recreation departments in Tennessee. University of Tennessee, Knoxville. https://trace.tennessee.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1& article=1537&context=utk_gradthes
- ZIP Code 23112 Map, Demographics, More for Midlothian, VA. (2022). Retrieved from https://www.unitedstateszipcodes.org/23112/

APPENDIX A: CHESTERFIELD COUNTY PARK SYSTEM SITES AND ACREAGE TABLE

PARK LAND BY CATEGORY	2021
REGIONAL PARKS # OF	SITES: 5
Harry G. Daniel Park at Iron Bridge ¹	186.5
R. Garland Dodd Park at Point of Rocks	177.8
Irvin G. Horner Park	316.4
Rockwood Park	171.4
Winterpock Park	240.5
TOTAL REGIONAL PARK ACREAGE	1,092.7

COMMUNITY PARKS # OF SITES:	13
Atkins Acres Park	122.0
Ettrick Park	28.3
Goyne Park ²	33.1
Harrowgate Park	39.9
Huguenot Park	56.7
Lake Chesdin Park	110.0
Lowe's Complex	56.9
Magnolia Green Park	26.8
Matoaca Park	69.0
Providence Road Park	49.1
Mary B. Stratton Park - Trampling Run Park Office	15.1
Warbro Complex	34.8
Windmill - Old Hundred Road Park	47.1
Community Parks at Schools *	46
Leased parkland providing communuity use	166
Community Parks within Special Purpose Parks	0
TOTAL COMMUNITY PARK ACREAGE	901.4

NEIGHBORHOOD PARKS #	OF SITES:	10
Bensley Park		17.0
Beulah Park		16.2
Chester Pocket Park (P)		0.3
Clarendon Park		14.6
Ettrick Village Park		0.9
Fernbrook Park		3.5
Gates Mill Park		12.3
Midlothian Village Park		6.1
Robious - Twin Team Road Park		7.0
Salem Church Mini Park		3.5
Neighborhood Parks at Schools*		364.5
Neighborhood Parks within Special Purpose I	Parks	0.0
TOTAL NEIGHBORHOOD PARK ACRE	EAGE	446.0

SPECIAL PURPOSE PARKS # OF SITES:	31
39th Illinois Park	2.5
Battery Danztler Park (P)	16.3
Brown & Williamson Conservation Area (P)	264.8
Castlewood Site	4.4
Chester Linear Park	12.4
Cogbill Park	212.1
Dutch Gap Boat Landing	4.8
Dutch Gap Conservation Area	795.9
Sgt. Engles Park	11.7
Eppington Plantation (P)	43.7
Fairgrounds	77.8
Falling Creek Ironworks (P)	8.6
Falling Creek Linear Park	82.9
Fort Stevens (P)	2.1
Fort Wead (P)	12.6
Henricus Historical Park (P)	22.8
Historic Point of Rocks Park	30.0
Howlett Line Park(P)	13.2
James River Conservation Area	107.9
Kiwanis Park	5.4
Lake Chesdin Canoe Launch	43.4
Lake Chesdin Linear Park	60.6
Magnolia Grange	1.1
Mid-Lothian Mines Park (P)	43.3
Pleasant View Schoolhouse Site(P)	2.0
Providence Creek Linear Park	54.5
John J. Radcliffe Conservation Area	97.4
River City Sportsplex	115.0
Robious Landing Park	101.6
Swift Creek Conservation Area	447.2
Ware Bottom Church Battlefield Park (P)	10.2
Leased parkland providing special purpose use	71
TOTAL SPECIAL PURPOSE PARK ACREAGE	2,779

PARK LAND SHARED WITH SCHOOLS	2021
SCHOOL ATHLETIC COMPLEXES	
NEIGHBORHOOD PARKS AT SCHOOLS # OF SITES:	7
Davis E.S. Athletic Complex	14.3
Greenfield E.S. Athletic Complex	4.5
Manchester M.S. Athletic Complex	30.6
Midlothian M.S. Athletic Complex	18.7
Monacan H.S. Athletic Complex	12.4
Spring Run E.S. Athletic Complex	6.0
Woodlake Athletic Complex at Clover Hill E.S.	16.0
Other school-park acreage (54 sites)	709.7
TOTAL SCHOOL COMPLEX ACREAGE	812.1
*NEIGHBORHOOD PARKS SHARE	364.5

COMMUNITY PARKS AT SCHOOLS # OF	SITES: 4
Bird H.S. Athletic Complex	32.6
Manchester H.S. Athletic Complex	8.9
Providence M.S. Athletic Complex	22.9
Robious M.S. Athletic Complex	28.3

TOTAL SCHOOL COMPLEX ACREAGE	92.8
*COMMUNITY PARKS SHARE ³	46

TOTAL NUMBER OF PARKS SITES	64
NUMBER OF SCHOOL COMPLEX SITES	11
ADDITIONAL SCHOOL SITES	65
TOTAL NUMBER OF SITES	140

PARK ACREAGE PER POPULATION	
1/1/2020 Population Estimate	355,000
TOTAL PARK ACREAGE*	5,219.3
Acres per thousand	14.7
TOTAL PARK AND SCHOOL SHARED ACREAGE	5,630.0
Acres per thousand	15.9
TOTAL AVAILABLE FOR PUBLIC USE**	3,791.3
Acres per thousand	10.7
TOTAL w/o SPECIAL PURPOSE*	2,440.2
Acres per thousand	6.9

LEASED/SHARED PARKS	# OF SITES:	5
Appomattox River Canoe Launch [sp]		2.2
Appomattox River Trail - VSU/Ettrick T	rail Head [sp]	47.8
Mary B. Stratton Park [c]		166.5
Midlothian Mines Park - Headstock [sp]	21.0
Stonebridge Recreation Center		12.5
TOTAL LEASED/SHARED A	CREAGE	250.0

(P)= Partnership Unbold text=Undeveloped Italics=Athletic Complex

¹ excludes airport reserved & First Tee acres

- ² excludes Goyne Disc Golf acres (shared use)
- ³ includes Goyne Disc Golf at 47% acreage
- * includes percentage of school shared use acres(park land equivalent): 47%
- elementary acreage, 42% middle & high acreage
- ** excludes undeveloped sites shown in non-bold typeface and includes
- 100% of school shared use acreage

All acreages based on Chesterfield County & Parks GIS

State owned Pocohantas Park 7,591

APPENDIX B: CAPRA ACCREDITATION LIST OF STANDARDS

1.0 - Agency Authority, Role, and Responsibility

1.1- Source of Authority

- 1.1.1- Approving Authority/Policy Body
- 1.1.2 Citizen Advisory Boards/Committees
- 1.2 Periodic Timetable for Review of Documents
- 1.2.1 Document Approval Authority
- 1.3 Jurisdiction
- 1.4 Mission
- 1.4.1 Agency Goals and Objectives
- 1.4.2 Personnel Involvement
- 1.5 Vision
- 1.6 Policies, Rules, Regulations, and Operational Procedures
- 1.6.1 Administrative Policies and Procedures
- 1.7 Agency Relationships
- 1.7.1 Operational Coordination and Cooperation Agreements
- 2.0 Planning
- 2.1 Overall Planning Function within Agency
- 2.10 ADA Transition Plan
- 2.2 Involvement in Local Planning
- 2.3 Planning with Regional, State, and Federal Agencies
- 2.3.1 Community Comprehensive Plan with Park and Recreation Component
- 2.4 Park and Recreation System Master Plan
- 2.5 Strategic Plan
- 2.6 Feasibility Studies
- 2.7 Site Plans
- 2.8 Historical and Cultural Resource Management Plans
- 2.9 Community Involvement

- 3.0 Organization and Administration
- 3.1 Organizational Structure
- 3.2 Administrative Offices
- 3.2.1 Support Services
- 3.3 Internal Communication
- 3.4 Public Information Policy and Procedure
- 3.4.1 Public Information and Community Relations Responsibility
- 3.4.2 Community Relations Plan
- 3.4.3 Marketing Plan
- 3.4.3.1 Marketing Responsibility
- 3.4.3.2 Social Media Policy
- 3.5 Utilization of Technology
- 3.5.1 Management Information Systems
- 3.6 Records Management Policy and Procedures
- 3.6.1 Records Disaster Mitigation and Recovery Plan and Procedures
- 4.0 Human Resources
- 4.1 Personnel Policies and Procedures Manual
- 4.1.1 Code of Ethics
- 4.1.1.1 Staff Acceptance of Gifts and Gratuities
- 4.1.10 Promotion
- 4.1.11 Disciplinary System
- 4.1.12 Grievance Procedures
- 4.1.13 Termination and End of Employment
- 4.1.14 Social Media Policy Regarding Staff Use
- 4.1.2 Recruitment Process
- 4.1.3 Equal Opportunity Employment and Workforce Diversity
- 4.1.4 Selection Process
- 4.1.5 Background Investigation

- 4.1.6 Employee Benefits
- 4.1.7 Supervision
- 4.1.8 Compensation Plan
- 4.1.9 Performance Evaluation
- 4.2 Staff Qualifications
- 4.3 Job Analyses for Job Descriptions
- 4.4 Chief Administrator
- 4.4.1 Leadership Succession Procedure
- 4.5 Workforce Health and Wellness Program
- 4.6 Orientation Program
- 4.6.1 Employee Training and Development Program
- 4.6.2 Professional Certification and Organization Membership
- 4.7 Volunteer Management
- 4.7.1 Use of Volunteers
- 4.7.2 Volunteer Recruitment, Selection, Orientation, Training, and Retention
- 4.7.3 Supervision and Evaluation of Volunteers
- 4.7.4 Recognition of Volunteers
- 4.7.5 Liability Coverage for Volunteers
- 4.8 Consultants and Contract Employees
- 5.0 Financial Management
- 5.1 Fiscal Policy
- 5.1.1 Comprehensive Revenue Policy
- 5.1.2 Agency Acceptance of Gifts and Donations
- 5.1.3 Grants Procedures
- 5.1.4 Private, Corporate, and Non-Profit Support Procedures
- 5.2 Fiscal Management Procedures
- 5.2.1 Authority and Responsibility for Fiscal Management
- 5.2.2 Purchasing Procedures

- 5.2.2.1 Emergency Purchase Procedures
- 5.3 Accounting System
- 5.3.1 Financial Status Reports
- 5.3.2 Position Authorization Procedures
- 5.3.3 Fiscal Control and Monitoring Procedures
- 5.3.4 Independent Audit
- 5.4 Annual or Biennial Budget
- 5.4.1 Budget Development Guidelines
- 5.4.2 Budget Recommendations
- 5.5 Budget Control Procedures
- 5.5.1 Supplemental/Emergency Appropriations Procedures
- 5.5.2 Inventory and Fixed Assets Controls
- 6.0 Programs and Services Management
- 6.1 Recreation Programming Plan
- 6.1.1 Program and Service Determinants
- 6.1.2 Participant Involvement
- 6.1.3 Self-Directed Programs and Services
- 6.1.4 Leader-Directed Programs and Services
- 6.1.5 Facilitated Programs and Services
- 6.1.6 Cooperative Programming
- 6.2 Program Objectives
- 6.3 Scope of Program Opportunities
- 6.3.1 Outreach to Diverse Underserved Populations
- 6.4 Community Education for Leisure Process
- 6.4.1 Community Health and Wellness Education and Promotion
- 6.5 Code of Conduct
- 6.5.1 Concussion Protocol

7.0 - Facility and Land Use Management

- 7.1 Parkland Acquisition Procedures
- 7.10 Maintenance Personnel Assignment Procedures
- 7.11 Capital Asset Depreciation and Replacement Schedule
- 7.2 Areas and Facilities Development Policies and Procedures
- 7.2.1 ADA Existing Facility and Site Access Audit
- 7.3 Defense Against Encroachment Procedures
- 7.4 Disposal of Lands Procedures
- 7.5 Maintenance and Operations Management Standards
- 7.5.1 Facility Legal Requirements
- 7.5.2 Preventative Maintenance Plan
- 7.6 Fleet Management Plan
- 7.7 Agency-Owned Equipment, Materials, Tools, and Supplies Policies and Procedures
- 7.7.1 Building Plans and Specifications
- 7.7.2 Land and Lease Records
- 7.8 Environmental Sustainability Policy and Program
- 7.9 Natural Resource Management Plans and Procedures
- 7.9.1 Recycling and/or Zero Waste Plan
- 8.0 Public Safety, Law Enforcement, and Security
- 8.1 Codes, Laws, and Ordinances
- 8.1.1 Staff Liaison to Law Enforcement Officers
- 8.2 Authority to Enforce Laws by Law Enforcement Officers
- 8.3 Law Enforcement Officer Training
- 8.4 Public Information on Laws, Ordinances, Rules, Regulations, and Policies
- 8.4.1 In-Service Training for Staff on Public Safety and Law Enforcement
- 8.4.2 Handling of Disruptive Behavior Procedures
- 8.4.3 Traffic Control, Parking Plans, and Crowd Control

- 8.4.4 Handling of Evidentiary Items Procedures
- 8.5 General Security Plan
- 8.6 Emergency Management Planning
- 8.6.1 In-Service Training for Staff on General Security and Emergency Management
- 8.6.2 Emergency Risk Communications Plan
- 8.6.3 Care and Shelter Procedures
- 9.0 Risk Management
- 9.1 Risk Management Policy
- 9.1.1 Risk Management Plan and Procedures
- 9.1.2 Accident and Incident Report Procedures
- 9.1.3 Personnel Involvement and Training
- 9.2 Risk Manager
- 9.3 ADA Compliance and Face-to-Face Resolution
- 10.0 Evaluation, Assessment, and Research
- 10.1 Systematic Evaluation Processes
- 10.1.1 Responsibility for Evaluation
- 10.1.2 Staff Training on How to Evaluate Programs, Services, and Facilities
- 10.2 Outcomes Assessment
- 10.3 Performance Measurement
- 10.3.1 Level of Service Standards
- 10.4 Needs Assessment
- 10.5 Program and Service Statistics
- 10.5.1 Recreation and Leisure Trends Analysis
- 10.5.2 Community Inventory
- 10.5.3 Park Metrics
- 10.6 Research Investigation
- 10.6.1 Quality Assurance

All fundamental standards are indicated in red.

Chesterfield County Parks & Recreation Sustainability User Survey Thank you for your interest in taking the Chesterfield County Parks & Recreation Sustainability User Survey. The purpose of this survey is to help determine best sust practices to create recommendations for the future sustainability plan. Your feedba crucial and plays an integral part in opportunities for improvement. For more inform learn how the Parks and Recreation Department is currently addressing sustainabilit please visit <u>https://www.chesterfield.gov/4690/Environmental-Stewardship</u> .	ck is lation to
gilmerka@vcu.edu (not shared) Switch account	Ø
* Required	
What park(s) sites do you visit often? * Please select the park(s) you visit often. Community Parks Conservation Area Parks Linear/Pocket Parks Linear/Pocket Parks Neighborhood Parks Public School Parks Regional Parks Sportsplex/Athletic Complex Trailheads Water/Canoe/Boat/Launch Parks Other:	

How do you travel to park sites? * Please choose one option.
O Bike
O Drive
O Ride the bus or other public transit
O Run
O Walk
O Other:
How frequently do you visit parks? * Please choose one option.
O Almost every day
O Three to four times a week
O A couple times a week
O A couple times a month
O Hardly use
O Other:

What is your main purpose for visiting parks? * Please choose the best that applies.
Attending community events and meetings
Educational activities for children
Enjoying the natural environment
Meeting with friends
No special areas to go other than parks
Playing sports and using exercise facilities
Relaxation and walking
Spectating sporting events
Spending time with family
Other:

What features do you enjoy about park(s)? * Please select all that apply.
Accessibility for all individuals
Benches/tables
Community gardens
Fitness and sporting equipment
Indoor facilities
Landscaping/gardens
Open space/green space
Playgrounds
Recycling bins
Renewable energy sources (i.e. solar panels, hydropower, wind energy)
Restroom facilities
Sidewalks/bike paths/running trails
Sport fields
Tree cover
Water fountains
Water (i.e. river, pond, stream, ocean) access
Other:

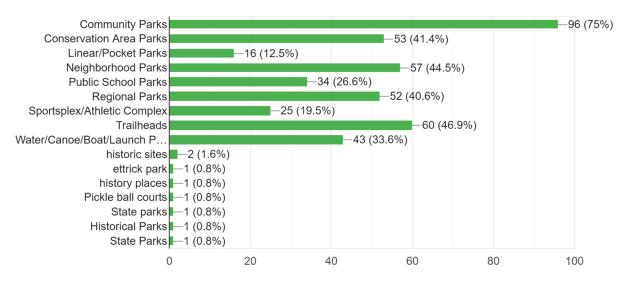
Your answer		
Tour answer		
What is your rac	ll/ethnic identity? *	
Please choose one		
	- Protection - Pro	
Choose	*	
2005 N 12		
What is your age		
Please choose one	ption.	
Choose	•	
What is your ger	ler identity? *	
Please choose one		
Choose		
CHOOSE	Ť	
wrl . 1 1	1	
What zip code d		
Please choose one)ption.	

How familiar are you with the term "sustainability"? * Please choose one option.											
	1	2	3	4	5	6	7	8	9	10	
Not as familiar	0	0	0	0	0	0	0	0	0	0	Very much familiar
Would you be interested in learning more about how sustainability can help parks? * Please choose one option. Chesterfield County Parks & Recreation Sustainability Plan is currently being developed and will be available soon. Yes No											
Submit		-		_	_	_	_	Pa	ge 1 c	of 1	Clear form

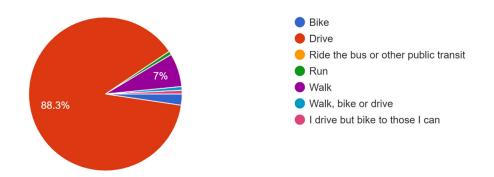
APPENDIX D: CHESTERFIELD COUNTY PARKS AND RECREATION SUSTAINABILITY USER SURVEY RESULTS

What park(s) sites do you visit often?

128 responses

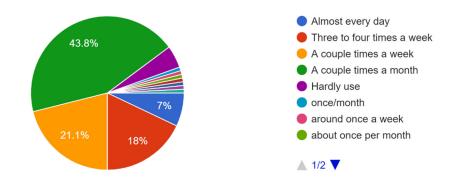


How do you travel to park sites? 128 responses



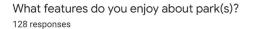
How frequently do you visit parks?

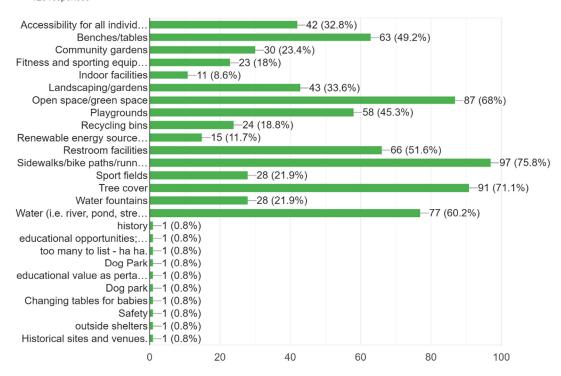
128 responses



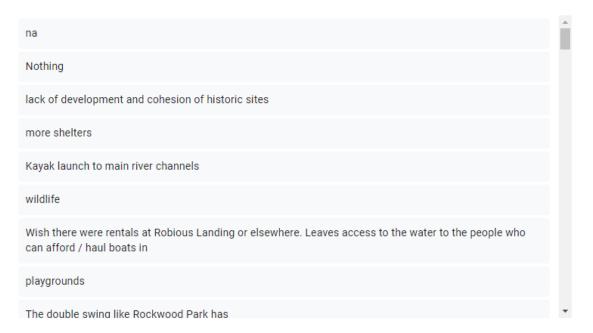
What is your main purpose for visiting parks? 128 responses

Exercise on trail Active recreation - Biking. Music event learning about area histor Walking my do Walk dog recreation with famil Kayakin Bikin	— — — — — — — — — — — — — — — — — —	2 (9.4%) 	21.9%)	-59 (46.1%)		(71.9%)
	0	20	40	60	80	100





128 responses



128 responses

We like to go on long (3-5 mile) walks. The only parks I know of with a trail three miles or longer are Dutch Gap and Pocohantas, which are not close to 23113. (Maybe Rockwood Park, but we get lost in there!)

More parks

More parks in general! Too much housing development! Wider walking paths, bike parks (check out Deep Run Park Pump Track) for adults and kids, skateboard parks, more dog parks with dog playground equipment, more natural ponds with native plants and benches to sit and view, decent food (not junk food its a sports complex!) at sport complex, play grounds with creative fun equipment such as pirate ships and engaging equipment for children (check out Dallas parks with best playgrounds), display large art work from VCU students, emphasize and keep large old trees and keep as many trees as possible, have FIELDS OF NATIVE FLOWERS TO ASSIST POLLINATORS, set up large screen and fields for outdoor movie nights, manicured gardens, more pickleball courts for older citizens - county is lacking a whole lot!!

closer restroom facilities

More pickleball courts

they meet my needs

What do you feel is lacking in your local community park(s)?

128 responses

they meet my needs

Nothing comes to mind

I love Huguenot Park. Sunday Park is great but rumor has it that they will kick you out. Hericus is great.

NA

I wish there were restrooms at the remote sites like Radcliffe

Recycling bins and public art.

Educational programs and opportunities for seniors are limited in Bermuda District. No Appomattox River access.

While weekly maintenance is good, long term repairs and maintenance could be better. For example, some paths and sidewalks need resurfacing, grassy areas showing erosion and slumping, grass seed or sod should be reapplied after proper grading and drainage fixed.

128 responses

All is fine with my park in Ettrick. However, I would like to see classes for older adults. For example, health related classes, writing and other courses. Adults should also be able to continue to learn and grow in spite of age

More green space.

More bike paths, trails. Also more trees/ tree cover

Better facilities, staffing, and promotion at historic and nature sites

Nature playscapes that incorporate natural materials, a bigger variety of playground equipment for nonnature playscapes

I love our parks mind you but Highlights, for example, like in Stanton VA Gypsy Hill Park. Raleigh, NC Pullen Park. We do not have that one park with big WOW factor.

Outdoor concerts, bike rentals, more senior events

What do you feel is lacking in your local community park(s)?

128 responses

I think chesterfield could use more natural area parks with just walking trails, and close to denser populated areas

a larger green area and community gardens

Cleaner, less garbage on ground

The county parks are great and offer a variety of activities.

A splash zone for children would be awesome during the summer months.

Playground equipment for elementary and school age kids. A skate or BMX track would be nice. More archery programs.

More waste bins available throughout the trails.

I am hoping the project where there will be a walking trail from Petersburg to Ashland will occur. The need for a biking/walking path for more than just 1 mile would be very helpful!

128 responses

Wilderness escapes, chance for unanticipated discovery in unprogrammed areas

need more parking and better signage

Bike paths to parks

history sites need better funding and development

Updated playground equipment, I would like a disc golf course, more offerings of classes, camps, lessons

Midlo Park is fantastic but we need more parks like Midlo as it's too much growth in this area is the park is extremely packed

N/A

More native plants that support our birds, bees, butterflies, and other wildlife. Additionally, more emphasis needs to be put on removing invasive species, especially from the conservation areas.

What do you feel is lacking in your local community park(s)?

128 responses

More treed parks and trails

Pickleball near Johnston Willis

Fine for our use

Disc golf

Availability, pest control in pavilions

Court surface maintenance

educational engagement, bird tours or animal identification plaques

A couple of outdoor swimming pools at major or large parks would be nice.

128 responses

I have been glad to have access to trails in the various parks, and I am always interested in trail development. I would however think that anytime more access is available for those with disabilities, the better, so if I had to suggest anything, I guess it would be continued accommodations for the disabled to enjoy using the parks.

Love our parks!

I can bike to one park (Robious Landing) and wish it were easier to bike to other parks-making the county more bike-friendly or connecting parks with walking trails to local neighborhoods would be earth-friendly and a real asset.

Accessibility via bike or foot.

bathroom facilities

More places to kayak and parking nearby; Places to picnic/sit by the water and enjoy

ACCESSIBILITY. To get to most parks you have to drive. Even when within walking distance the traffic and lack of sidewalks makes biking or walking to a park too dangerous.

What do you feel is lacking in your local community park(s)?

128 responses

Too much litter.

Inter-connectivity of neighborhoods to parks. Wish my neighborhood gave me safer access by foot or bike to trails or quieter roads.

Community gardens, wheelchair accessible trails

More Pickleball Courts both indoor and outdoor

I feel nothing is lacking

More info sessions on travel, govt. programs for seniors

more pickleball courts

Access to park facilities within a walking distance. I have to drive to get to a park.

Daniels park needs drainage maintenance.

Appendix D | 90

128 responses

More restroom locations at Rockwood

pocket parks

More organized activities for younger children

Splash pad

programs with people attending

Safety call boxes, lighted parking lots, trash and recycling cans, drinking water.

Trails

Accessible trails, staff to enforce park rules, more trash cans.

Porta Johns

What do you feel is lacking in your local community park(s)?

128 responses

Better trail marking

Wider paved trails for bike rides

We need more parks in general. Parks geared for families with young kids. Updated playground equipment and splash pad options are desired. I'm close to Cosby high school and find it unacceptable that the closest park with playground is a 20 minute drive (Rockwood). Our park system doesn't compare to neighboring counties, Richmond and Henrici.

Closer proximity to my home in the Magnolia Green area.

Connectivity between each parks/public transportation systems. I drive to the park sites (just like driving to gym facilities) and I really wish the parks and rec department could increase the sidewalks, running trails, etc. to other parks and the countys' sidewalk system so then I can bike/walk to the parks!

n/a

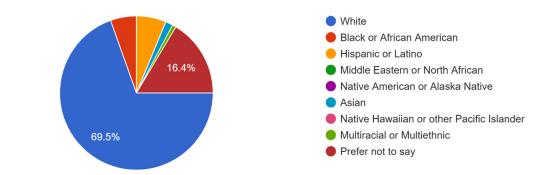
I'm still waiting on the replacement of Harrowgate Park, it's a sore topic.

128 responses

More restrooms	
RELIABLE DRINKING WATER. SAFE WAYS TO BIKE OR RUN TO EACH PARK RATHER THAN DRIVE	
Composting, bike racks, water bottle refill station	
Walking trail ground lighting	
Bike trails that are Sept from walking trails. Trails are too narrow for both to enjoy	
The existing park sites are fine. But you should be requiring new housing and business developments to provide community green spaces, tot lots (kids' play areas), and sidewalks. It was difficult raising children here with such limited play areas.	
some have no restrooms just portapotty	
Need a water fountain in Huegenot Park.	
What do you feel is lacking in your local community park(s)? 128 responses	
Need a water fountain in Huegenot Park.	-
I wish parks were connected with bike lanes, so I could ride my bike to the parks.	
handicap accessibility playgrounds	
community swimming pools,	
More spaces for individuals to gather!	
My local park is Rockwood and it covers everything but more playground will be needed for growth.	
Splash Zonesin other areas there are splash zones that children can cook off on a hot day	
My garden is along a Sunday Park sidewalk with a view of the lake cove.	

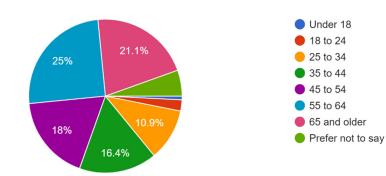
What is your racial/ethnic identity?

128 responses



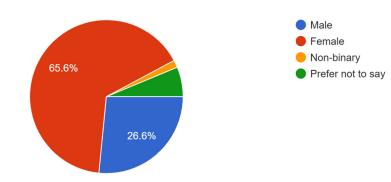
What is your age range?

128 responses

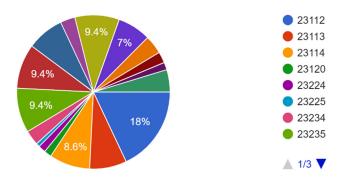


What is your gender identity?

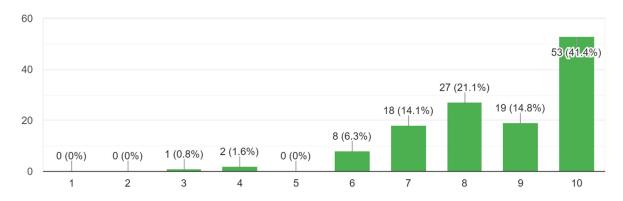
128 responses



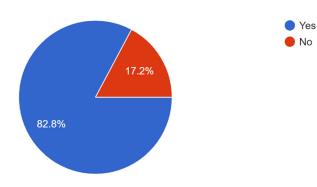
What zip code do you live in? 128 responses



How familiar are you with the term "sustainability"? 128 responses



Would you be interested in learning more about how sustainability can help parks? 128 responses



APPENDIX E: TIMELINE FOR COMPLETION

The Parks and Recreation Director, Neil Luther, invited directors of the following departments to identify staff to attend three meetings. Additionally, Mr. Luther recommended internal parks and recreation staff to participate in the sustainability planning process.

- 1. The first meeting was an introductory project overview. (Later summer Early fall 2021)
- 2. The second meeting was a briefing of research and direction. (Later fall 2021 or early winter 2021)
- 3. The third meeting was the final project presentation and outline of next steps for Parks and Recreation Adoption of the Sustainability Plan. (Late spring 2022)
- 4. The Sustainability Plan to be reviewed and edited by Chesterfield County Parks and Recreation and adopted in summer 2022.

The County's Parks and Recreation Technical Advisory Committee included representatives from the following:

- General Services Clay Bowles, Director
- Environmental Engineering Scott Smedley, Director
- Community Enhancement Dan Cohen, Director
- Utilities Matt Rembold, Engineering Supervisor
- Cooperative Extension Seth Guy, Environmental Educator
- Risk Management Kyle Campbell, Director
- Communications and Media Susan Pollard, Director
- Planning Andy Gilles, Director
 - Steve Haasch Assistant Planning Manager
 - Rachel Chieppa Planning Manager

Internal Parks and Recreation Sustainability Committee:

- Bill Carlson
- Karen Robinson
- Noel Losen
- Greg Velzy
- Mark Battista
- Billy Cooke
- Joe Stovall
- Stuart Connock
- Margie Bryan

 Table 4: Timeline for Completion

Date(s)	Task
October 26, 2021	Final Proposal Due
	Sent final draft of the Chesterfield County
	Parks and Recreation Sustainability Plan to
	panel members
October 27, 2021	Introductory Project Overview Meeting
	First meeting with the County's Parks and
	Recreation Technical Advisory Committee
November 2021	Started User Survey
	After receiving feedback from panel members
	and committee, started process of survey
	outreach method
December 1, 2021	Proposal Defense
	Presented Chesterfield County Parks and
	Recreation Sustainability Plan to panel for
	approval
December 2021	Briefing of Research and Direction
	Second meeting with the County's Parks and
	Recreation Technical Advisory Committee
December 2021 – January 2022	Continued User Survey
	Continued survey outreach methods and set
	up community meeting with committee
	members
December 2021 – January 2022	Stakeholder Interviews/Survey
	Started individual interviews/meetings with
	committee
January 2022 – February 2021	Wrap Up Data Collection
	Started process of analyzing findings
March 2022 – April 2022	Recommendations and Plan
	Started recommendations with Chesterfield
	County Parks and Recreation Department
	and prepared final plan for submission
April 2022	Final Plan Due
	Sent Chesterfield County Parks and
	Recreation Sustainability Plan to panel
	members
April 2022 – May 2022	Final Project Presentation and Next Steps
	Third meeting with the County's Parks and
	Recreation Technical Advisory Committee
May 2022	Final Plan Defense
	Presented Chesterfield County Parks and
	Recreation Sustainability Plan to panel for
	approval
May 2022 – June 2022	Re-draft/Combine Final Document

	Prepare Sustainability Plan for adoption by the county
June 2022 – July 2022	Review, Edit, and Adoption of Sustainability Plan <i>Plan to be reviewed, edited, and adopted by</i> <i>Summer 2022</i>