2018-2023 Park and Open Space Plan

Madison, Wisconsin

play MADISON PARKS

P REVIEW

DRAFT

Photo Courtesy of Wendy Murkve

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Paul R. Soglin, Mayor

Prepared by the City of Madison Park Division
Eric Knepp, Parks Superintendent
Kay Rutledge, Assistant Parks Superintendent

Park and Open Space Plan Staff Team
Sarah Lerner, Project Manager
Sarah Close, Landscape Architect
Cody Oltmans, Park Planning Assistant

Long Range Planning Subcommittee
Grant J. Frautschi
Edward A. Jepsen
Madelyn D. Leopold
David L. Wallner
Stephen A. Webster

Board of Park Commissioners
Samba Baldeh
Maurice S. Cheeks
Emily R. Gnam
Madelyn D. Leopold
Nancy T. Ragland
David L. Wallner
Venus D. Washington

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Madison residents are fortunate to have inherited a park system built by the progressive vision and efforts of previous generations.

Today, the Board of Park Commissioners, Madison Parks Foundation, and City of Madison Parks Division continue a mission of enhancing Madison's legacy of diverse parklands; providing green space, safe environments, and recreational facilities; and meeting the changing needs of present and future generations.

The quality of life for City of Madison residents is influenced by the City's natural resources; parks, greenways, and public access to the numerous waterways which greatly define Madison culture. The mission statement, vision, and goals in this plan serve to guide the development of policies and facilities in the City of Madison park system.

Vision Statement

Everyone shall have access to an ideal system of parks, natural resources, and recreational opportunities that enhance the quality of life for residents and visitors.

Mission Statement

Provide an exceptional system of safe, accessible, well-planned and maintained parks, facilities, public cemetery, natural areas, and public shorelines.

Provide affordable opportunities for recreational and educational experiences.

Preserve and expand our urban forest resources through a well-planned and systematic approach to tree maintenance, planting, and natural area management.

Preserve and promote City of Madison parks' historic legacy, as well as its future legacy.

Provide opportunities for cultural interaction by facilitating community and events and through the display of public art.

Chapter One: Introduction

1.1 Purpose of the Park and Open Space Plan

City of Madison parks play a vital role in the well-being of Madison residents. Parks improve the health and wellness of residents, and in turn contribute to the well-being of the entire community. The City of Madison Park and Open Space Plan (POSP) serves as a guide to inform public policy and system-wide park facility decisions.

This Park and Open Space Plan supports City Boards, Commissions, City agencies and staff, other governments agencies, and interested residents and volunteers. It serves as a guide in decision-making related to park policies, acquisition and development of parkland and facilities, and City financing and operations.

The recommendations and analysis discussed in this plan relate to park development, management of core facilities, and broad concepts in park system planning. Specialized elements of the Madison Parks Division such as Forestry, the State Street/Capitol Mall Concourse, Golf Enterprise, Olbrich Botanical Gardens, and the Warner Park Community Recreation Center in many cases, have their own adopted plans, guiding committees, mission statements, and strategies. The 2018-2023 Park and Open Space Plan recognizes these plans as part of the recommendations of this plan.

Additionally, this plan does not address the City's bicycle and pedestrian system. Bicycle and pedestrian facilities are addressed in separate plans, with guidance provided by the Park and Open Space Plan.

Analysis and recommendations provided in this plan were developed from an extensive public engagement strategy conducted from May 2016 through November 2017. This is discussed in more detail in Chapter Three.

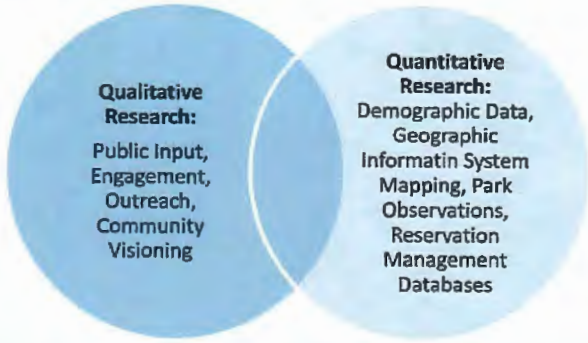
Exhibit 1 provides an inventory map of the City of Madison's park and open spaces.

The Park and Open Space Plan is to be evidence-based and, as such, utilizes extensive public input, census data, park use records, geographic information systems mapping, and other informational databases.

The plan has been subject to public review, hearings, and is adopted by the Board of Parks Commissioners and the Common Council.

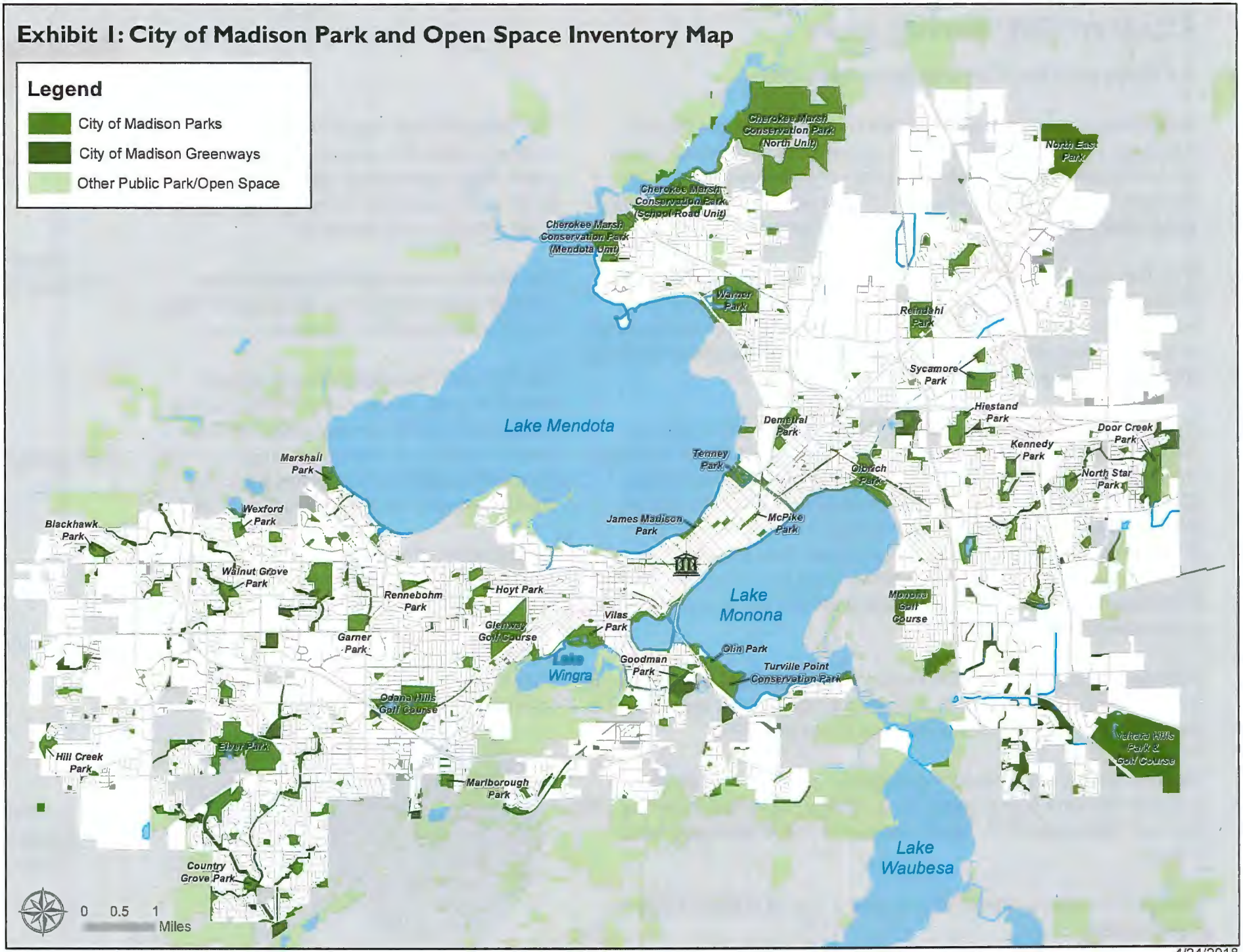
The Park and Open Space Plan is updated every five years to stay current with changing recreational trends, demographics, and park needs, as well as to reflect the integration with the planning efforts of complementary City boards, agencies, county, and statewide efforts.

Maintaining a current Park and Open Space Plan is a prerequisite for participation in Federal and State park and open space financial aid programs. The City must continue to remain eligible for these program funds to accomplish many identified park, recreation, and open space objectives.



In this Chapter

Exhibit 1: City of Madison Park and Open Space Inventory Map



1.2 Accomplishments

The past five years have included significant improvements to the City's park system. Appendix X: 2012-2017 Park Development Accomplishments highlights substantial achievements since the last Park and Open Space Plan. The table below identifies the City's effort to fulfill the recommendations of the 2012-2017 Park and Open Space Plan.

Completed. Advancements since 2012-2017 POSP On-going project.

Recommendation from the 2012-2017 Plan	Action
Review and update existing park dedication ordinance and development fees including park impact fees and "fees in lieu of" dedications.	Adopted the Park Impact Fee and Land Dedication Policy and Public Facility Needs Assessment (2016) and updated Madison General Ordinances to reflect recommendations of the Needs Assessment.
Create a sustainable park system in terms of park size, amenities and maintenance.	Worked with staff team to update Neighborhood Development Plans to be more consistent with park goals for minimum 5-acre size parks to promote a sustainable park system. Implemented recommendations as part of plat approval and parkland dedication within the Neighborhood Development Plan areas.
Address park deficiencies through development of community and neighborhood parks.	Acquired new parkland for Acer Park, Allied Park, Blitzer Family Preserve, Camar Park, Highland Manor Park, Jeffy Trail Park, Kestrel Park, Sugar Maple Park, Thousand Oaks Park, and Woods Farm Park and expanded Hill Creek Park.
Prioritize acquisition of land adjacent to existing parkland to fill gaps in the park system in accordance with goals, objectives, and policies in this plan.	Acquired additional land to expand Central Park, Cherokee Park, Cherokee Marsh - School Road Unit, Merrill Springs Park, North Star Park, Owl Creek Park, and Penn Park.
Continue to develop Master Plans for parkland which include both passive (non-developed, and active (developed) recreation.	Developed park master plans with both passive and active space for Allied Park, Owl Creek Park, Patriot Park, Sugar Maple Park, Thousand Oaks Park. Currently in the process of completing master planning for North Star Park Expansion, Camar Park, and James Madison Park.
Identify areas in our parks with significant natural resources for preservation and protection and develop land management goals for these areas.	Adopted the Madison Parks Land Management Plan (2017).
Improve and preserve the unique habitats and ecosystems within conservation parks.	Treated invasive species at 205 acres of invasive species at conservation parks; seeded native seed mix on 30 acres of prairie and oak woodland, performed controlled burns on 395 acres of conservation land, begun the draft Habitat Management Plan.
Increase connectivity between parks including pedestrian, biking, and water trails.	Coordinated and improved 26 bike and pedestrian connections and added eight new canoe/kayak launches for water access.
Work with other agencies to support planning efforts across the City of Madison and Dane County.	Joint collaboration with Dane County on implementation of water quality enclosures at beaches to improve swimming conditions; joint efforts to fund improvements at Central Park; and improvements to the Capital City Trail System within Madison Parks.
Construct park facilities to provide access to City residents to standard park amenities.	Replaced 50 playgrounds, installed five new playgrounds, six new basketball courts, 11 sun shelters, two new shelters with restrooms, upgraded the existing Penn Park shelter, and added a reservable concession building.
Promote winter recreation opportunities.	Implemented new NiceRink program to improve efficiency and longevity of ice skating rink use. Partnered with MadNorski for snow making and trail grooming.
Build on the existing positive relationships with public and private organizations for donations and volunteers to aid in park system development.	Establishment of the Madison Parks Foundation, a non-profit organization dedicated to acquiring financial resources through contributions and grants to make park improvements and support park programming. The Parks Division also supplemented the efforts of over 1,994 park volunteers.

Develop reservable recreational fields that can be used for multiple purposes.	Underway.
Respond to changing recreational trends by providing new facilities for popular new recreation trends.	Developed new pickleball complex and added pickleball line painting to 18 courts. Planned and developed mountain bike course at Quarry Park.
Pursue development of community gardens and edible landscapes.	Worked with the Mayor's Office on implementation of the Edible Landscape Permit, permitting three new edible landscapes sites in parks. Currently working with the Mayor's Office on expanding community gardening opportunities on the west side of Madison. Added additional community garden plots at Brittingham, Aldo Leopold, and Rennebohm Park.
Continue to construct and improve dog park and dog exercise areas levying funding generated from the sale of dog park permits.	Constructed two new dog parks (Walnut Grove and Odana School), and implemented improvements at Demetral, Sycamore, Warner, Brittingham, and Quann Park. Currently, planning implementation of the City's first synthetic turf dog park.
Continue to improve water access and quality to promote water recreation.	Developed private partnerships for operating three new canoe/kayak rental facilities at Olbrich, Brittingham and Marshall Park. Worked with Dane County on clean beaches efforts to install beach exclosures at several beaches, and a beach enclosure, which filters lake water.
Continue to operate a sustainable golf enterprise.	Presented Financial and Operational Analysis of Course Closure and Hole Reduction Report (2017) addressing the financial challenges to the golf course to Golf Subcommittee and Board of Park Commissioners.
Continue to optimize maintenance efforts in our parks by implementing sustainable practices within budget levels.	The City of Madison continues to identify and implement cost effective, sustainable maintenance strategies to supplement current efforts, which include managed meadows and reduced mowing.
Focus on core facilities, like playgrounds to ensure continued service levels.	Completed comprehensive inventory of all playgrounds, implementing significant playground infrastructure plan. Replaced 59 playgrounds in the past 5 years to bring them to U.S. Consumer Product Safety Commission standards.
Continue to recognize, preserve and enhance historic parks.	Implemented upgrades to historic Breese Stevens Field, worked with volunteers to improve Glenwood Children's Park, and worked with private developers on the rehabilitation and re-use of the historic Garver Feed Mill.
Investigate opportunities for a scientifically valid behavior role assessment of park use to provide insight on existing park uses throughout the City.	Piloted System of Observation for Play and Recreation in Communities (SOPARC) method and worked with City staff and board members to catalog park observations.
Pursue Crime Prevention Through Environmental Design (CPTED) analysis of park development to reduce inappropriate activities in parks.	Park planning staff have coordinated with rangers and operations staff to implement designs that reduce inappropriate activities such as activating spaces with private/public partnerships at Brittingham, Olbrich, and Marshall Park; and construction improvements to address community concerns at Aldo Leopold Park, Penn Park, and Worthington Park.
Coordinate with educational agencies to expand programming and opportunities for outdoor education.	Developed the Madison Connecting Children to Nature Implementation Plan in partnership with Public Health Madison & Dane County, the Children and Nature Network, and the National League of Cities Institute for Youth, Education, and Families.
Continue to expand Olbrich Gardens per the March 2009 Olbrich Park Land Use Plan.	Began design of the education addition to the visitor center with construction anticipated to begin in 2018.
Develop recommendations in future plans to be consistent with the recommendations, goals and objectives of this plan.	Underway.

1.3 A History of the City of Madison Park System

The Dejope (Four Lakes) region that defines the majority of Madison today was formed by the retreat of glaciers approximately 13,000 years ago. Evidence suggests that humans occupied this area starting as early as 300 AD (Historic Madison, Inc., n.d.). Wisconsin was "home to one of the earliest socially complex societies in the Upper Great Lakes" and "what is now southern Wisconsin was a place where the Sauk, the Kickapoo, the Potawatomi, the Menominee, the Ho-Chunk, and the Ojibwe could all call their ancestral home in some way or another" (Aaron Bird Bear, 2011). By the time settlers began to arrive, the Ho-Chunk Nation called this area home. However, the Ho-Chunk were forced to move west of the Mississippi River after the Black Hawk War of 1832, a brief conflict between the United States and Native Americans, led by Black Hawk.

Table 1.1 Madison's Historical Population

Year	Population
1829	<200
1851	1,600
1900	19,000
1910	25,531
1930	57,899
1960	126,706
1990	190,816
2016	252,551

Source: Historic Madison, Inc. The Origins of Some Madison, Wisconsin Street Names.Population.US.

James Doty visited Madison in 1829, and in 1836 drew plats for the Four Lakes area. He also persuaded the territorial legislature to designate Madison as the new capital (Historic Madison, Inc.). It did not have a single park, but was in a magnificent setting on the isthmus between Lakes Mendota and Monona. By 1892 residents had realized the beauty of the surroundings and a group of private residents banded together to form the Madison Park and Pleasure Drive Association. The Association raised private donations to acquire and improve park land, to construct pleasure drives, and to plant trees and shrubs throughout the City.

In 1961, a Park and Open Space Plan was adopted that recommended preservation of natural drainageways and significant natural areas such as Cherokee Marsh and the Nine Springs wetlands. An emphasis of this plan and subsequent updates was to eliminate a deficiency of parkland. The Plan was updated regularly, raising the standard for the desirable amount of parkland, and dramatically increasing park acreage. Madison's historic commitment to public recreation and open space of all kinds provides the public today with a diverse system of parks and open spaces. Additional Park and Open Space Plans were completed in 1961, 1971, 1977, 1984, 1991, 1997, 2005 (an update to the 1997 plan), and 2012, and all include recommendations regarding eliminating parkland deficiencies.

Figure 1.1: Catalogued Native American Legacy

Source: Charles E. Brown, Lake Mendota, Prehistory, History and Legends, (Madison: The Wisconsin Archeological Society, 1933)

Today, the City of Madison Parks Division manages over 270 parks totaling over 5,600 acres of land (shown on Exhibit 1) and is responsible for over 6,000 acres of public land in total. The additional acreage includes land such as street ends, right-of-ways, and stormwater facilities. The Parks Division is also responsible for the operation and maintenance of special facilities such as Olbrich Botanical Gardens, four public golf courses, and one public cemetery, State Street and the Capitol Mall Concourse, and pruning, planting, and removal of all trees in public right-of-ways.

The City Parks Division does not provide City-funded recreational programming. Recreational programming is primarily offered through the Madison Metropolitan School System and other community recreational organizations.

The Madison Parks Foundation, formed in 2002, augments the City of Madison Parks Division. This nonprofit organization creates and supports initiatives to improve and expand the park lands, facilities, and services offered through the City of Madison Parks Division. Further information on the Madison Parks Foundation is discussed in Chapters Seven and Eight.

Figure 1.2: Past City of Madison Park and Open Space Plans

1.4 Planning Process

The planning process for the 2018-2023 Park and Open Space Plan involved three phases:

Phase I: Data Gathering and Public Engagement
The first phase of the project occurred from May 2016 until November 2017. This phase included data collection, public engagement, and geographical information system data analysis.

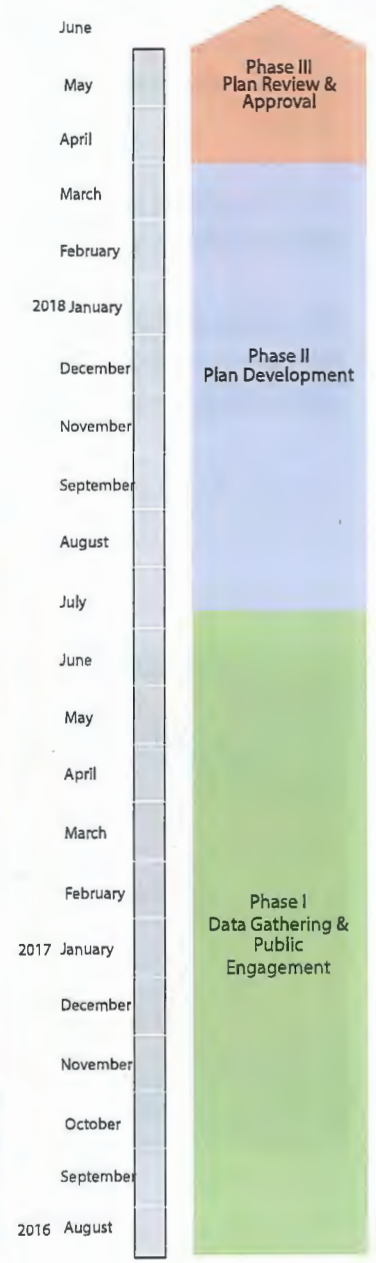
Phase II: Plan Development
Plan Development overlapped with Phase I and occurred from July 2017 to February 2018 with guidance from the Parks Long Range Planning Subcommittee.

Phase III: Plan Review and Approval
From March 2018 until adoption, the Parks Long Range Planning Subcommittee, the Board of Park Commissioners, the Plan Commission, the Board of Public Works, and the Common Council reviewed the draft plan. Their comments are incorporated into the final Park and Open Space Plan.

Photo: Community Visioning Session at Alicia Ashman Library

Photo: Students designing a park as part of a planning activity at Lussier Community Education.

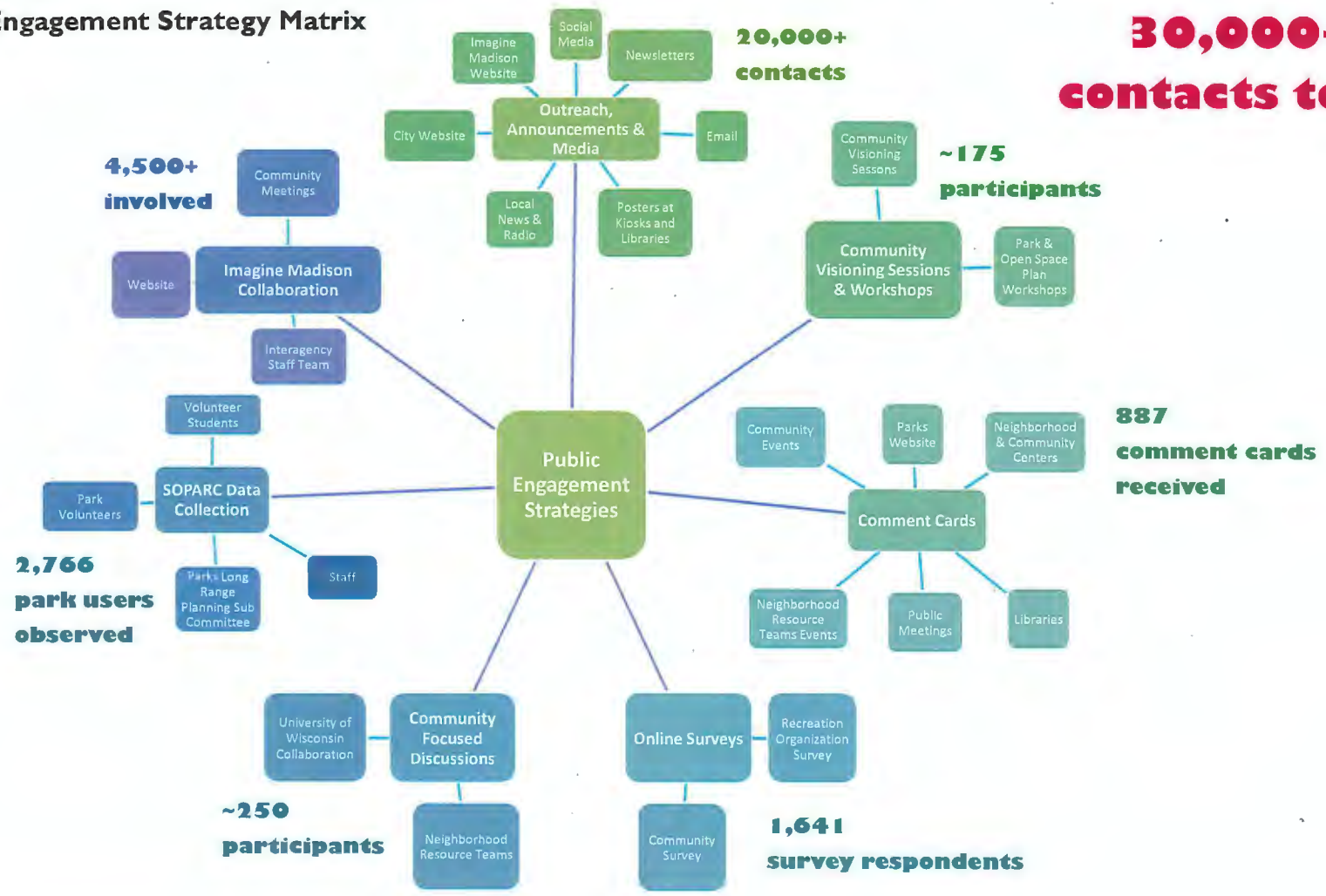
Figure 1.3: Project Timeline



1.5 Public Engagement Strategies

Recognizing the limitations and bias associated with public input processes, the Park and Open Space Plan engagement process incorporated various methods to increase opportunities for public participation. This included hosting community visioning sessions, workshops, surveys, focus group discussions, and requests for input through comment cards distributed at various park events, community centers, libraries, and public meetings. Results from the *Imagine Madison Comprehensive Plan* engagement process related specifically to park and open space improvements are incorporated into this plan. Chapter Three describes the engagement strategy in further detail.

Figure 1.4: Engagement Strategy Matrix



Chapter Two: Guiding Lenses

In conjunction with the *Imagine Madison Comprehensive Plan* update, this plan investigates how to improve Madison Parks through the lenses of public health, equity, sustainability, and adaptability.

The four icons below are used throughout this plan to identify recommendations that intersect with one or more of the plan's guiding lenses. The purpose of this chapter is to review these lenses and discuss their relevance to park planning.

Equity: The inherent worth of each individual in Madison should be esteemed and fostered, enabling them to reach full potential.

Public Health: The access and contribution to mental and physical health of a community.

Sustainability: Management of resources to promote welfare and equity for current and future generations.

Adaptability: Preparedness and ability to respond to, and recover from hazards and threats with minimal damage to safety, health, security, and the economy.

In this Chapter

2.1 Equity

A focus on equity is imperative to achieving the Parks Division's vision of providing parks to all Madison residents. The Parks Division recognizes that thoroughly understanding the population it serves is the first step towards developing an inclusive parks system. This section reviews Madison's existing demographics and anticipated shifts, and the implications of these changes to park planning.

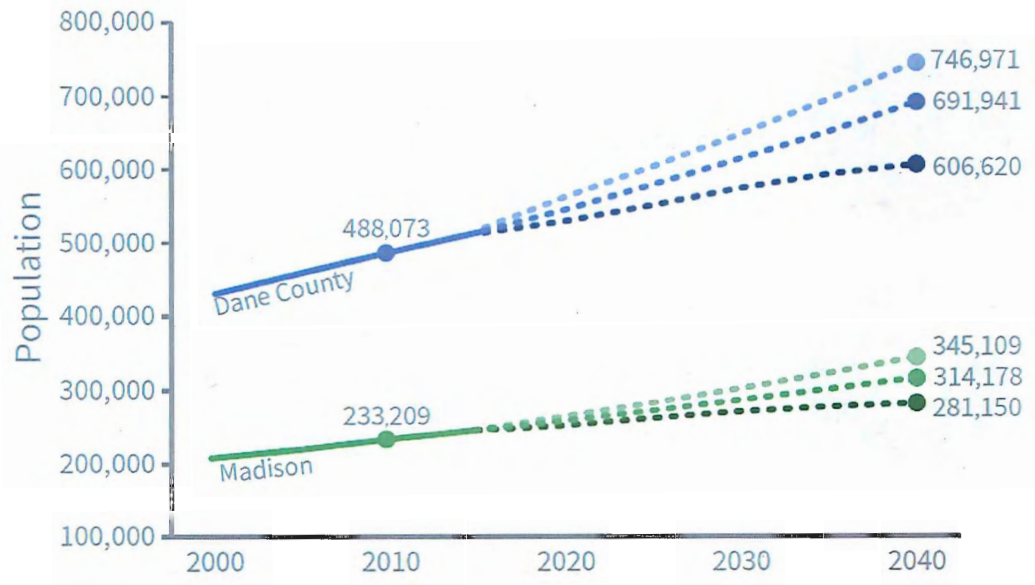
Population

Madison is the second largest city in the state of Wisconsin, having an estimated population of 252,551 (U.S. Census Bureau, 2016). The City's population has increased by 12% since 2000, by 6% since 2010, and is expected to continue growing in the near future. The Wisconsin Department of Administration predicts that by 2040 Madison's population may reach up to 345,109, making it the fastest growing city (by total population growth) in Wisconsin (Egan-Robertson, 2013).

Due in part to the presence of the University of Wisconsin, Madison has a relatively young population compared to the rest of the state. In 2006, the median age was 32.3, approximately five years younger than the statewide median of 37.6 (U.S. Census Bureau, 2016; U.S Census Bureau, 2014). Young adults aged 20-34 have historically been Madison's largest demographic. From 2011 to 2015 this group accounted for over one-third of Madison's total population (U.S Census Bureau, 2015).

The Wisconsin Demographic Services Center projections show that the population of older residents in Dane County is expected to grow substantially over the next few decades. The population of residents aged 65-84 is projected to nearly double between 2010 and 2040, increasing from 8.68 percent in 2010 to 16 percent by 2040. The population of residents aged 85 or older, who only made up 1.59 percent of the population in 2010, will account for 3.91 percent by 2040 (Wisconsin Department of Administration, 2017).

Figure 2.1: Population Trends and Forecasts for Madison and Dane County[01]

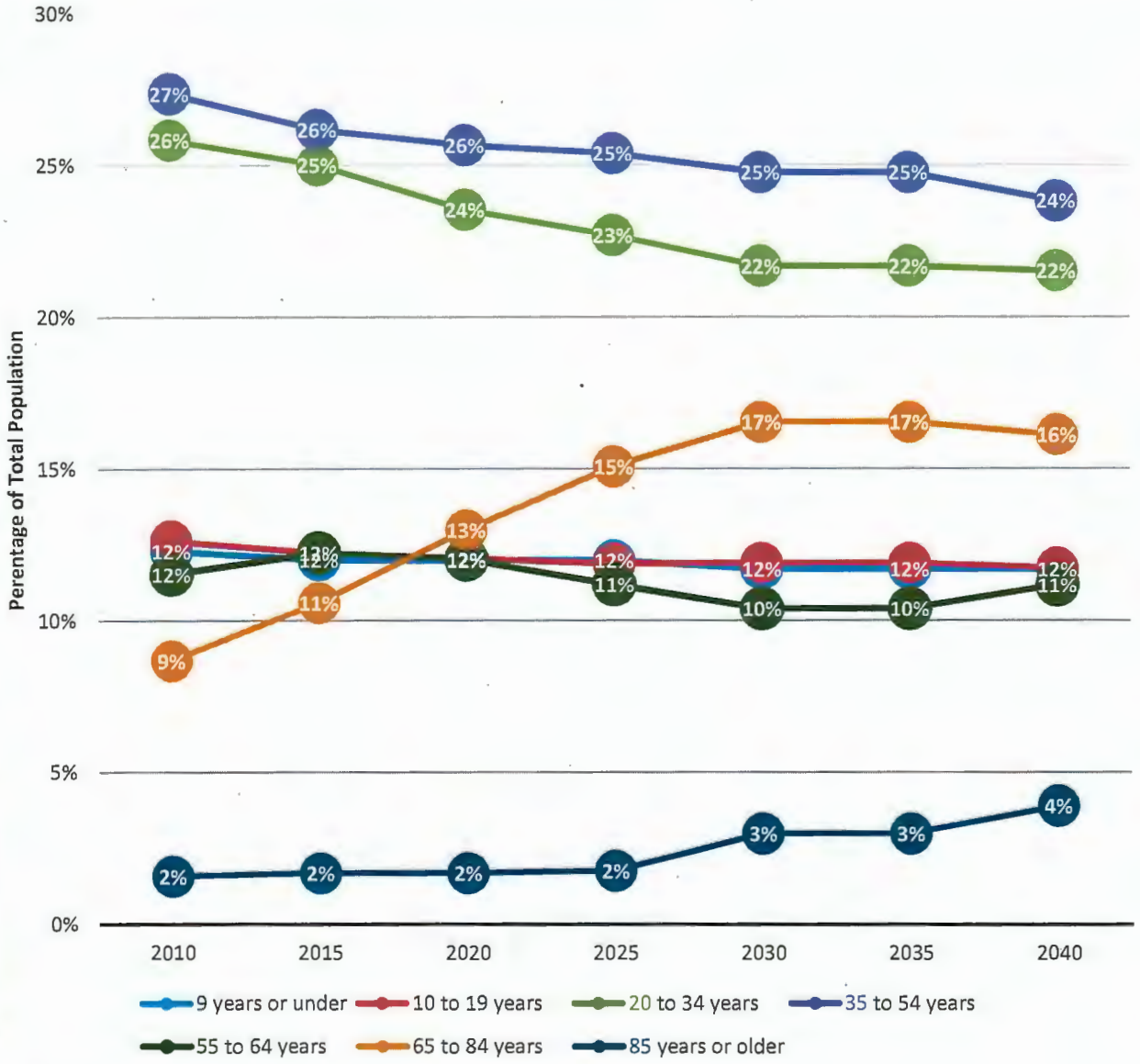


Source: Egan - Robertson, 2013

Conversely, Figure 2.2 shows that the population of younger residents is anticipated to decline. This nationwide demographic trend may result in changing recreational preferences. As this older demographic grows, park development needs to be both accessible and attractive to these individuals.

Photo: Park visitor playing pickleball.

Figure 2.2: Projected Population by Age Bracket



Source: Wisconsin Department of Administration, 2017

Housing

Figure 2.3 shows that in comparison to the national average, the City of Madison has a high level of rental units. According to the 2015 American Community Survey, 53.9% of all occupied dwellings in Madison were rental units, compared to only 37% of all dwellings nationwide. From 2007 to 2015, nine out of ten new Madison residents were renters (U.S. Census Bureau, 2015) and the number of rental units added each year continues to increase (Figure 2.4).

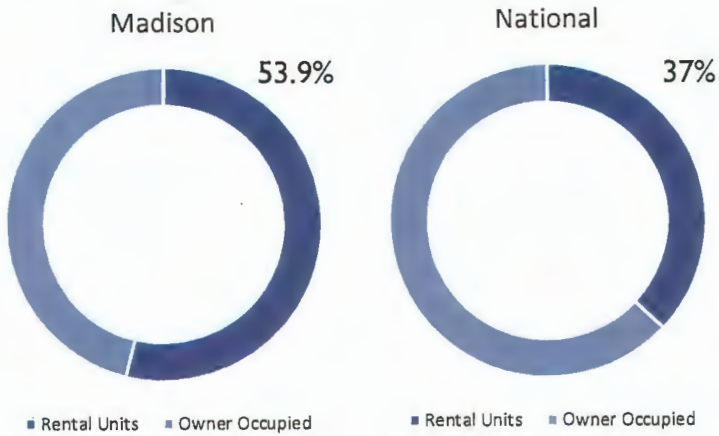
In the City of Madison, homeownership is disproportionately lower for communities of color compared to white households. Figure 2.5 shows that communities of color represent 23% of owner occupied housing compared to 54% for individuals who identify as white.

Multi-family units typically lack outdoor spaces and their occupants rely more heavily on public park and open spaces to serve their recreational needs. As the number of multi-family unit residents increase, Madison Parks faces challenges to expand recreational opportunities in the City's more densely populated areas. The City recognizes the importance of adequate recreation opportunities for these residents, and will continue to ensure that their needs are incorporated into the planning and design process.

Figure 2.5: Owner Occupancy Comparison Across Race/Ethnicity

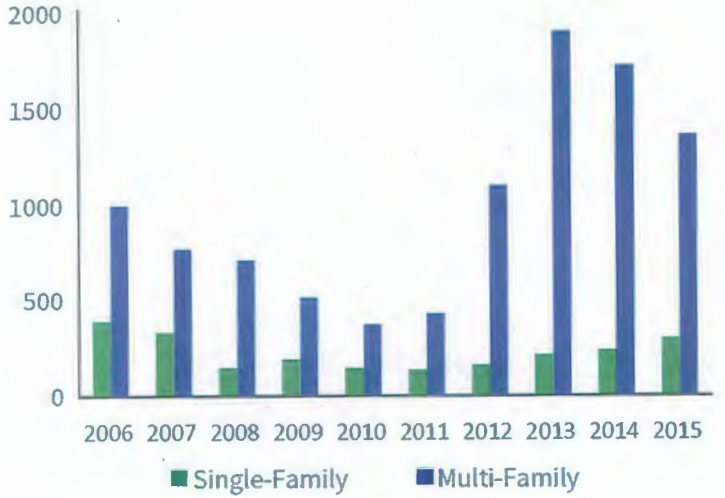
Source: City of Madison, 2016

Figure 2.3: Owner Occupancy Comparison



Source: U.S. Department of Housing and Urban Development, 2017

Figure 2.4: Number of Residential Units Added by Year (City of Madison)



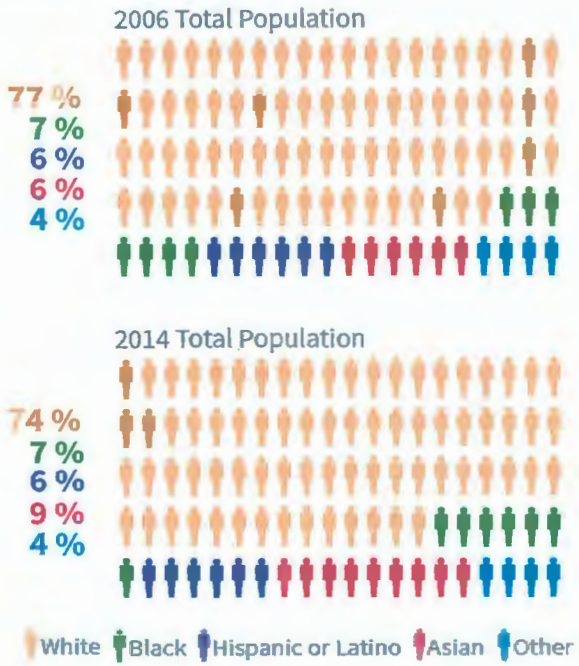
Source: City of Madison, 2016

Race/Ethnicity

The *Imagine Madison Comprehensive Plan* suggests that Madison will continue to diversify as youth populations of color increase. The student population in the Madison Metropolitan School District (MMSD) is more diverse compared to those identified in the US Census data. MMSD reports, "Over the past five years, the number of students and the percent of the student population identifying as Hispanic or Latino has steadily grown [and] the number of students and the percent of the student population identified as low-income or as English Language Learner has increased" (Chavira, 2016). While communities of color comprise more than 25% of Madison's population, many communities are geographically concentrated in just a few neighborhoods (see Exhibit 5: City of Madison Demographics by Race/Ethnicity).

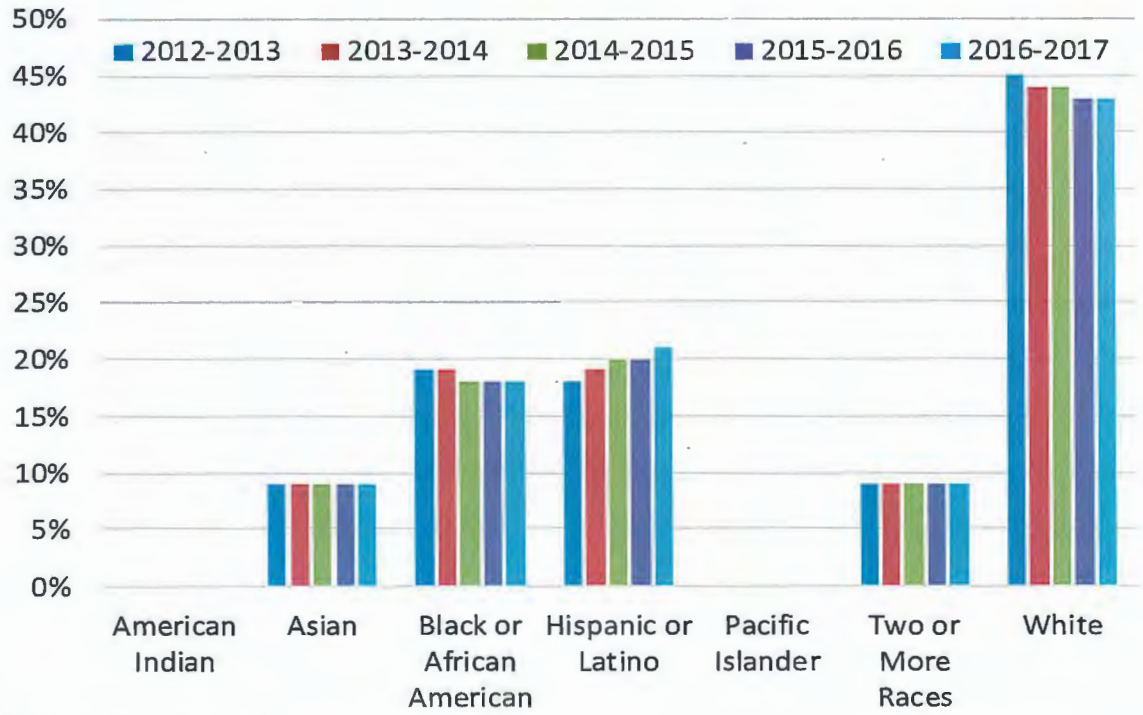
Racial demographics are an important factor to consider when planning for an equitable parks system. Numerous studies have documented that different races often have distinct park use patterns and preferences for open space (Gobster, 2002; Salk, 2014).

Figure 2.6: 2006 and 2014 Race and Ethnicity



Source: City of Madison, 2016

Figure 2.7: Race and Ethnicity Trends for MMSD Students



Source: Chavira, 2016

Exhibit 5: City of Madison Demographics by Race/Ethnicity

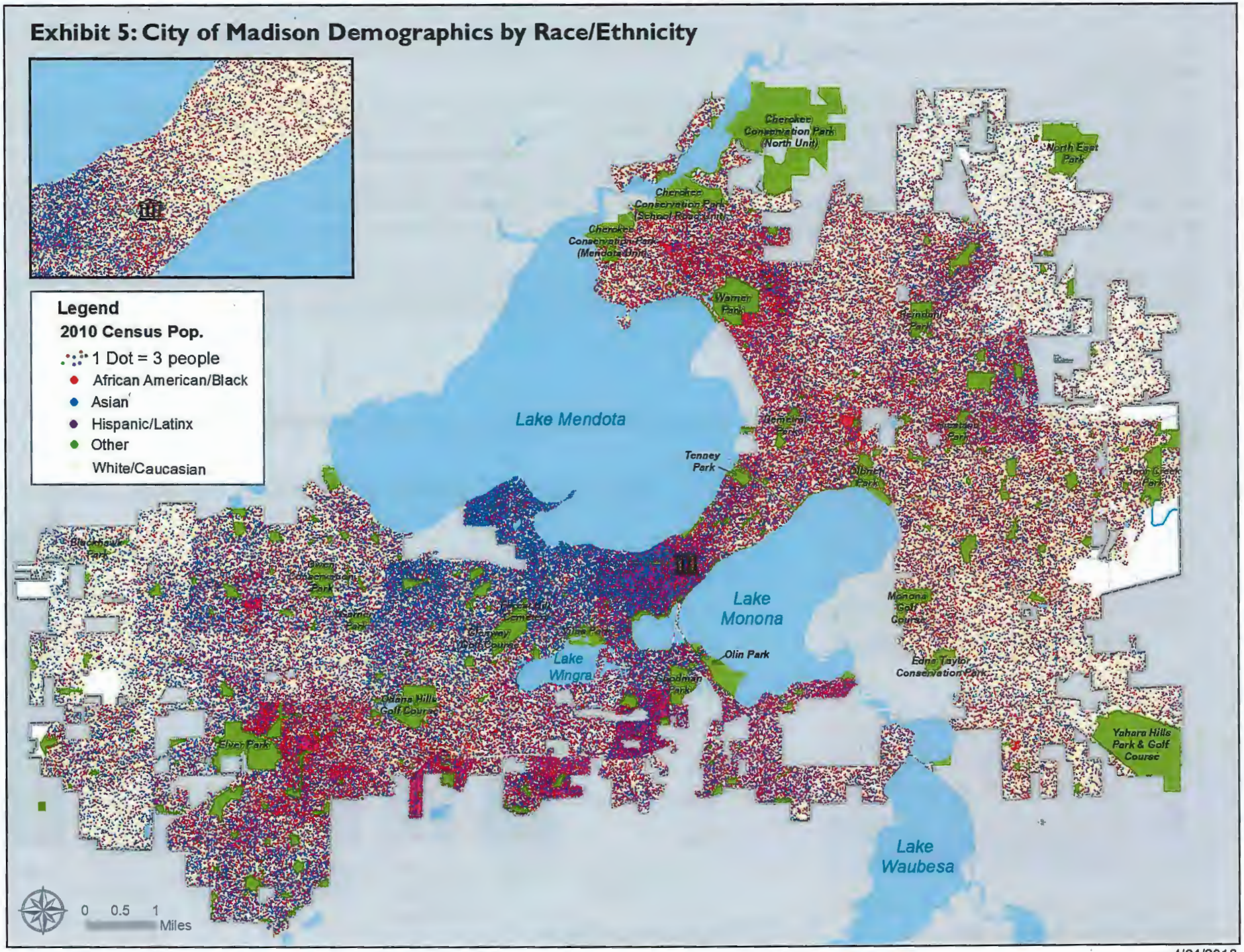


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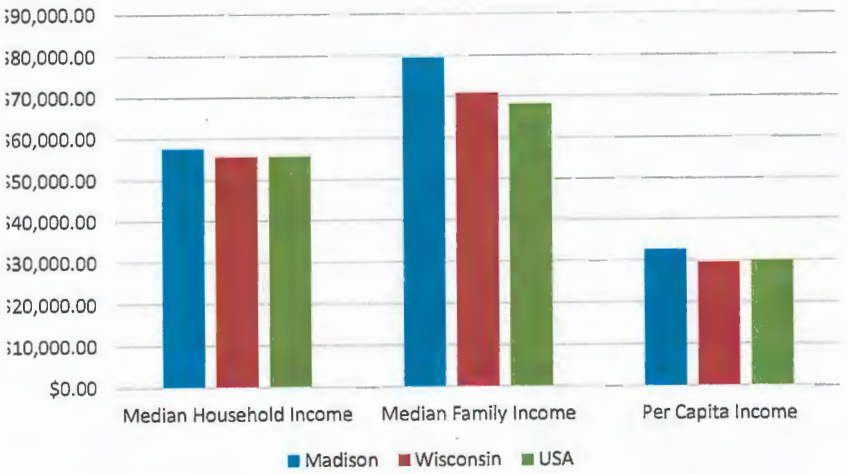
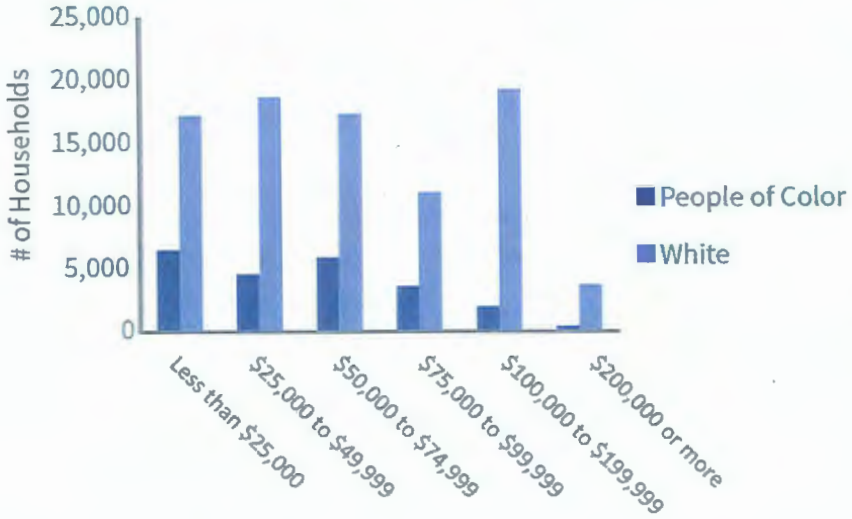
Figure 2.8: Median Income Comparison



Source: U.S. Census Bureau, 2016.

Figure 2.9: Household Income by Race/Ethnicity



Source: City of Madison, 2016.

Economy and Opportunity

Workforce and Employment

Madison has a substantial professional population, which can be in part attributed to its position as the state capitol and the presence of the flagship campus of the University of Wisconsin. Education and health services represented the City's largest sector in 2015, employing 31.7% of the workforce, followed by the professional, science and management industry at 14.7%, and the arts, entertainment and recreation industry at 10.7 percent (U.S. Census Bureau, 2015).

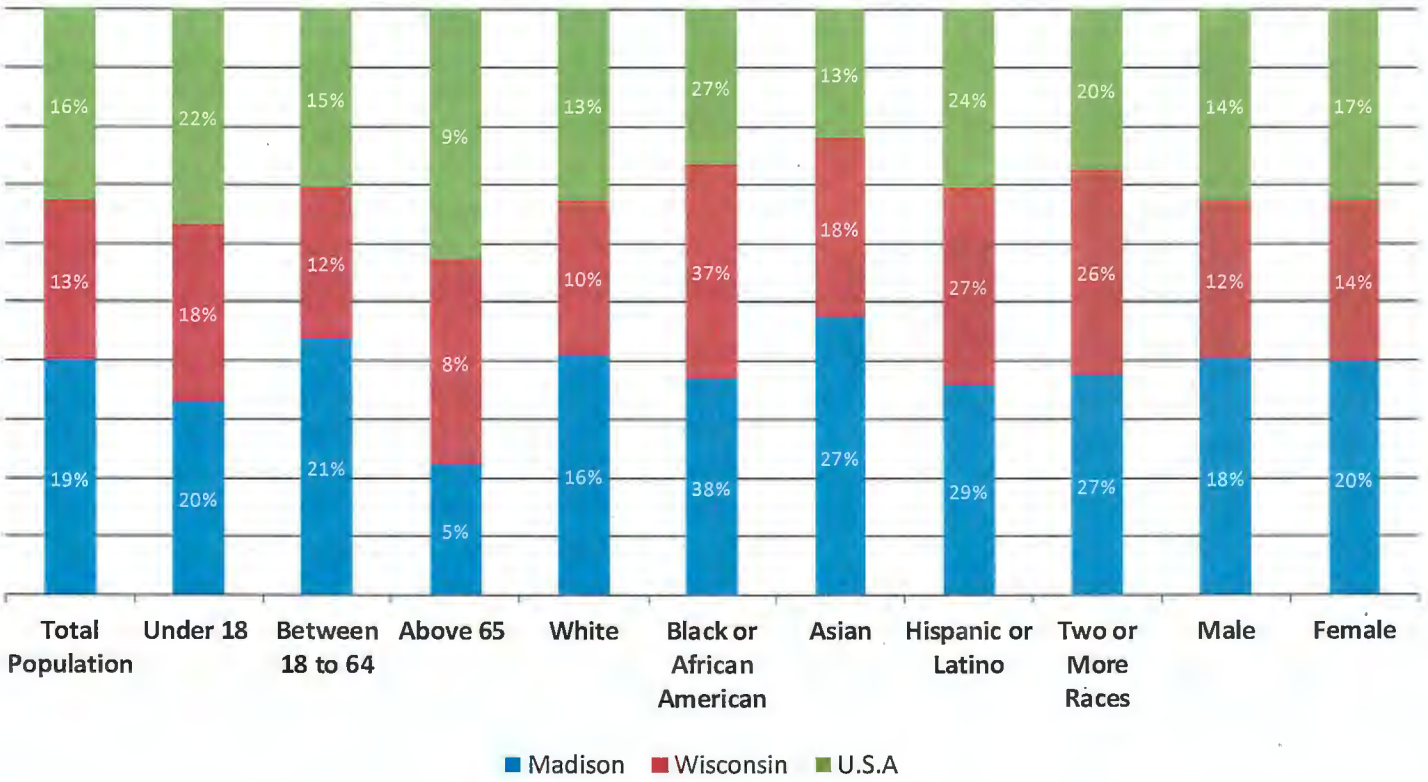
Income

In 2015, the City of Madison had a median household income of $57,690 and a median family income of $79,555 (U.S. Census Bureau, 2015). Figure 2.8 illustrates Madison's above average-levels of income compared to state and national levels when measured on a median household, median family, and per capita basis. Figure 2.9 shows that a greater percentage of communities of color have incomes less than $100,000 when compared to white communities.

Poverty

Despite these statistics, 19% of Madison residents were below the federal poverty level in 2015 (U.S. Census Bureau, 2015). This number is 6% higher than the statewide rate, and 3.5 percent higher than the national rate. For the City of Madison, 19% of the population is considered as living below the poverty line, of which 87% of this population are communities of color. According to the 2015 American Community Survey, minority populations in Madison experience higher poverty rates than on a national scale (U.S. Census Bureau, 2015). The difference is most pronounced for Asians and African Americans, whose respective poverty rates are 2.17 and 1.4 times the national average.

Figure 2.10: Percentage of Residents Below Federal Poverty Threshold



Poverty rates influence access to parks, requiring more reliance on walking and public transportation. Access to parks is particularly important to these individuals, as low socioeconomic status groups face disproportionately higher rates of obesity and cardiovascular-related conditions (The State of Obesity, 2017).

Figure 2.10 identifies poverty statistics for various demographics at the local, state, and national level. Madison may be considered a relatively affluent city overall; however, various areas of the community still suffer from significant poverty. Identifying residents who are at the greatest disadvantage is vital to ensuring that Madison Parks provides equitable park access to all individuals.

2.2 Public Health

Parks and open spaces serve a significant role in the promotion and protection of public health for those who live, work, learn, and play in the City of Madison. According to the World Health Organization, health can be defined as "...a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." (World Health Organization, 2018). The many health benefits associated with parks align with this definition as they provide a place for people to be physically active, offer respite from busy schedules, provide opportunities to interact with neighbors, and support healthy ecosystems.

The City of Madison Parks Division embraces its role in creating a healthy environment for our residents and visitors alike. Applying a public health lens to park planning allows the Parks Division to boost the positive impacts associated with a robust, equitable, and safe parks system. Health benefits that have been shown to be associated with parks and open spaces include:

- Physical health
- Mental and emotional well-being
- Social cohesion
- Environmental health

Physical Health

Parks provide an opportunity for park users to engage in physical activities that promote positive health outcomes. Increased levels of physical activity have many health benefits including a reduced risk for heart disease, hypertension, colon cancer, and diabetes (Sherer, 2006). Furthermore, an increased level of physical activity is one of the most important factors in reducing obesity. Proximity to parks and walkable areas leads to an increase in physical activity levels in both adults and children (Bedimo-Rung et al, 2005; Brownson et al, 2001; Roux et al, 2007). Table 2.1 below illustrates the varying prevalence of obesity in Madison, Dane County, Wisconsin, and the entire United States. The table also includes

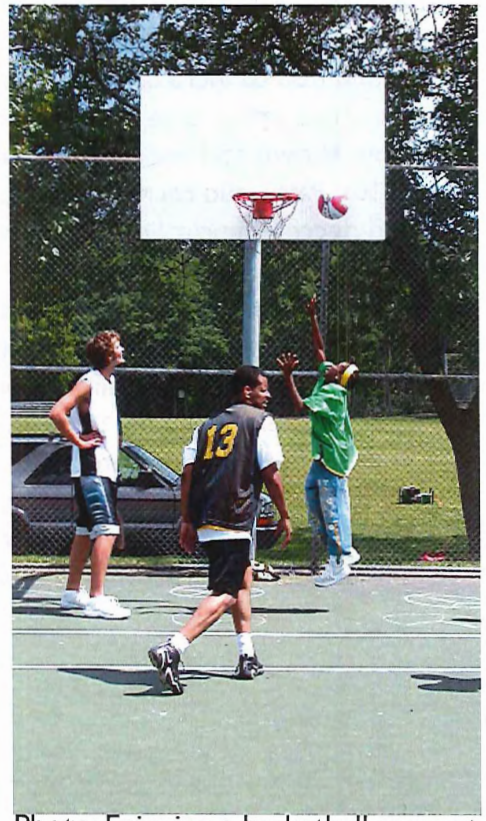


Photo: Enjoying a basketball game at Penn Park.

Table 2.1: Physical Health Indicators Compared Across Madison, Dane County, Wisconsin and United States

Measure	Madison	Dane County	Wisconsin	U.S.	Data Year
Adults age 18+ who are obese	23.5%	****	28.2%	29.8%	2014
Children, 2 to 4 years old WIC participants who are obese	****	13.0%	15.2%	15.9%	2010
7th-12th graders who are obese	****	14.1%	14.9% (2011)	15.2% (2011)	2012
Adults age 18+ who are sedentary	17.1%	****	22.2%	26.2%	2014
Population with access to exercise opportunities	****	95.0%	81.0%	62.0%	2014
Adult Diabetes Rate	6.3%	****	8.5%	9.9% (2015)	2014
Hypertension Rate in Medicare Population	****	43.5%	48.5%	55.0%	2015
Adult Asthma Rate	****	9.8%	9.7%	14.3% (2015)	2014

Source: The State of Obesity, 2017 County Health Rankings, Healthy Dane

In addition to increasing levels of physical activity, parks and open spaces offer many other health-promoting features. For example, greenery and a mature urban tree canopy are important factors in improving respiratory health (Martineau, 2011). Time spent in park-like environments has been shown to lower pulse rate and blood pressure, increase parasympathetic nerve activity, and lower sympathetic nerve activity (Park et al., 2010). Parks and recreational opportunities are valuable assets for promoting optimum physical health as well as a proven tool in lowering obesity and decreasing cardiovascular-related illness and mortality (Coutts et al, 2010; Takano et al, 2002).

Mental and Emotional Well-being

Mental and emotional well-being is essential to living a healthy life, and parks, open spaces, and natural landscapes have significant potential to boost one's mood (Bedimo-Rung et al, 2005). Table 2.2 shows that one in ten adults in Dane County experience frequent mental distress and over 10% experienced 14 or more days of poor mental health in the past month. Among Dane County residents receiving Medicare benefits, 17.7% suffer from symptoms of depression (Healthy Dane, 2017). Spending time in parks and open spaces can lead to improved mood, reduced anxiety, and help reduce symptoms of depression when coupled with physical activity (Bedimo-Rung et al, 2005). Exposure to green spaces also has measurable effects on lowering concentrations of cortisol, often referred to as the stress hormone (Parks et al., 2010). Due to their natural environments, parks offer the perfect place to relax and de-stress from busy schedules.

Table 2.2: Mental Health Indicators

Measure	Madison	Dane	Wisconsin	U.S.	Data Year
Frequent Mental Distress	****	9.7%	10% (2014)	11.0%	2015
Depression: Medicare Population	****	17.7%	17.0%	16.7%	2015
14+ poor mental health days	10.5%	****	****	****	2015

Source: Healthy Dane

Additionally, Attention Restoration Theory posits that exposure to natural environments allows one's mind to recoup from the daily demands of work or school, leading to the promotion of effective mental functioning (Berman et al, 2008). This theory also has implications for those suffering from attention deficit disorders. Even a twenty-minute walk in a park-like setting is sufficient to elevate attention performance in those suffering from ADHD (Faber Taylor & Kuo, 2008).

Social Cohesion

Social cohesion is present when members of a community work towards the well-being of all its members, trust one another, and feel a sense of belonging (OECD, 2018). Feeling a sense of community, safety, and trusting one's neighbors assists in navigating life's challenges. Fostering such feelings is increasingly difficult as opportunities for interacting with neighbors competes with other demands for our time. As focal points for neighborhoods, parks are well positioned to promote social interactions among park users and offer opportunities to engage with old and new friends alike.

In Dane County, 15.4% of adults report that they do not get the social and emotional support they need (Healthy Dane, 2017). Parks provide neighborhood level gathering spaces, giving neighbors the chance to interact, which in turn increases social ties and boosts feelings of community (Sherer, 2006, Bedimo-Rung, 2005). Increased levels of social cohesion are associated with a number of personal and community level benefits such as increased social support, increased social interactions, increased trust in neighbors, and decreased levels of criminal activity (Kawachi and Berkman 2000, Miller & Buys, 2008; Weinstein et al., 2015).

Environmental Health

Parks and open spaces provide critical protections for water, air, and flora and fauna biodiversity and help mitigate urban heat islands. This results in benefits to the environment, as well as to personal and community health. A study of nine urban park systems across the country found that urban parks contribute to an average of $2.9 million in stormwater retention benefits and $1.8 million in air pollution removal benefits to their respective municipalities (Harnik & Crompton, 2014). Exposure to pollutants can have both acute and chronic health implications, especially for sensitive populations such as children, older adults, and people with heart or lung diseases. Investments in parks and open spaces play a positive role in combatting pollutants and their negative effects on residents. The next section will explore in more depth the role parks play in these critical areas.

2.3 Sustainability and Adaptability

A park system must both sustain and adapt to continually serve the community. Sustainability refers to a "state in which the demands placed on the environment can be met without reducing its capacity to allow all people to live well, now and in the future" (Financial Times, 2017). An example of a sustainable practice would be the use of solar panels to reduce reliance on fossil fuels, and to mitigate growing utility costs.

Adaptability, on the other hand, is "the quality of being able to adjust to new conditions or changes in the environment" (Hung et al., 2013). An example of an adaptable practice would be the City's refocused efforts to increase species diversity in the urban tree canopy. Infestations of pests or diseases such as Dutch Elm Disease or the Emerald Ash Borer have had such catastrophic impacts on the City because of the historic overplanting of one species of tree. With increased diversity, less trees are affected by a specific pest, the potential spread is minimized, and there is less effect on the overall quantity and quality of the urban tree canopy. Through this strategy, the adaptability of the urban tree canopy is maximized.

The Madison Parks Division uses both sustainability and adaptability as a framework for policies on environment. Additionally, Madison Parks uses these lenses to develop policies that influence the economic and cultural considerations that sustain a vibrant park system.

Environment

Planning for both sustainability and adaptability ensures that the City of Madison can both reduce its environmental impacts and respond to adverse environmental pressures. Additionally, these practices increase the chance that biodiversity will be maintained over time and environmental shifts and changes can be addressed successfully. As an advocate for environmental health, Madison Parks recognizes its role lies at the forefront of managing and preparing for environmental challenges. Specific topics frequently cited as concerns by Madison residents during the public engagement process include the following:

- Climate change and other environmental pressures
- Pollinator decline
- Water quality
- Urban tree canopy
- Invasive species

Climate Change and other Environmental Pressures

Focusing on sustainability and adaptability can reduce the public health and equity implications of environmental pressures, such as climate change, which affects vegetation, stormwater, groundwater, air, and water quality. Climate change is projected to have a disproportionate impact on vulnerable and disadvantaged communities (Rudolph, Gould & Berko, 2015). Those with greater economic, social and political resources are more likely to succeed in both managing and adapting to future climatic changes (Rudolph et al, 2015). Meanwhile, those in poorer living conditions will become increasingly vulnerable to the adverse effects of climate change. Climate change has the potential to

further increase disparities in health outcomes. For example, lower-income neighborhoods that lack trees and green space are at a greater risk of heat-related illness. This necessitates that sustainability and adaptability initiatives recognize, and subsequently emphasize, an additional focus towards assisting these vulnerable and disadvantaged communities.

The effects of climate change have already become apparent in the form of warmer temperatures and increased precipitation. Over the past century, temperatures throughout the state have increased by an average of two degrees Fahrenheit (United States Environmental Protection Agency, 2016). By 2050, statewide annual temperatures are likely to be 6-7 degrees above the current averages (Dane County Climate Change Action Council, 2013). Lake Mendota, which used to remain frozen for four months out of the year in the 18th century, now only stays ice-covered for an average of three months (Dane County Climate Change Action Council, 2013).

Climate changes are also predicted to increase the frequency of flooding in Wisconsin. Annual precipitation has increased by five to ten percent in the Midwest over the last half century (United States Environmental Protection Agency, 2016). This trend is anticipated to continue in upcoming years, and the rain events that do occur are likely to be more intense (US EPA, 2016). Together, these changes pose a number of challenges that the Parks Division must respond to, including:

- Increase in extreme heat events and subsequent heat-related illnesses
- Shorter winters impacting winter recreational opportunities
- Shifts in ecosystems and natural habitats
- Increase in vector-borne disease
- Increase in stormwater runoff
- Increase in flooding
- Increase in algal blooms

Pollinator Decline

Pollinators such as bees, moths, butterflies, bats, and hummingbirds provide vital services to our ecosystems. Between 75 to 95% of all flowering plants rely on these organisms for pollination (Ollerton,Winfree & Tarrant, 2011). Roughly, one out of every three bites of food a person eats is a result of pollinators (Klein et al, 2007; Buchmann & Nabhan, 1996), and pollinators are estimated to add $217 billion annually to the global economy (Gallai et al, 2009; Losey & Vaughan, 2006). Additionally, about 75% of the world's food crops rely on pollinators (Harvey, 2016). The decline of the pollinator population holds significant public health implications for Madison residents.

Photo: Monarch butterfly at Olin Park.

Over the last decade, the United States has experienced a dramatic decline in honeybee hives resulting from colony collapse disorder. The State of Wisconsin has lost over 60% of its honeybee colonies since spring 2014-2015. The state's bumblebee and monarch butterfly populations have also decreased in recent years (City

of Madison, 2015). Evidence points to a variety of factors, including climate change and habitat decline, as the cause of pollinator decline in Wisconsin.

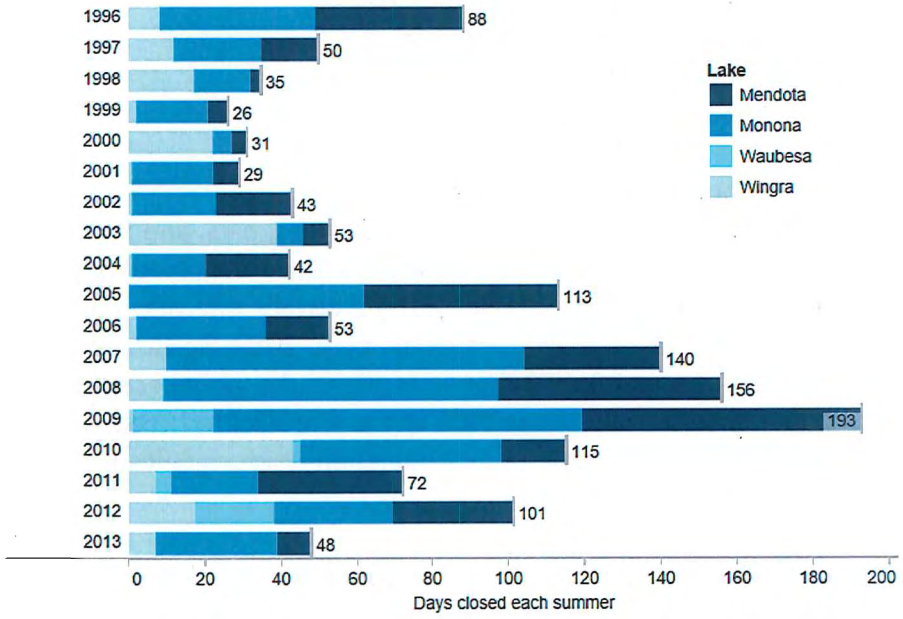
Water Quality

Positioned between the two largest bodies of water in Dane County, Lake Mendota and Lake Monona, monitoring and managing water quality is unquestionably a significant community priority for Madison. The topography of Madison (see Appendix X) and formation of our lakes was sculpted by the Laurentide Ice Sheet. The result was the formation of over 23,000 acres of surface water and 52,000 acres of additional wetlands in Dane County (Dane County Office of Lakes and Watersheds, 2008). The five Yahara lakes themselves include 58 miles of shoreline and 22 public beaches (Clean Lakes Alliance, 2016). While Madison's growth as a city has posed problems for the local water quality, recent decades have seen major improvements in pollution reduction and runoff management.

Threats to the health of Madison's waterways stem mainly from the introduction of pollutants such as phosphorous and nitrogen. Blue-green algae blooms, which can be caused by excess phosphorous levels and warm water temperatures, have plagued Madison's urban waterways for years. These algal blooms decrease water quality and have the potential to cause serious illness. Additionally, harmful bacteria (e.g., E. Coli) and heavy metals drain into Madison's lakes and rivers every year via stormwater runoff.

Long-term exposure to these pollutants can increase the risk of heart disease, kidney disease, and cancer (Public Health- Madison & Dane County, 2014). Improvements in agricultural practices and stormwater management have helped decrease surface-water pollution levels in recent years. While the number of annual beach closures in Dane County has declined since 2009, the number remains higher than in the early 2000's (Public Health- Madison and Dane County, 2014). Further improvements in reducing phosphorous and other harmful agricultural runoff will be vital towards stemming future algal blooms and dangerous bacteria, particularly as annual precipitation and temperature levels in Madison are projected to increase in upcoming decades.

Figure 2.11: Dane County Water Quality Beach Closures by Year



Source: Kate Golden, Wisconsin Center for Investigative Journalism

Urban Tree Canopy

Urban forests provide a variety of benefits to cities, making city trees an especially useful tool for managing the effects of climate change. Urban trees help filter out many common air pollutants, including nitrogen dioxide, sulfur dioxide, ozone, carbon monoxide, and particulate air pollutants. A well-designed urban tree canopy

can substantially lower cooling and heating costs during the summer and winter months. This is particularly important in counteracting the urban heat island effect, which occurs when asphalt and concrete absorb and radiate solar heat, causing cities to be five to ten degrees warmer than their surrounding areas. Urban trees also play a large role in reducing stormwater runoff. According to the U.S. Forest Service, a medium-sized maple tree (16" sugar maple) intercepts 1,550 gallons of stormwater per year. Urban forests are important for the public health of city residents. For example, street trees in urban areas are associated with lower asthma rates among children (Lovasi et al, 2008). The shade created by tree canopy also plays a vital role in protecting residents from harmful UV rays (Heisler et al, 1995). Studies have shown that living near urban forests can reduce physical and emotional stress among individuals (Dwyer et al, 2000; Ulrich, 1984).

Table 2.3: Economic Impacts of Madison's Urban Forest

Madison's Urban Forest	Annual Benefit
Per tree	$122
Stormwater Reduction	$3,126,965
Pollution Removal	$492,489
Sequestered Carbon	$399,384
Aesthetics and Other Benefits	$3,949,689
Energy	$3,766,538

Source: Madison Parks i–Tree Inventory: Tool for Assessing and Managing Forests & Community Trees

There are approximately 11,000 acres of public and private tree canopy in the City of Madison, accounting for 22.4% of the City's entire land area. As of 2018, there were 96,074 public street trees in Madison, with each tree providing an estimated $122 worth of annual benefits. Table 2.3 details the various benefits that the City of Madison receives from its urban forest every year. Not only does Madison's tree canopy provide environmental benefits, the aesthetic value of the trees raises property values and can help reduce neighborhood crime (Martinueau,C., 2011).

Invasive Species

Invasive plants and animals decrease the sustainability and adaptability of Madison's ecological resources. Plants such as Japanese knotweed, buckthorn, and garlic mustard compete and crowd out native vegetation. Invasive species can be difficult to remove, often requiring multiple herbicide applications for full eradication. Invasive pests such as the Emerald Ash Borer (EAB) and jumping worms can have substantial environmental impacts with significant implications for public health. Studies suggest that the resultant loss of tree canopy from EAB infestations can increase rates of cardiovascular diseases and lower-respiratory tract illness and mortality (AM J Prev Med. 2013).

Economic and Cultural

As Madison Parks prepares for the future, it will be necessary to sustain and respond to economic and cultural shifts. Economic, and sometimes political shifts, influence many municipal funding mechanisms.

A parks system must be fiscally sustainable and adaptable in order to survive economic downturns and partisan funding sources. For example, the Parks Division utilizes impact fee ordinances (discussed in further detail in Chapter Seven) to supplement the cost of new park development; however, these fees are also closely tied to the health of the economy. In situations of economic stagnation, impact fees will not be a reliable source of funding new parks.

Demographic Shifts and Cultural Preferences

Additionally, the Parks Division must be able to sustain and adapt to cultural shifts. As noted in the previous sections, the City of Madison is becoming both older and more diverse. Residents of different ages and cultures have distinct values for parks and open space; therefore, these trends have significant implications for park planning. An adaptable, flexible parks system should evolve in conjunction with changes in its user base.

As part of responding to demographic trends this plan utilized the City of Madison's Racial Equity and Social Justice (RESJ) tool. This tool is designed to "facilitate conscious consideration of equity and examine how communities of color and low-income populations will be affected by a proposed action/decision of the City" (City of Madison, RESJ Tool). The RESJ tool offers a complement to more traditional methods of planning park projects, and is further discussed in Chapter Five.

2.4 How to Use these Lenses

In upcoming years, the City of Madison and the Parks Division will be facing a variety of new challenges, including pressures from climate change, population growth, changing demographics, and increased fiscal demands. The lenses of equity, public health, sustainability, and adaptability represent key considerations when handling these issues. These four lenses are to be used as a framework to guide all park and open space planning. They assist the Division in informed decision-making and achieving its vision of providing residents access to an exceptional park system.

Chapter Three: Engagement Strategies and Outdoor Recreation Needs Assessment

In this Chapter

Engagement Strategies

Outdoor Recreation Needs Assessment

3.1 Engagement Strategies

This chapter examines recreational needs, demands, and concerns based on community engagement. The park and open space planning process incorporated multiple engagement strategies to understand park use and concerns amongst Madison residents. These methods reached a large number of residents, but also began a dialogue with new voices who can contribute to the future planning of the park system. Madison Parks strives to engage all residents to help ensure concerns of all residents are represented.

Photo: Hip Hop PARKitecture Workshop

Engagement Methods

During the engagement process, participants provided their input on a broad spectrum of topics such as park usage, future needs, environmental initiatives, and specific goals. Six distinct engagement methods gathered input from participants of a variety of ages, races, and socioeconomic status. Each engagement method is described in further detail in the following sections. Recognizing the inherent limitations and bias associated with public input processes, efforts were made to track engagement strategies and comments, and to geolocate responses to evaluate distribution of input and improve future engagement methods. Exhibit 2 identifies the locations of each of the strategies below.

Comment Cards

The Parks Division distributed comment cards at various locations across Madison in an effort to solicit feedback on how people use the parks system. Comment cards were provided at nine City of Madison libraries, 12 community/ neighborhood centers, and at the Madison Senior Center. Comment cards were collected at 44 different public events and community meetings and could also be submitted electronically. The comment cards were distributed in English, Spanish, and Hmong, and also available in an images-only format. The City received 887 comment cards back from this effort.

Online Community Survey

As part of this process, the Parks Division also developed an online community survey. The survey aimed at understanding the public's perceptions and priorities regarding the Madison parks system. The survey included nine separate questions about items such as favorite activities, resident needs, and areas of potential improvement, as well as requesting information regarding age and race. The online community survey was completed by 1,609 separate individuals, one of the highest online survey response rates that any city agency has received. As part of the survey, respondents identified their participation in park-related activities. A separate recreational survey generated 32 responses from athletic organizations and is discussed further on page 38.

Exhibit 2: POSP Engagement Locations

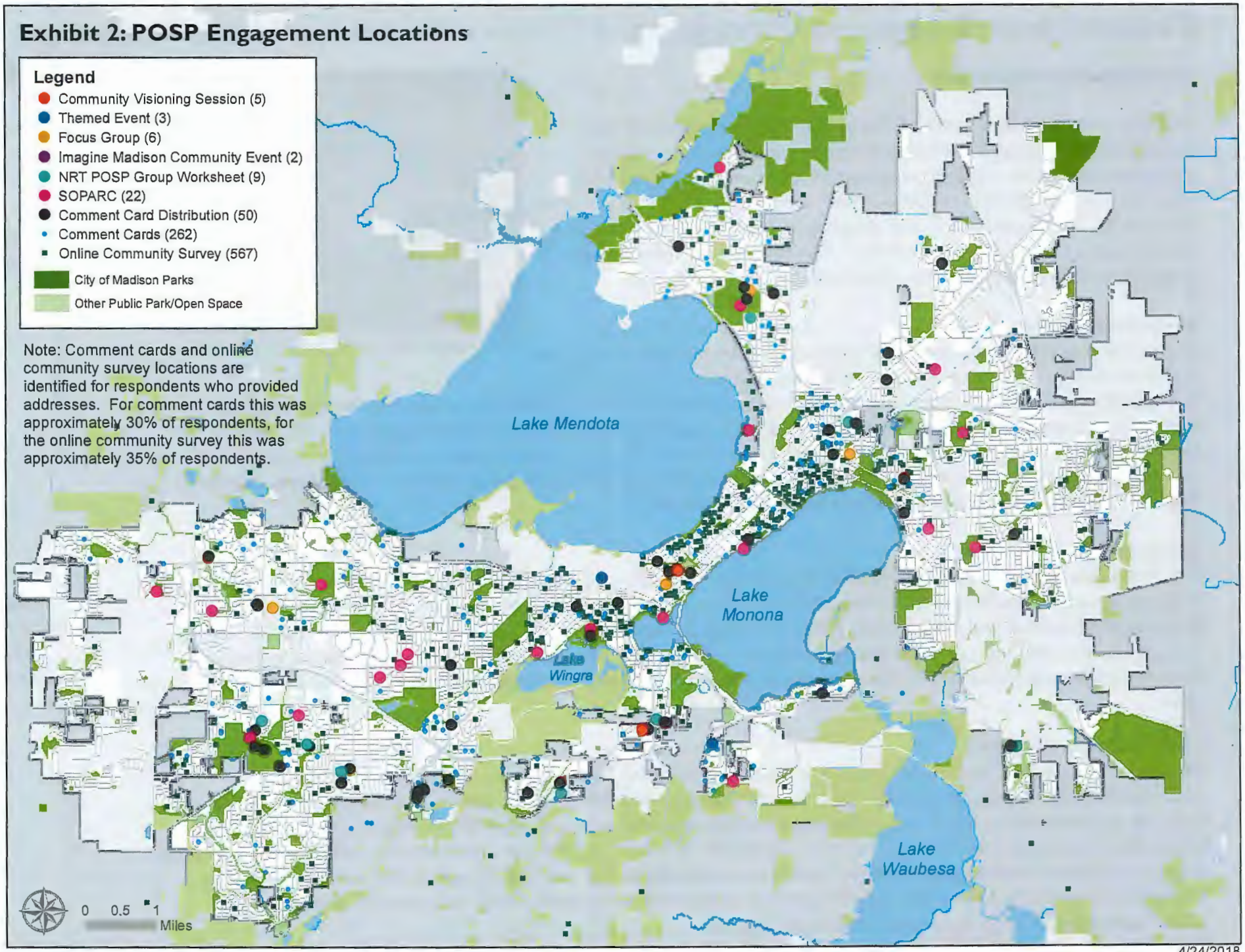


Figure 3.1 Engagement Numbers

System for Observing Play and Recreation in Communities

To gather additional data on park usage, the Parks Division utilized an observational research method called the System for Observing Play and Recreation in Communities (SOPARC). The method was developed in 2006 by researchers at San Diego State University and the RAND Corporation to examine how community parks contributed to physical activity (McKenzie et al, 2006). Madison Parks collaborated with student volunteers, City staff, members of the Parks Long Range Planning Subcommittee, and members of the Board of Park Commissioners to use a modified SOPARC tool to gather data on park usage. Parks chosen for this tool were based on park type, location, and the surrounding neighborhood's income and race/ethnicity demographics to provide a snapshot of park use throughout the City. Data from SOPARC was gathered in 2016 from July through October. During this period, 2,766 residents were observed across 28 different parks.

Community Visioning Sessions and Workshops

With the assistance of the consulting group Urban Assets, LLC, the Parks Division facilitated five community visioning sessions in each of Madison's main geographic regions. The community visioning sessions, listed below, were interactive workshops designed to identify the public's goals and vision for Madison's park system.

- North: January 31, 2017 Warner Park Community Recreation Center
- East: February 6, 2017 Whitehorse Middle School
- South: February 13, 2017 The Village on Park
- West: March 1, 2017 Alicia Ashman Library
- Downtown: March 23, 2017 Central Library

Photo: Community Visioning Session

At the community visioning sessions, Parks staff presented information on the POSP and the purpose of its public engagement strategy. Session participants then engaged in a variety of activities allowing them to provide their input on topics related to park facility and programming needs, areas of potential improvement, and their vision for the Parks system. Individuals were also asked to provide demographic data including their age, race, and how long they have been living in Madison. A total of 120 individuals participated in the community visioning sessions. In addition to community visioning sessions, three workshops, listed below, facilitated in-depth discussion

and analysis on specific topics. The first workshop, called "Hip Hop PARKitecture" facilitated by Hip Hop Architect Michael Ford, engaged children and communities of color in a fun day of park planning. The second workshop, focused on climate change and environmental pressures, was conducted in partnership with the Clean Lakes Alliance, the Board of Park Commissioners, and the Wisconsin Initiative on Climate Change Impacts. The last workshop was in partnership with Public Health - Madison and Dane County, as well as with local advocates for environmental education, to focus on connecting children to nature. A total of 55 individuals participated in the workshops.

- Hip Hop PARKitecture: April 22, 2017 - Badger Rock Neighborhood Center
- Madison Parks & Resiliency in the Era of Climate Change:
  May 18, 2017 UW - Union South
- Connecting Kids to Nature:
  June 4, 2017 - Warner Park Community Recreation Center

Focus Groups

Acknowledging that public participation must incorporate a variety of methods, the City of Madison collaborated with the University of Wisconsin – Madison and Public Health - Madison and Dane County to conduct participatory research with children and underrepresented populations across Madison. This work focused on engaging communities in park planning within their neighborhoods. Focus group discussions occurred at the following locations:

- Madison Senior Center
- Vera Court Community Center
- Capitol Center Apartments
- Goodman Community Center
- The Meadowood Neighborhood Center
- The Lussier Community Center

Photo: Hip Hop PARKitecture

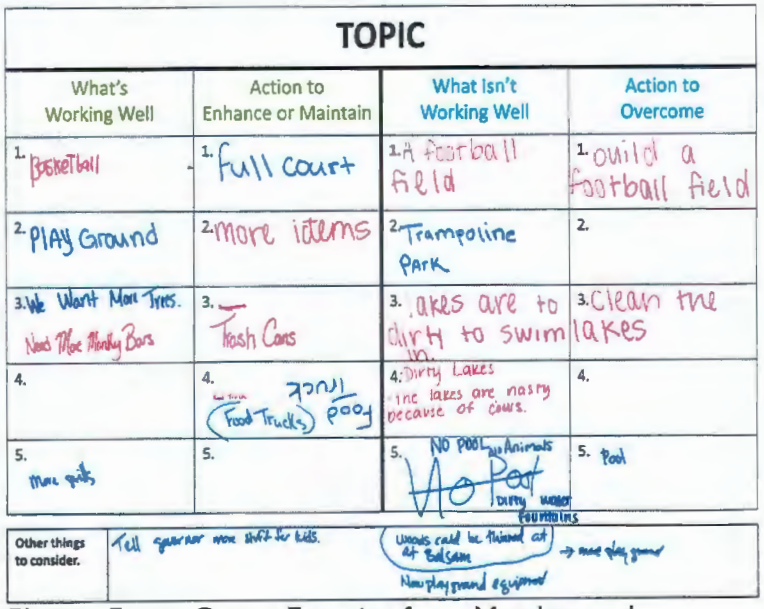


Photo: Focus Group Exercise from Meadowood Neighborhood Center

Additionally, Public Health - Madison & Dane County conducted 15 one-to-one interviews, and collaborated with Hawthorne Elementary School, Sandburg Elementary School, and Centro Hispano as part of efforts to create the "Youth-Engaged City Planning: Recommendations for the City of Madison, Wisconsin" report. An estimated 110 individuals participated in focus groups, and an additional 150 individuals participated through the City's Neighborhood Resource Teams.

Imagine Madison Comprehensive Plan

The *Imagine Madison Comprehensive Plan* included a public listening campaign launched by the City of Madison as part of the update to the comprehensive plan. It gathered feedback from a variety of sources including public meetings, online surveys, and resident panels made up of underrepresented segments of the population. Public input was provided on major community issues such as parks, housing, transportation, and economic development. During Phase I and Phase II of the public input process, a total of 135 comments on parks and open space were submitted via the online survey, public meetings, and resident panels.

Engagement Demographics

Parks collected data through several methods to gain insight into broad community thoughts on park management and user needs.

Participant Ages

Figure 3.2: Ages of Respondents from Engagement Methods

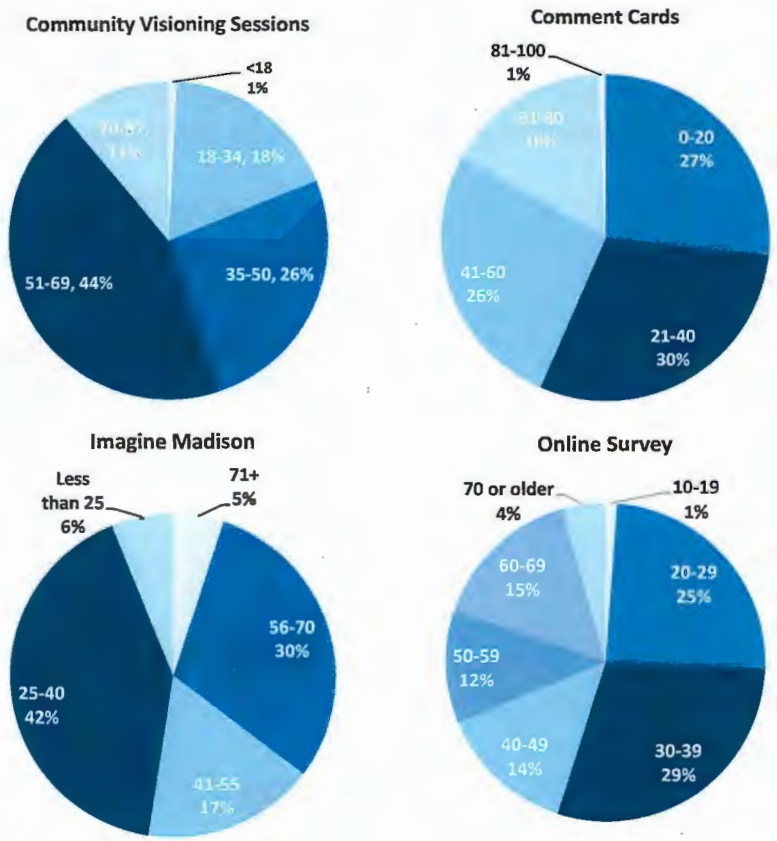
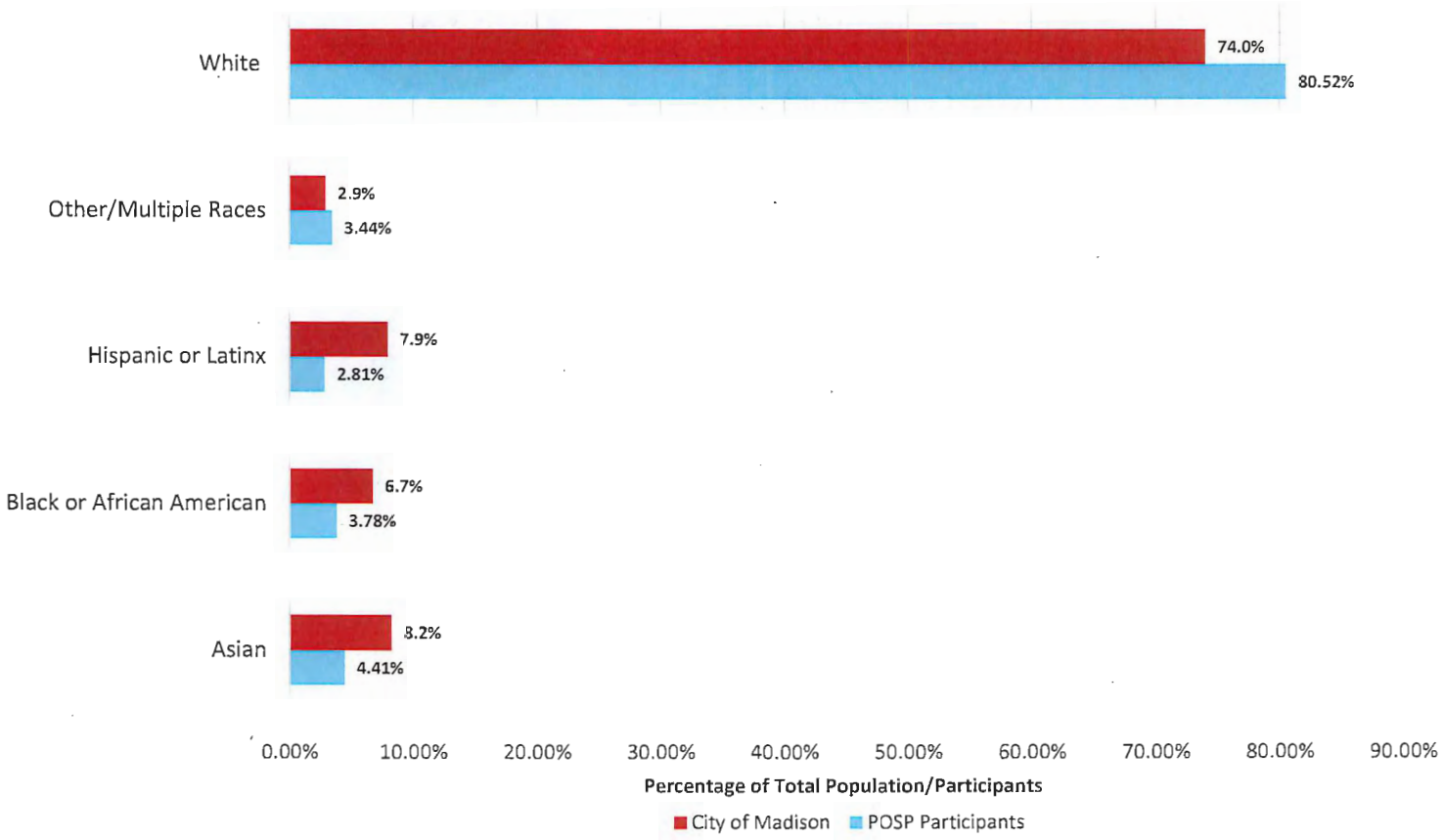


Figure 3.2 illustrates the age distribution of each engagement method's participants. Participation by age varied depending on engagement type. An increased youth presence appeared in the data from the comment cards. However, individuals under the age of 20 were nearly absent from both the online community survey and the community visioning sessions. Residents between the ages of 21 and 40 were the most prominent age demographic in the online survey, while residents aged 51-69 were the most prominent age demographic in the community visioning sessions. The Imagine Madison data also consisted primarily of adults, with individuals under age 25 accounting for only 6 percent of all participants.

Participant Race/Ethnicity

Figure 3.3 shows the racial distribution of each method's participants in relation to that of the City of Madison. Demographic information was collected as part of the online survey, community visioning sessions, and through portions of the Imagine Madison engagement process. Figure 3.3 illustrates unintentional biases in traditional engagement methods such as public input meetings and online surveys[01]. Recognizing that online surveys and public input meetings may disproportionately engage residents who identify as adult and white/Caucasian, the POSP engagement process also utilized methods specifically designed to encourage participation from historically underrepresented communities.

Figure 3.3: Ethnicity/Race Demographics of Engagement Methods



01 Data shown in Figure 3.3 does not include demographic information of approximately 4,000 people who provided input via comments cards, theme focused events, NRT's, focus group discussions, the recreation league survey. Nor does it include people who were observed as part of the SOPARC study.

3.2 Outdoor Recreation Needs Assessment

An Outdoor Recreation Needs Assessment is an analysis used to identify and prioritize future planning efforts for natural areas and outdoor recreational resources. The assessment combines information obtained during the engagement process, and examines past, present, and projected future demands in order to create informed recommendations.

Engagement Outcomes

This section describes results from the engagement methods described above. Figure 3.4 aggregates information received from the comment cards, online community survey, and SOPARC data. The results help identify trends in preferred recreational activities across different engagement methods and ages. These recreational activities are defined as either active or passive[02].

Amongst all engagement methods, the top ten activities shown in Figure 3.4 list includes a combination of passive recreation activities, such as hiking/biking, and active recreation activities, such as swimming and playing on playgrounds. Some activities, for example biking and walking/hiking, were popular regardless of age group or gender. However, there were some notable differences in the top activities based on the engagement method, which are further discussed in this chapter.

Youth Outcomes of Top Reported Activities

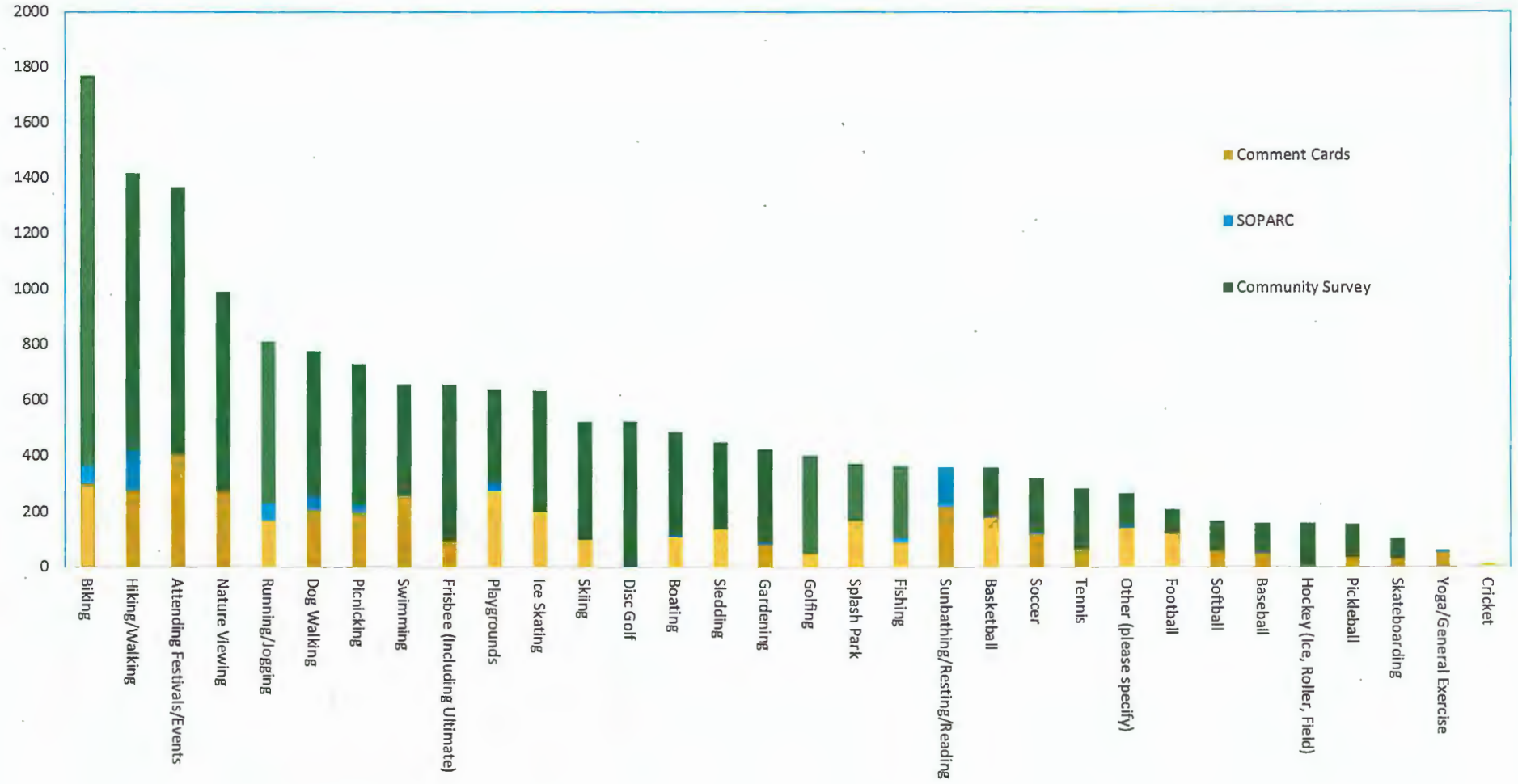
Based on engagement input, younger residents indicated they utilize parks and open space more for active recreation activities. Youth were the primary users of park playgrounds. In the comment card data, playing on a playground was the fourth most popular activity among the under 20 age group, and the second most popular activity among the 21-40 age group (presumably because they take their children to playgrounds). Playing on the playground was the third most frequently observed activity for individuals under 20 in the SOPARC data.

The younger population also makes significant use of parks as an area to engage in team sports such as basketball, soccer and football. In the comment card data basketball and football were ranked as the second and third most popular activities for individuals under age 20, while soccer was ranked 7th. Another activity that appears to be especially popular among youth is swimming.

Photo: Wexford Ridge Playground.

02 The American Heritage Dictionary identifies passive recreation as "Outdoor recreational activities, such as nature observation, hiking, and canoeing or kayaking, that require a minimum of facilities or development and that have minimal environmental impact on the recreational site."

Figure 3.4: Top Activities as Reported per Engagement Method



Adult Outcomes of Top Reported Activities

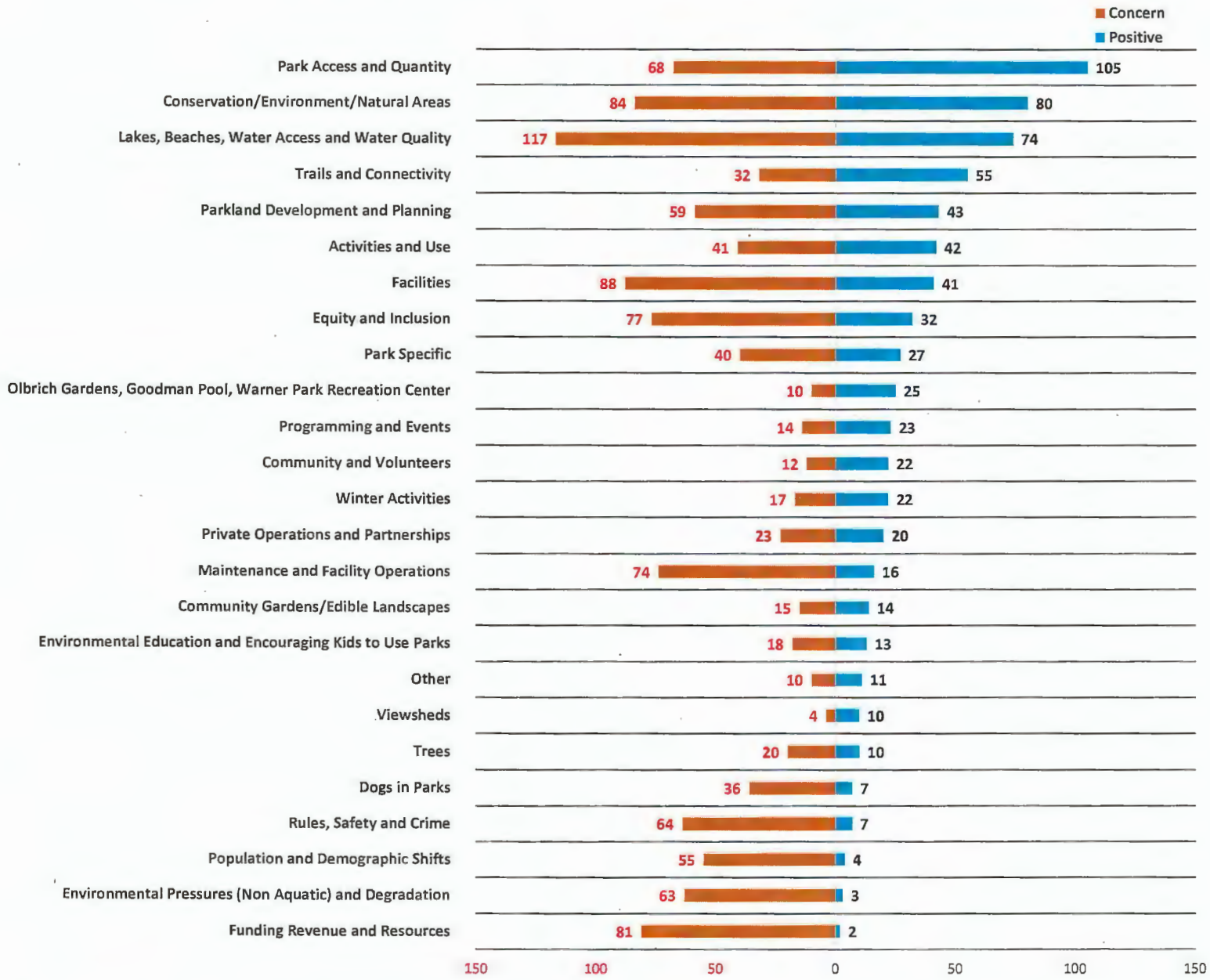
Collected data indicates adult residents tend to use parks for more passive recreation such as hiking and snowshoeing. For example, nature viewing was the third most popular activity for comment card respondents above the age of 40. Among online survey respondents, nearly all of whom were older than 20, nature viewing was the fourth most popular activity. Walking, biking, jogging, and dog walking were all activities that were more popular among adults than youth. Adults also appeared to gravitate towards individual sports more than team sports. Pickleball, tennis and disc golf were all very popular among this group. Additionally, Ultimate Frisbee appears to be a sport growing in popularity for adults, particularly among the 21-40 age group.

Ice skating was another activity that was only listed as a top ten activity in the comment card data. However, it was also popular among online survey respondents, just narrowly missing the top ten, with 26.8 percent of respondents indicating they use parks for ice skating. It is important to note that a winter activity such as ice skating would not be represented in the SOPARC data because direct observation was only done in the summer and fall.

Top Issues and Concerns

The Parks Division also sought public input on the current state of Madison parks, with the goal of using this information to assess which areas should receive additional focus in the upcoming years. The data presented in Figure 3.5 was gathered via the online community survey, community visioning sessions and workshops, focus group discussions, and from the Imagine Madison process. Figure 3.6 shows the combined results from these engagement methods. The data was categorized to identify emerging trends and issues among the public. Each comment was identified as a positive or a concern in relation to the topic being mentioned. Major themes surfaced including: water and the environment, park access, development, and quantity, and facilities and activities that are equitable and inclusive.

Figure 3.6: Top Comments During Engagement Process

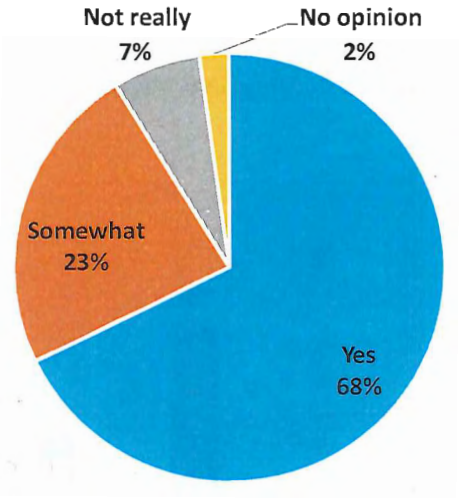


Water and the Environment

Madison's proximity to water resources and historical wetland habitat has provided numerous opportunities for water-based recreation and natural habitats. A large portion of the feedback received from engagement participants was focused on environmentally related topics. "Lakes, beaches, water access and water quality" was the most frequently mentioned issue in the community visioning sessions and the fifth most frequently mentioned in the Imagine Madison data. Likewise, "conservation/the environment/natural areas" was the second most frequently mentioned topic in both the community sessions and Imagine Madison feedback. In response to the question "What would you like to see more of in Madison Parks," the second most popular choice among online survey respondents was "More natural spaces and conservation areas."

Many of the comments related to the environment were positive. Residents expressed their pleasure with the park system's number of beaches, conservation parks, and the readily available access to water and nature. However, there was significant concern about water quality, pollution, and the future of Madison's lakes and natural areas in the face of continued development and population growth. A common theme seen in the feedback from all methods was that the Parks Division would lose its focus on conservation and natural areas in an effort to meet the recreational demands of a continually expanding population.

Figure 3.7: Online Survey Response
Should parks play a role in addressing issues such as habitat loss, climate change, and environmental degradation?

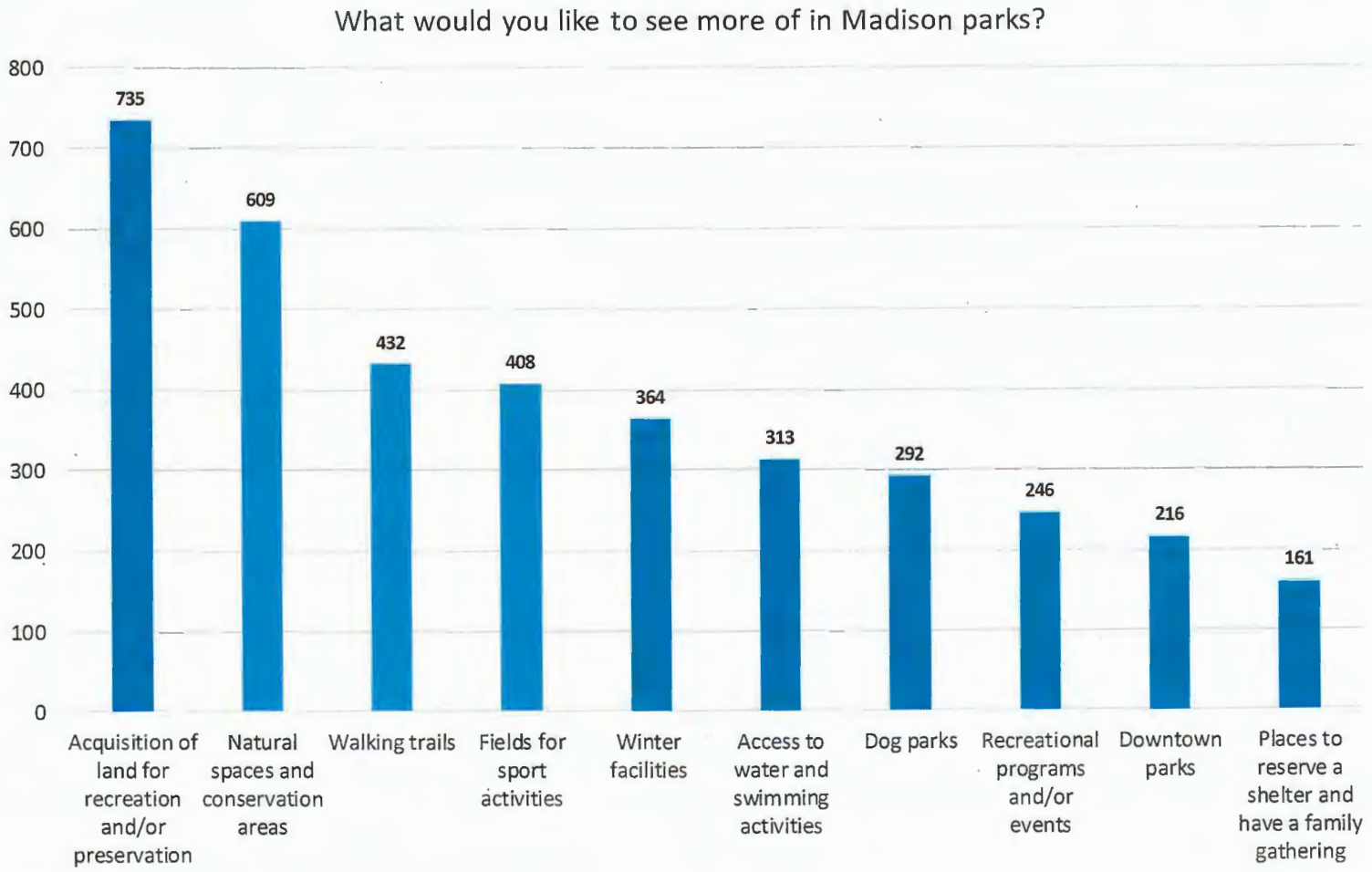


Concerns related specifically to climate change also came up frequently in the comments. Fans of winter activities such as ice skating and skiing were concerned a shortened season would affect their opportunity to enjoy these activities. Other climate change specific issues were mentioned, such as the increased occurrence of extreme heat events and the proliferation of invasive species. Figure 3.7 displays the results of an online community survey question asking respondents whether they believed that the Parks Division should play a role in addressing these issues.

Park Access and Quantity

The other major theme seen in the results was concern about park access and quantity, primarily related to the City's increasing population. This was the third most frequently mentioned topic in the community session comments and the most frequently mentioned topic in the Imagine Madison comments. Residents were concerned with how Madison's continually expanding population would affect their capacity to use the park system. The City of Madison is expected to add 40,000 residents by 2040. Concerns about future overcrowding and diminishing park access were extremely common among participants. Figure 3.5 shows how respondents to the online survey prioritized acquisition of land for recreation and/or preservation.

Figure 3.5: Online Survey Question Response



Park Equity and Inclusion

The community visioning sessions, focus group discussions, and Imagine Madison engagement methods all identified park equity and inclusion among the most prominent issues. When community visioning session participants were asked, "What do you worry about in Madison Parks?" equity and inclusion was the fourth most frequently mentioned topic. Additionally, participants in the meetings with Madison's senior and underserved populations placed a strong emphasis on equity in the park system. A focus group at the Madison Senior Center revealed that many seniors felt excluded from using Madison parks, as a lack of drinking fountains, crosswalks at entrances, and restroom facilities make them less welcoming for older residents.

Photo: Tuj Lub (Hmong Top Spin Demonstration)

Discussion with low-income individuals and youth from communities of color echoed similar concerns regarding equity and inclusion. Residents in low-income communities expressed concern that nearby parks often were not as safe or well-maintained as parks in wealthier sections of the city. Individuals from communities of color also felt that parks lacked amenities specific to the needs of different cultures. For example, Hmong residents were frustrated at the lack of Tuj Lub (a traditional Hmong game) courts and large picnic tables at parks. Residents also reported that it was difficult to hold large family gatherings at local parks.

The Parks Division strives for an inclusive park system that meets the needs of varied cultures and age groups. It is clear that past planning efforts may have unintentionally excluded certain segments of the population. A focus on equity and inclusion will be especially important as Madison's demographics continue to change, with residents becoming older and communities of color continuing to grow within the city.

Facility Demands

This section reviews park use and demands based on existing reservation data collected through RecTrac, the City's park and recreation management software. This data includes the date of reservation, facilities reserved, and number of park users anticipated. This section also reviews permit sales from existing data collected through Accela, the City's asset management software, and the results of the athletic organization survey.

Athletic Facility Reservations

The City of Madison provides facilities for year-round athletic activities within the park system, but does not manage athletic recreation leagues. Instead, the City partners with Madison School & Community Recreation and other recreation organizations such as the Madison Ultimate Frisbee Association, Liga Latina Soccer Association, Madison Area Youth Soccer Association, and Southside Raiders Youth Football to program the athletic fields. As part of this plan update, Madison Parks reviewed reservation data and conducted a recreation league survey issued to over 130 organizers who have made park reservations for athletic facilities.

Review of the City's reservation data identifies that activities with the highest number of reservations include tennis, soccer, and softball. These three activities have the highest number of separate organizations that reserve facilities for their sport. However, demand for athletic facilities is growing for pickleball, lacrosse, and cricket, which compete for facilities with other historically popular sports.

Reservation data also identifies that the most frequently reserved parks include multi-field/multi-court facilities. These types of facilities allow users to host practices, games, and tournaments in a single location instead of spread out over multiple parks. Reserving multiple fields or courts at one park location is beneficial for organizers to accommodate the large size of their leagues, share referees across games, and to host multi-game events. Table 3.1 identifies the most park reservations by sport, of which all have multiple fields/courts. Exhibit 3 identifies the number of athletic field reservations by park.

Table 3.1: 2017 Top Park Reservations by Sport

Sport	Number of reservations
Soccer	3653
Tennis	2844
Ultimate Frisbee	1344
Softball	1185
Youth Football	283
Lacrosse	281
Volleyball	117
Pickleball	116
Baseball	93
Baseball - Little League	77
Football	71
Cricket	55
Rugby	49
Skate Park	48
Kickball	36
Basketball	27

Note: Reservations are based on the number of events at each individual court or field (i.e. a pickleball tournament using all six courts at Garner equates to six reservations). Table 3.1 only identifies facilities that have been reserved, and excludes "pick up games" without reservations.

Park staff suggest that there is demand for lit fields and facilities that recover quickly from rain events. In particular, there is high demand for athletic field lighting for soccer, Ultimate Frisbee, flag football and volleyball. Madison Parks has lit softball diamonds, two lit baseball diamonds, one lit soccer and football field, and one lit volleyball location. Users currently take advantage of off-season softball outfields as lit spaces for ultimate Frisbee and flag football.

Table: 3.2: 2017 Top Twenty Reserved Parks for Athletics[01]

Park	Number of Reservations	Primary Reservation
Quann Park	1309	Tennis Courts
Rennebohm Park	1081	Tennis Courts
Reindahl (Amund) Park	878	Soccer
Olbrich Park	858	Softball, Soccer, Volleyball
Warner Park	711	Youth Football, Soccer, Softball
North Star Park	405	Ultimate Frisbee
Garner Park	304	Lacrosse, Rugby
Elver Park	302	Soccer, Softball, Tennis
Country Grove Park	280	Soccer
Kennedy Park	262	Soccer
Manchester Park	254	Ultimate Frisbee
Midtown Commons Park	232	Ultimate Frisbee
Demetral Park	221	Softball
Goodman Park	191	Softball
High Point Park	176	Soccer
Duane F. Bowman Park	146	Baseball, Softball
Wingra Park	145	Soccer
Wexford Park	129	Soccer, Tennis
Burrows Park	118	Soccer
Whitetail Ridge Park	113	Soccer
Door Creek Park	109	Tennis, Soccer

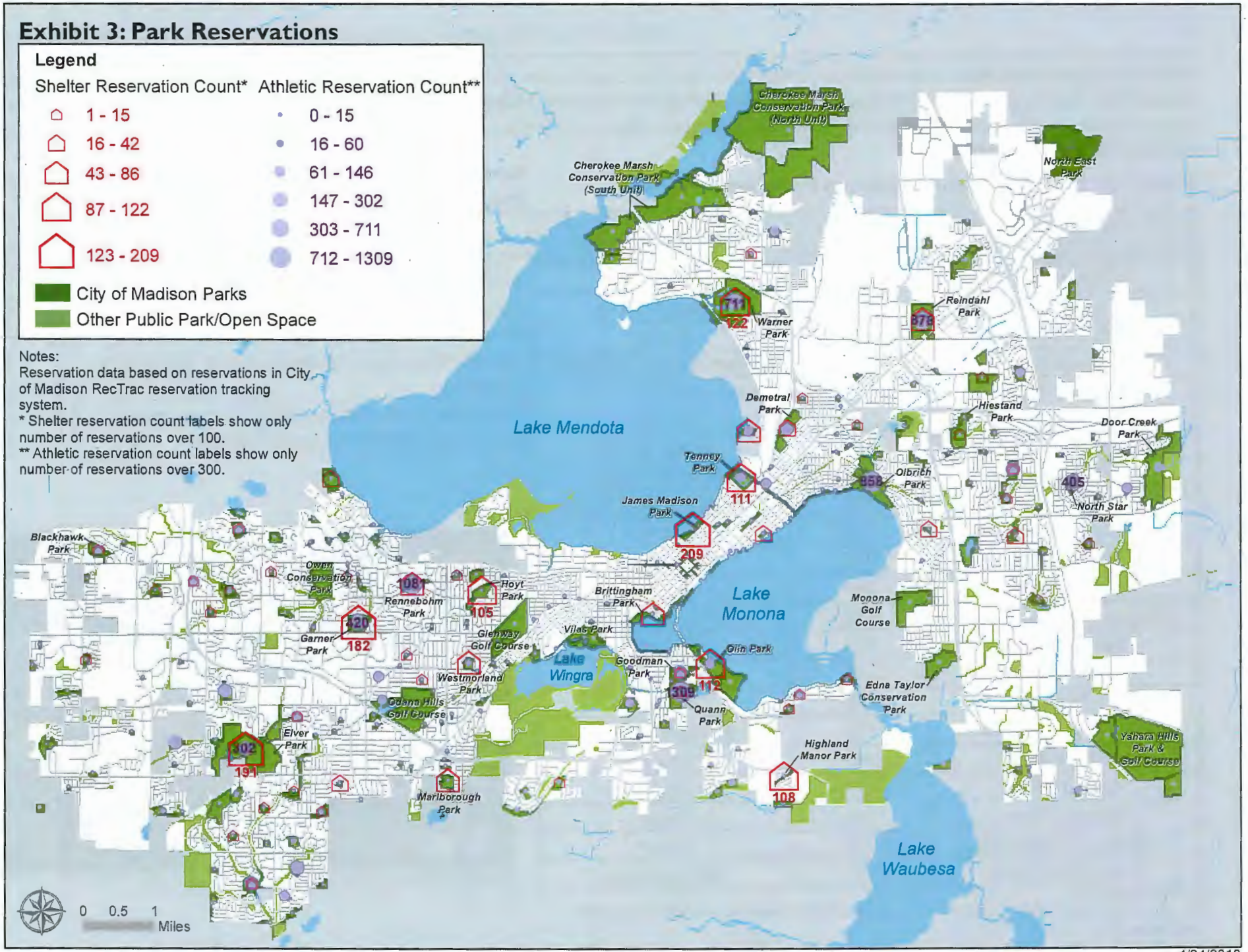
01 Irwin A. and Robert D. Goodman Skatepark at McPike Park is not available for exclusive reservation use.

Table X.X: Athletic Organization Recreation Survey Results

	Yes	No
Respondents whose program relies solely on City of Madison Park Facilities for athletic court or field space	11	21
Respondents whose program needs to limit the number of participants due to lack of fields/courts available	22	10
Respondents who had to cancel an event/practice due to lack of available athletic facilities	11	21

Photo: Ultimate Frisbee at Burr Jones Park.

Exhibit 3: Park Reservations



In addition to reviewing internal reservation data, Madison Parks solicited feedback from a survey sent to over 130 athletic organizations. Of those who responded to the survey, 34% said they had to cancel an event or practice because there were no facilities available for reservation. Additionally, 31% noted that they had to limit the number of participants in their league due to of lack of facilities.

Shelter Reservations

Madison Parks has 83 reservable shelters including six large shelters without restrooms, 19 shelters with restrooms, one concession/ restroom building and 57 sun shelters. Large shelters and shelters with restrooms are available mid-April through mid-October. Sun shelters are open year-round. Reservations of shelters are often made for wedding celebrations, family reunions, association/ business picnics, and community events. Shelters are typically booked for weekday evenings and weekend reservations. Madison Parks has about 1,900 reservations of shelters each year. The most reserved shelters in the park system are Gates of Heaven at James Madison Park, the large shelter at Elver Park, and the shelter at Garner Park.

Photo: Gates of Heaven at James Madison Park

Table: 3.4: 2017 Top Twenty Reserved Shelters

Park	Large Shelter Reservations	Sun Shelter Reservations
James Madison - Gates of Heaven	154	--
Elver Park	191	--
Garner Park	182	--
Warner Park	80	42
Olin Park	112	--
Tenney Park	111	--
Vilas Park	111	--
Highland Manor Park	108	--
Hoyt Park	105	--
Rennebohm Park	86	--
Brittingham Park	81	--
Westmorland Park	69	--
Reindahl (Amund) Park	60	--
Burrows Park	59	--
James Madison - Large Shelter	55	--
Marlborough Park	--	54
Marshall Park	42	--
Meadowood Park	--	42
Demetral Park	34	--
Orton Park	--	33
Elvehjem Park	27	--
Lake Edge Park	19	--

Park Event Reservations

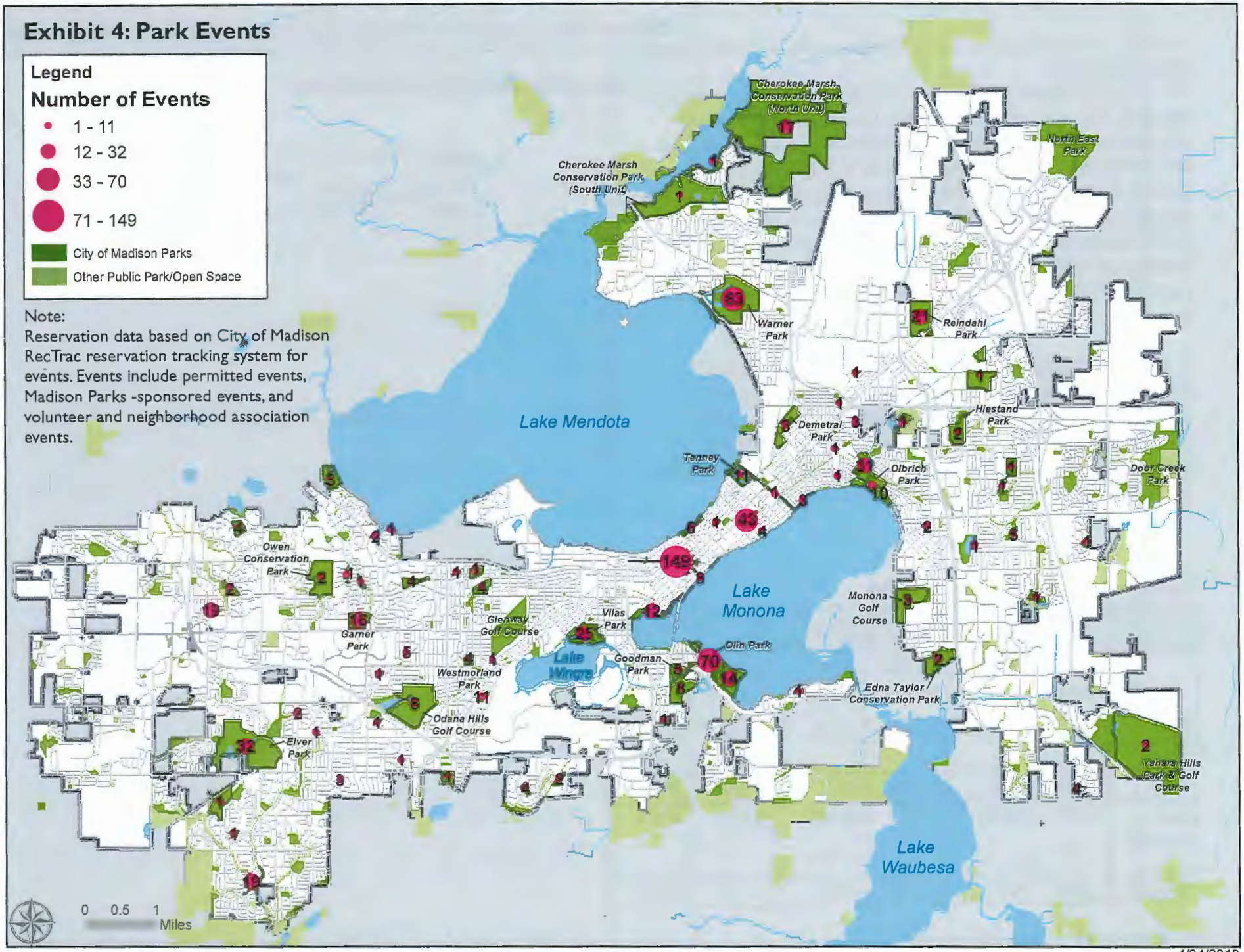
In addition to park athletic and shelter reservations, people frequently reserve parks for community events. In 2017, there were 722 event days in Madison parks. This included 518 public or private events permitted by Madison Parks such as run/walks, farmer's markets, festivals/concerts, food cart nights (Let's Eat Out), concerts, and neighborhood celebrations. The largest number of reserved park days for events were for State Street/Mall Concourse, Olin Park, Warner Park, McPike Park, and Elver Park. Exhibit 4 illustrates the number of reservation events per park. Out of the 722 event days, 204 were produced by Madison Parks. Parks-produced events included Movies in Parks, Learn To Events, Ride the Drive, Westfest, Earth Day Challenge, and Dog Park Clean-Up Day.

Table 3.5: 2017 Top Ten Reserved Parks for Events[03]

Park	# of event days	Most recurring event (# of days)
State Street/Mall Concourse	149	Dane County Farmers Market (31)
Olin Park	70	Fantasy in Lights (43)
Warner Park	63	Bird & Nature Outings (13), Family Fun Night (10), Run/Walks (10)
McPike Park	43	Farmers Market (26), Central Park Sessions (7)
Elver Park	32	Farmers Market (15)
Olbrich Botanical Complex	31	Concert Series (13)
Vilas (Henry) Park	25	Let's Eat Out (10), Run/Walks (8)
Reindahl (Amund) Park	21	Let's Eat Out (10), Anji Play (9)
Country Grove Park	19	Let's Eat Out (18)
Haen Family Park	19	Let's Eat Out (10), Anji Play (9)
Quann Park	8	AEC Event Closures (8), Cross Fit Games (5)
Cherokee Marsh - North Unit	17	Bird & Nature Outings (12)
Garner Park	16	Pickleball Lessons (12)
Turville Point Conservation Park	14	Bird & Nature Outings
Brittingham Park	12	Colsac Skiers (6)
Nakoma Park	11	Let's Eat Out (10)
Tenney Park	11	Ice Skating Lessons (6)
Olbrich Park	10	10 Separate Events
Law Park	8	8 Separate Events
Odana Hills Golf Course	8	Free Golf Instruction (6)

03 Excludes events managed through public/private use agreements.

Exhibit 4: Park Events



Park Permit Sales

The City of Madison requires permits for cross-country skiing, disc golf, dog parks, and lake access. Cross-country ski and lake access permits are joint permits for use on any designated site within the City of Madison, City of Monona, and Dane County. Disc golf permits are for use at City of Madison courses including Elver, Hiestand, and the winter course at Yahara Hills Golf Course. The dog park permit can be used at any City of Madison on-leash or off-leash dog parks, Dane County Parks, the City of Middleton, and the City of Sun Prairie pet exercise areas.

In 2015, the City of Madison Parks Division began directly collecting permits and tracking them in Accela. Table 3.6 identifies the annual and daily park permit sales from 2015 through 2017. Park permit sales generally remained steady during this time, with the exception of dog park permits which continue to grow with increasing demand for dog parks.

Figure 3.8: 2015-2017 Permit Sales

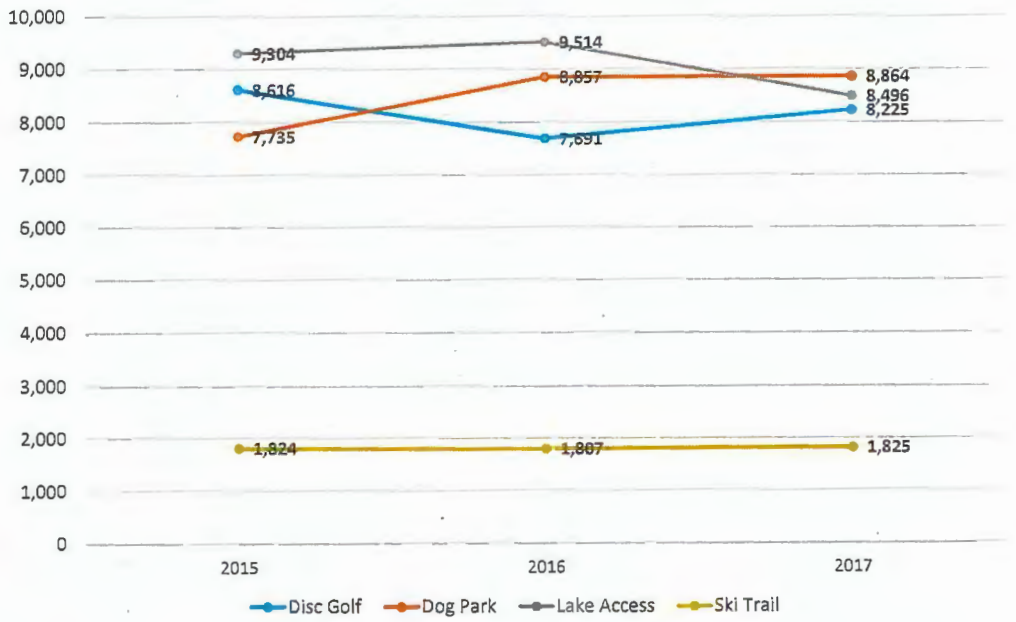


Table 3.6: 2015-2017 Permit Sales

	2015		2016		2017	
	Annual Permits	Daily Permits	Annual Permits	Daily Permits	Annual Permits	Daily Permits
Disc Golf	1,420	7,196	1,443	6,248	1,456	6,769
Dog	7,143	592	8,239	618	7,972	892
Lake Access	4,099	5,205	4,322	5,192	3,559	4,937
Ski Trail	1,266	558	1,318	489	1,325	500

Chapter Four: Parkland Inventory

4.1 City of Madison Park Classifications

In this Chapter

City of Madison Park Classifications

The City of Madison provides its residents with a wide variety of recreational opportunities, with most public parks including play areas and equipment, landscaping, signage, and seating. As shown in Table 4.1, each park is classified according to property characteristics such as size, service area, amenities offered, programming, or special purpose. Exhibit 6 illustrates the geographic distribution of City of Madison parks by their park classification.

Table 4.1: City of Madison Park Type Classification Descriptions[01]

Classification	General Description
Mini Park	Less than 5-acres and used to address limited, isolated, or unique recreational needs.
Neighborhood Park	Greater than 5-acres, neighborhood parks remain the basic unit of the park system. These parks serve as the recreational and social focus of the neighborhood.
Community Park	Typically greater than 20-acres, these parks serve a broader purpose than a neighborhood park. They focus on meeting community-based recreation needs, as well as preserving unique landscapes and open spaces.
Conservation Parks	Lands set aside for preservation of sensitive and/or high quality natural resources.
Sports Complex	Heavily programmed athletic fields and associated facilities whose primary purpose is programmed active recreation.
Trafficway	Public right-of-way used as parkland. Development of this land is limited. Trafficway acreage is counted as parkland for the purposes of inventorying quantity of acreage and number of parks.
Special Use	The City of Madison considers special use to include parkland whose primary function serves unique recreation opportunities (i.e., golf courses).
Open Space	Typically undevelopable land that is not of environmental quality to develop as a park and is not intended to be developed as conservation land and is not intended to be developed with park facilities.
Greenways	Public land owned or administered by City Engineering for stormwater purposes. Greenway acreage within parks is counted as parkland for purposes of inventorying.
Other	Non park facilities. In the City of Madison this category includes the MMSD Pump Station 8 which is located on land owned by the Parks Division.

Park Facilities

Other Park and Open Space Facilities

Private Recreational Facilities

01 For the purposes of identifying park types, greenways are listed in this table. Greenways are areas of stormwater management within parks.

Mini, Neighborhood and Community Parks

Mini, neighborhood, and community parks form the core park facilities of most communities throughout the United States. The facilities in these parks usually provide some type of play equipment, athletic field and open green space (see Table 4.2). Amenities within each park are largely developed based on the master plan process, specific physical land constraints, and budget. In the City of Madison, depending on the size and classification of the park, these parks can also include facilities such as community gardens, off-leash dog parks, and ski and hiking trails. There are no guidelines for unique facilities such as sports complexes, trafficways, open space, greenways, or conservation parks.

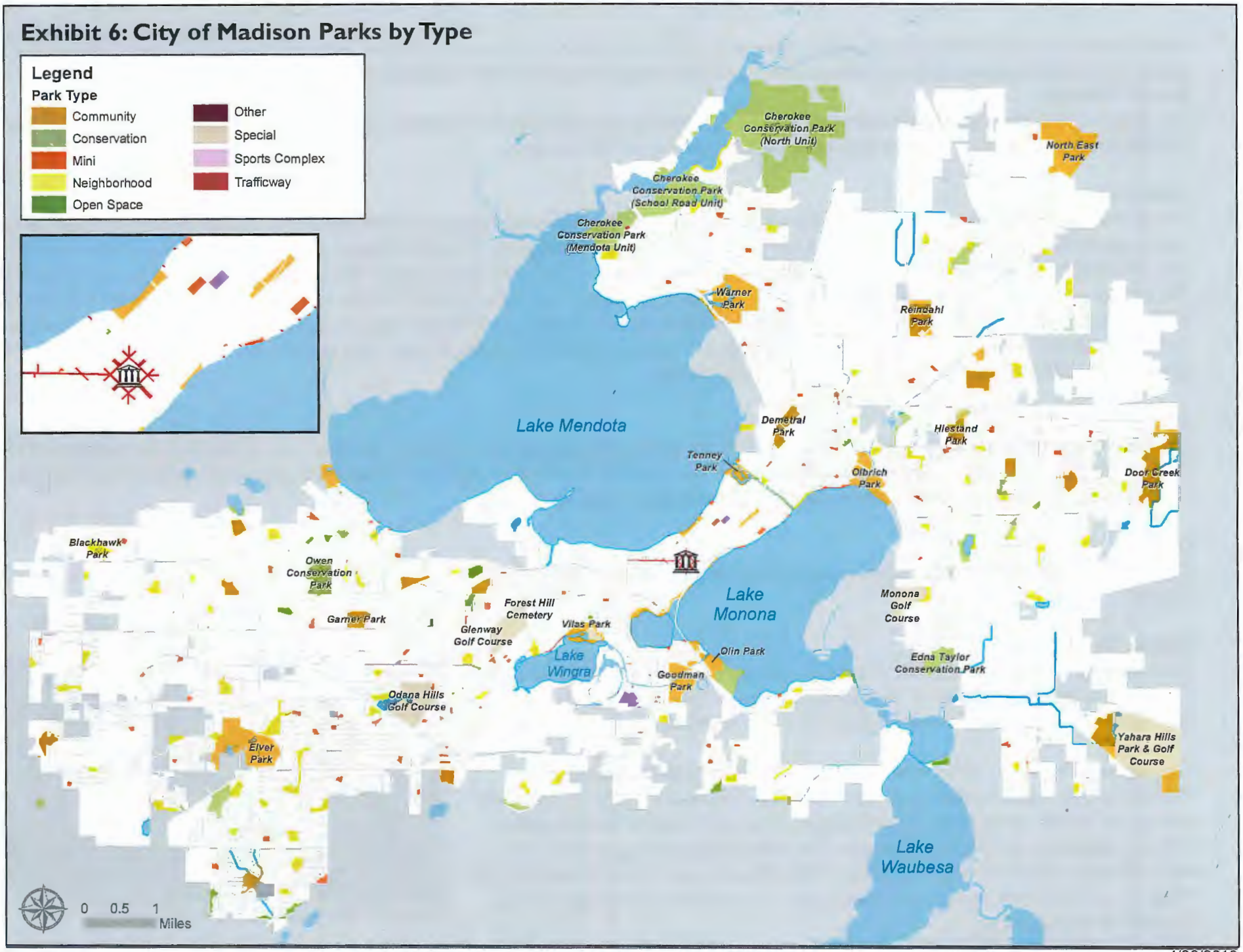
Table 4.2: Typical Park Facilities by Park Classification

Mini	Neighborhood	Community
• Playground • Open play area • Benches • Landscaping • Park sign • Park kiosk/info board • One small recreational amenity (i.e., 1/2 basketball court, small soccer field, volleyball, etc.) • Picnic areas	• Playground • Two medium-sized recreational facilities (i.e., softball diamond, soccer field) • One small recreational amenity (i.e. ,small basketball court, small soccer field, bocce ball, etc.) • Accessible path system • Open play area with space for adult soccer • Benches • Landscaping • Park sign • Park kiosk/info board • Open air shelter • Small parking area if programmed • Community gardens (based on space available)	• Playground for both two to five and five to twelve year olds • Two to three medium-sized recreational amenities (i.e., softball diamond, soccer field, full-size basketball court) • Accessible path system • Open play area • Benches • Landscaping • Park sign • Park kiosk/info board • Reservable shelter with restrooms • Drinking fountain • Picnic area • Large parking area • Ice rink with lights • Community gardens (based on space available)

Conservation Parks

The City of Madison has 20 conservation parks. Conservation parks are managed to preserve native plant communities, wildlife, and significant natural resources. These parks have controlled public access to preserve and restore native plant and animal habitat. The City of Madison currently has approximately 1,752 acres of conservancy land. These facilities are acquired based on environmental quality of land; therefore, nationally recognized guidelines for service areas or acres per thousand do not exist. Despite the lack of formal guidelines issued by the National Recreation and Park Association, the City of Madison highly prioritizes the preservation of these areas and will continue to acquire

Exhibit 6: City of Madison Parks by Type



conservation land to preserve and protect sensitive and high quality natural areas for residents in the future.

Sports Complex

This category includes the facilities at Breese Stevens Athletic Field and the Duane F. Bowman Park, which function primarily as venues for athletic games and practice, but have also been used for events such as concerts.

Trafficways

City of Madison trafficways are road right-of-ways that function as a public park. These include areas such as the Edgewood Pleasure Drive, certain street ends, and the State Street/Mall Concourse. The City of Madison has 25 acres of parks classified as trafficways, but there are also areas that are road right-of-way within larger classified parks (i.e., the non-vacated Esther Beach Road right-of-way within Esther Beach Park). The largest trafficway is the area known as State Street/Mall Concourse. The State Street/Mall Concourse includes State Street and Lisa Link Peace Park, and encircles the State Capitol grounds. It has five performing areas, walkways, fountains, biking routes, and numerous passive recreation facilities built into its design. With the shops and restaurants that line State Street, it is a primary destination for students, visitors, downtown employees, residents, and major community events.

Open Space

The classification of open space denotes land that does not have active recreation facilities but provides vital space for the community. This category includes lands that function as a park such as former landfill Mineral Point Park, land adjacent to waterways such as the Mud Lake Fishing Access, and heavily wooded slopes such as Highlands East Open Space.

Other

This classification is used for Pumping Station 8, which is used solely by the Water Utility.

Special Use Parks

Specialized facilities intended to serve a unique function are classified as Special Use Parks. These include golf courses, maintenance facilities, Forest Hill Cemetery, the Olbrich Botanical Gardens, and the Henry Vilas Zoo (operated by Dane County).

The largest percentage of land in the special use category includes golf courses. Madison has developed regulation United States Golf Association (USGA) approved courses for the use of its residents and visitors. This open space is used by golfers, walkers, joggers, and cross country skiers. The four courses managed by the Madison Parks Division include Yahara Hills, Odana Hills, Monona, and Glenway Golf Courses. Madison's golf program continues to be financially independent of the levy through the Golf Enterprise Fund.

Photo: Golfing at Yahara Hills Golf Course

The next largest special use facility is Olbrich Botanical Gardens. Olbrich Botanical Gardens, which operates as a public-private partnership between the City of Madison Parks Division and the non-profit Olbrich Botanical Society, and attracts more than 325,000 visitors each year. The facility features the 10,000 sq. ft. Bolz Conservatory with a collection of tropical plants from around the world, as well as 16 acres of outdoor gardens that feature sustainable horticulture and landscapes suitable to the region. Specialty gardens include the Sunken Garden , the Herb Garden, the Meadow Garden, the Rose Garden, the Rock Garden, the Wildflower Garden, the Starkweather Creek and Atrium Shade Gardens, and the Thai Garden (a gift to the University of Wisconsin-Madison from the Wisconsin Alumni Association-Thailand). Additionally, Olbrich Botanical Gardens displays raingardens, gravel gardens, and a variety of meadows as examples of sustainable horticulture.

Photo: Fall at Olbrich Botanical Gardens

Olbrich Botanical Gardens offers the community a broad range of programs and activities, including the Schumacher Library; an education program for adults and families; and a volunteer program that contributes more than 25,000 hours annually to the Gardens. Olbrich Botanical Gardens also offers a number of special events, including Rhapsody in Bloom; GLEAM: Art in a New Light; Blooming Butterflies; three concert series; Crackle: Fire and Froth; and three flower shows.

Greenways

Greenways are public land managed and administered by the City of Madison Engineering Division. They include lands such as detention ponds and drainage corridors. Greenways are sometimes considered part of the park (e.g., the drainage ponds at Owen Park), but can also be completely separate from Madison Parks (e.g., the retention pond on Mineral Point Drive). The Parks Division occasionally shares mowing and plowing responsibilities of greenways with the Engineering Division.

Photo: Thai Pavilion, Olbrich Botanical Gardens

4.2 Park Facilities

Madison Parks rank exceptionally well when compared to other cities of similar size across the nation. The *Trust for Public Lands - City Park Facts 2017* ranked Madison in the top ten for basketball hoops, beaches, community gardens, dog parks, pickleball courts, and playgrounds as shown in Tables 4.4 through 4.7. The City offers not only a large number of facilities but also a significant variety of amenities and recreational opportunities for residents to enjoy.

The City of Madison Parks system has over 270 public parks, providing typical park features such as basketball courts and playgrounds, as well as beaches, community gardens, pickleball and tennis courts, golf courses, and the nationally renowned botanical gardens.

Within the Madison park system there are over 8,000 amenities; some examples include athletic fields, buildings, and drinking fountains. Madison has historically ranked high for the quantity of tennis courts, playgrounds, and basketball courts, which for decades have been the core facilities of mini and neighborhood parks.

Table 4.3 below shows a summary of existing facilities within the Madison park system. A detailed summary by park is provided in Appendix X.

#	Types of Facility
118	Ballfield Backstops
151	Basketball Courts
12	Beaches
155	Bike Racks
1	Bike Polo Courts
32	Boat Mooring Slips
29	Boat Ramps
1	Botanical Garden
6	Buildings - Large Shelters without Restrooms
21	Buildings - Maintenance
8	Buildings - Olbrich Gardens
65	Buildings - Other
1	Buildings - Recreation Center
1	Buildings - Reservable Kitchenette
1	Buildings - Reservable Shelter with Restrooms
24	Buildings - Restroom Building
57	Buildings - Sun Shelter without Restrooms
4	Canoe and Kayak Rentals
20	Canoe and Kayak Launches
813	Community Garden Plots
1	Cricket Field
1	Cyclocross Practice Trail
1	Disc Golf (Winter) Course
1	Disc Golf (Basket)
2	Disc Golf Courses
8	Dog Off-Leash Exercise Areas
178	Drinking Fountains
5	Horseshoe Pits
16	Ice Skating Rinks
1	Mountain Bike Course
1	Outdoor Fitness Equipment
71	Parking Lots
25	Pickleball Courts
34	Piers
174	Playgrounds
1	Pool
445	Rentable Canoe/Kayak Racks
2	Reservable Baseball Fields
82	Reservable Multi Use Fields
21	Reservable Softball Fields
1	Skate Park
7	Ski Trail Locations
11	Sledding Hills
3	Splash Parks
85	Tennis Courts
162	Trails/Paths
29	Volleyball Courts

Table 4.4: City Park Facts - Community Gardens

City	Community Garden Plots	Plots per 10,000 Residents
Portland	2,246	36
Washington, D.C.	2,300	35
Madison	739	30
Milwaukee	1,078	18
Seattle	1,113	17
Arlington, Virginia	301	13
Long Beach	574	12
San Jose	1,014	10
Baltimore	550	09

Source: 2017 City Park Facts, Trust for Public Lands

Table 4.5: City Park Facts - Pickleball Courts

City	Pickleball Courts	Courts per 10,000 Residents
St. Paul	30	1.0
Madison	21	0.85
Omaha	31	0.70
Chesapeake, Virginia	16	0.65
Albuquerque	37	0.65
Baton Rouge	12	0.50
Minneapolis	19	0.45
Virginia Beach	18	0.40
Colorado Springs	16	0.35
Cincinnati	10	0.35

Source: 2017 City Park Facts, Trust for Public Lands

Madison is ranked 1st in the number of basketbll hoops and 6th in the number of off-leash dog parks per 100,000 residents, among surveyed cities.

Table 4.6: City Park Facts - Playgrounds

City	Park Playgrounds	Playgrounds per 10,000 Residents
Madison	173	7.1
Cincinnati	152	5.0
Detroit	309	4.7
Omaha	193	4.4
Norfolk	103	4.2
Virginia Beach	189	4.2
Corpus Christi	135	4.1
Pittsburgh	128	4.0
Glendale	97	4.0
Cleveland	141	3.7
Arlington, Virginia	80	3.5
Boise	77	3.5

Source: 2017 City Park Facts, Trust for Public Lands

Table 4.7: City Park Facts - Beaches

City	Beaches	Playgrounds per 10,000 Residents
Madison	12	0.49
Virginia Beach	14	0.31
Minneapolis	12	0.29
Corpus Christi	7	0.21
St. Petersburg	5	0.20
San Diego	26	0.19
Long Beach	9	0.19
Boston	12	0.19
Seattle	9	0.13
Cleveland	5	0.13

Source: 2017 City Park Facts, Trust for Public Lands

Table 4.3: 2017 Facility Inventory Summary[02]

4.3: Other Park and Open Spaces

A variety of university, school, county, and state facilities add to the availability of park and open space systems within the City of Madison. These facilities are shown on Exhibit 7.

University of Wisconsin

The University of Wisconsin-Madison (UW) contributes both athletic facilities and natural areas to the available open space in the City of Madison. The primary UW public facilities consist of the UW Arboretum and the UW Lakeshore Nature Preserve. These two areas provide over 1,500 acres of publicly accessible land for use by City of Madison residents and the public.

The UW Arboretum and Lakeshore Nature Preserve provide the City with an additional recreational resource. The UW's Arboretum totals 1,262 acres of conservation land. Its footprint includes gardens, prairies, savannas, deciduous forests, conifer forests, wetlands, and horticultural gardens. The UW Arboretum provides opportunities for hiking, biking, picnicking, jogging, skiing, snowshoeing, and nature-viewing.

The Lakeshore Nature Preserve contains 300 acres of preserved land along four miles of the southern shore of Lake Mendota. The Lakeshore Nature Preserve provides opportunities for nature viewing, swimming, picnicking, hiking, jogging, and biking, and has opportunities for launching kayaks, canoes, and small boats. Many people also use points along the Lakeshore Nature Preserve to access the frozen Lake Mendota for ice fishing or cross country skiing.

The UW's private recreational facilities (e.g., the Natatorium, the Nicholas Recreation Center, and Camp Randall Sports Center) include indoor/outdoor tennis courts, an indoor racquetball court, swimming pool facilities, tracks, softball diamonds, soccer fields and basketball courts. These facilities are reserved for the over 60,000 students, faculty, and staff affiliated with the University.

Photo: UW Lakeshore Nature Preserve

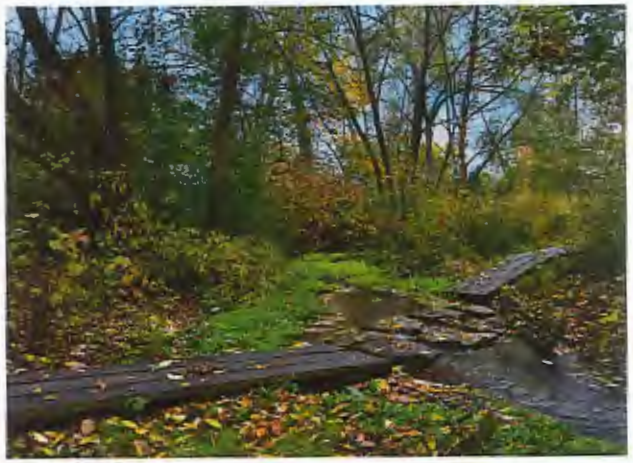
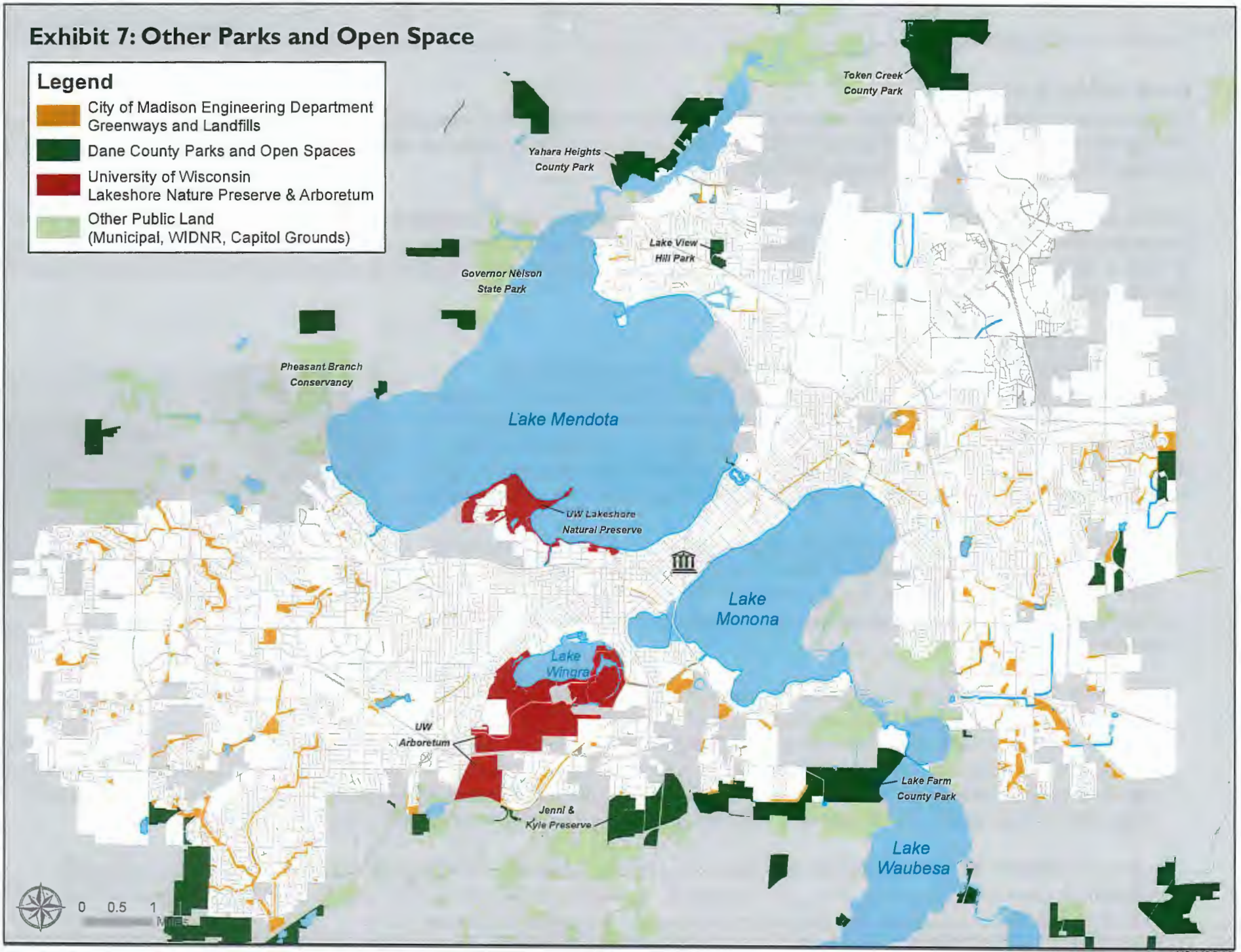


Photo: UW Arboretum

02 Current as of January 1, 2018.

Exhibit 7: Other Parks and Open Space



Public School Grounds

Public schools excluded from the City's inventory of existing park facilities but often serve the same functions as mini and neighborhood parks.. The Madison Metropolitan School District (MMSD) serves as the City's primary recreation programming service, providing a wide variety of activities that use both Madison parks and MMSD facilities.

Existing school facilities such as playgrounds and athletic fields are reviewed when evaluating overall City coverage of facilities. Using service area analysis, the City can identify whether school parks are able to fill demand in communities, which may otherwise lack parkland. Appendix X Table X: Schools with Recreation Facilities identifies MMSD school grounds with recreation facilities that are open to the public when not reserved or being occupied by students.

Dane County Parks

Dane County owns and manages over 12,000 acres of park and open space areas throughout the County. These areas are designed to offer recreational opportunities on a regional scale. Some of these parks lie within or partially within the City of Madison limits. These parks are typically conservation-oriented and have specific recreational facilities related to the preservation of and/or education of cultural and natural resources. Nearby County parks that serve Madison residents are described below (see Exhibit 7 for locations):

Photo: Shelter at Jenni and Kyle Preserve

- Jenni and Kyle Preserve: A unique park, encompassing 163 acres, intended to provide children and persons with disabilities a place to enjoy outdoor activities. Visitors can learn about natural environments through accessible fishing, wildlife observation, wheelchair swings, and a picnic shelter building, trails lead around two spring-fed ponds containing trout and panfish.

- Lake Farm County Park: This 328-acre park is a unit of the Capital Springs Centennial State Park & Recreation Area, which also includes the Lewis Nine Springs E-Way, Capital City State Bike Trail and Lower Yahara River Trail. The park is listed on the National Register of Historic Places and offers three shelter facilities, play equipment, a barrier-free boat launch with fish cleaning facility, two accessible fishing piers, group camping area, wildlife pond, overlook tower, and hiking and cross-country ski trails. The park also includes the Lussier Family Heritage Center, a reservable event venue, and a campground with 54 reservable sites, including 39 electrical hook ups for RV's, restrooms, and shower facilities.

- Lake View Hill Park: This 40-acre park is the highest point on the north side of the City of Madison. The site served as a County tuberculosis sanatorium from 1930-1966. It is classified as a Cultural/Historical Site and is listed on the National Register of Historic Places. Lake View Hill Park is heavily wooded and also contains restored savannas and prairie.

- Lewis Nine Springs E-Way: A 7-mile environmental corridor extending from Dunn's Marsh to Lake Farm County Park. The corridor includes cultural and natural features of wetlands, prairies, sedge meadows, native forests, large springs, and Native American mound sites. It offers opportunities for jogging, hiking, biking, nature study, photography, and cross-country skiing.

- Capital City Trail: Dane County Parks maintains the 9-mile segment of Capital Trail that traverses through the Capital Springs Recreation Area from Verona Road to Industrial Drive. It provides multiple links around and through Madison between the Military Ridge State Trail and the Glacial Drumlin State Trail. In the City of Madison, the trail follows seven miles of bikeways, from Industrial Drive near Nob Hill, under the Beltline Highway, along John Nolen Drive, past the Monona Terrace Convention Center downtown, and through the east side of Madison. The Capital City Trail is used for bicycling, walking, jogging, and in-line skating.

- Lower Yahara Trail: This nearly 2.5-mile trail opened in August of 2017 and provides an off-road trail connection between the City of Madison and the Village of McFarland. The bridge spans Lake Waubesa to connect the Capital City Trail at Lake Farm County Park with McDaniel Park in the Village of McFarland. The bridge runs alongside an active railroad corridor and includes an accessible fishing pier, rest stops, and multiple observation areas with picturesque views.

- Yahara Heights County Park and Cherokee Marsh Natural Resource Area: The 141-acre Yahara Heights County Park is located adjacent to the Cherokee Marsh Natural Resource Area. Cherokee Marsh is the largest remaining wetland in Dane County and in Lake Mendota's Watershed. The recreational park offers a 20-acre dog exercise area, hiking trails, and a canoe and kayak launch, while the Natural Resource Area serves to preserve wildlife habitat and wetlands that are crucial to the water quality of Madison's chain of lakes. The Cherokee Marsh Natural Resource Area also contains some of the best examples of Native American mound sites in Dane County.

- Blooming Grove Drumlins Natural Resource Area: This 1,646-acre area preserves glacial drumlin features that remain from the last glaciation. The site provides opportunities for hiking, fishing, cross-country skiing, wildlife observation, foraging, nature study, as well as hunting and trapping through limited-issued permit only.

Photo: Bridge at Lewis Nine Springs E-Way

Photo: Trail Users at Lower Yahara River Trail

Other Parks/Conservancy Areas

There are several other municipally-owned parks and conservancy areas under the jurisdiction of Madison's neighboring communities that are used by City of Madison residents, including but not limited to the Cities of Fitchburg, Middleton, and Monona. A complete inventory of non-city owned public parks within a 1/2 mile radius of the City boundary is set out in Appendix A.

4.4: Private Recreational Facilities

Private recreational facilities provide recreational resources to City of Madison residents who can afford and desire to seek out specialized facilities such as private gyms, pools, and tennis facilities. These facilities have not been included in this plan.

Chapter Five: Parkland Access

In this Chapter

This chapter will examine the existing distribution of City of Madison park facilities to ensure adequate, equitable access to parks. This plan evaluates parkland access using four different methods.

The first method compares park acreage with population using the National Recreation and Park Association (NRPA) guidelines (Lancaster, 1983). The second method reviews population density in relation to parkland proximity. The third method considers park access based on park service areas as defined by the NRPA. The last method reviews walkable and public transportation access to parks, and also reviews this access specific to residents living below the poverty line.

While these analyses are widely adopted methods for reviewing parkland access, they do not account for cultural preferences, park use and perception, or household type. Acknowledging and understanding the limitations of these analyses is essential, as they are only a few of the many tools used in developing new facilities and parkland in the City of Madison.

Method One: Parkland Acreage and Parkland per Capita

- Compares acreage of classifiable parkland (mini, neighborhood & community parks) to number of people (acres per 1,000 residents).

Method Two: Population Density and Parkland Proximity

- Determines the number of people living in proximity to parks, identifying parks that may have more demands based on surrounding neighborhood density.

Method Three: Service Area Analysis

- Projects a quarter to half mile distance around each classifiable park (mini, neighborhood, and community) based on park classification.

Method Four: Access Analysis

- Walkable Access - Defines a five to ten-minute walking route to mini, neighborhood, conservation and community parks along sidewalks and paths.
- Public Transportation Analysis - Reviews public transportation access to parks within a twenty-minute combination bus ride and pedestrian trip.

5.1 Method One: Parkland Acreage and Parkland per Capita

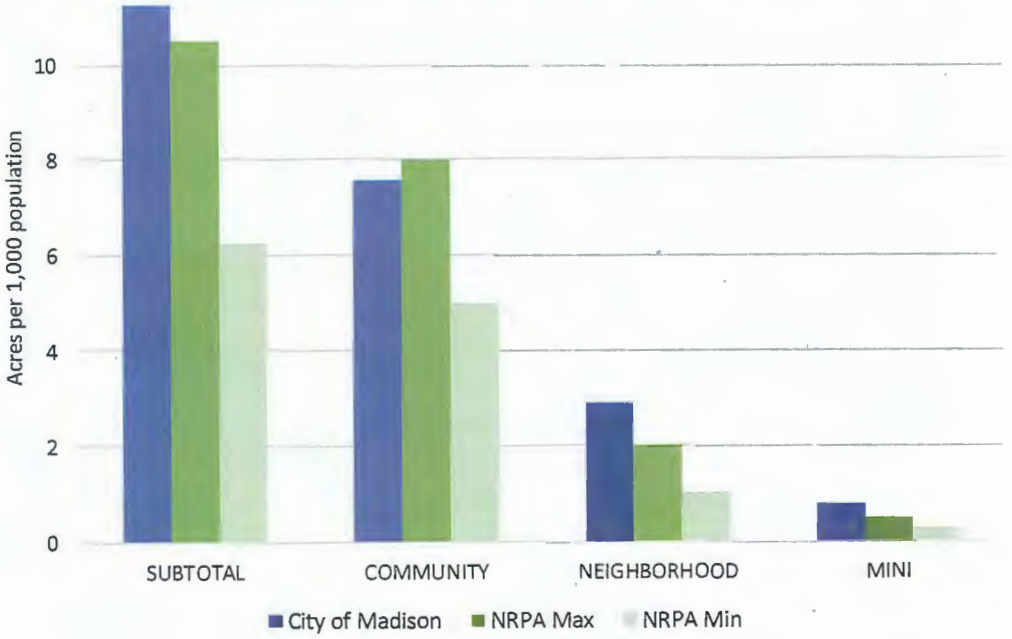
Mini, neighborhood, and community parks are intended to meet the core recreational demands for playgrounds, fields, shelters, and courts. The NRPA provides communities with a recommended range of acreage per 1,000 residents as a guideline to ensure these recreational needs are met.

The City of Madison has approximately 2,812 acres of NRPA categorized parkland or approximately 11 acres per 1,000 residents based on a 2017 population estimate of 250,073. When including the total amount of park land owned by the City of Madison, the City has approximately 22 acres of public land per 1,000 residents. As illustrated in Table 5.1 and Figure 5.1, the City of Madison falls within the NRPA guidelines of facilities for community parks, and exceeds the NRPA targets for mini, neighborhood, and total parkland.

Table 5.1: NRPA Metrics Compared to Madison Park Acreage

	NRPA Guidelines			City Adopted Standards	2017 Actual
Park Type	Service Area	Size (Acres)	Acres per 1,000 residents	Acres per 1,000 residents	Acres per 1,000 residents
Mini	1/4 mile	< 5	0.25 -0.5	As appropriate	0.8
Neighbor-hood	1/2 mile	5+	1.0-2.0	3.75	2.9
Community	2 mile	20+	5-8	6.25	7.6
Total			**6.25-10.5**	**10+**	**11.2**

Figure 5.1: NRPA Guidelines Compared to City of Madison Park Acreage



Park classifications are continuously updated and reviewed, taking into consideration the amount of area dedicated to greenways, active park space, and natural areas. For instance, parks that have acreage amounts within the community park range may be classified as a neighborhood park if a large portion of that acreage is dedicated to stormwater ponds[01].

Of these core park types, mini parks are the most prevalent type of park in the Madison park system. Table 5.2 shows that mini parks provide 3% of the total parkland but 36% of the total number of parks. These are typically small parks, less than five-acres in size with a playground, open field, and/or basketball court. Madison's high number of mini parks contributes to a system with an abundance of smaller-scale park amenities such as playgrounds and half basketball courts. Parks less than five-acres in size can be valuable open space; however, they typically lack larger recreational amenities such as sport courts and multi-use fields. Maintaining several small parks requires more resources and energy than maintaining the same acreage contained within a larger park. Chapter Four provides a more in-depth description of the specific features included in mini, neighborhood, and community parks.

Table 5.2: City of Madison Parkland Acreage[02]

Park Type	Number of Parks Based on Classification	Acres (percentage of total parkland)
Mini Parks	99 (36%)	194.7 (3%)
Neighborhood Parks	76 (28%)	729.0 (13%)
Community Parks	31 (11%)	1888.6 (34%)
Subtotal	**206 (75%)**	**2812.3 (50%)**
Conservation	20 (7%)	1752.5 (31%)
Trafficways	14 (5%)	25.7 (0.4%)
Other	1 (0%)	0.6 (0%)
Open Space	22 (8%)	110.8 (2%)
Special	10 (4%)	884.2 (16%)
Sports Complex	2 (1%)	27.9 (.5%)
Subtotal	**69 (25%)**	**2801.7 (50%)**
TOTAL PARKLAND	**275**	**5614**

Photo: Opera in the Park event at Garner Park, which is classified as a Community Park

01 Blackhawk Park is one example; although the stormwater ponds provide passive recreation, they represent 12.7 acres of the total 28.7 acres for the park, and therefore classified as a neighborhood park.

02 Park acreages current as of 1/1/2018.

5.2 Method Two: Population Density and Parkland Proximity

Both increasing density and shifts in housing trends affect which parks have the highest neighborhood demand and competition for meeting community needs. Using population data from the U.S. Census, Table 5.3 illustrates which parks have the highest number of people within a half mile of the park, potentially increasing the demand for park use at these facilities. However, the most recent GIS data available at the time of this analysis was extrapolated from the 2010 US Census Block Data. Within the last eight years, the downtown has seen growth in multi-story multifamily apartments and condominiums. This analysis will be updated as more accurate Census data are released.

Table 5.3: Parks with Highest Number of People Within Half Mile

Park Name	Approximate Population
Brittingham Park	> 15,000
James Madison Park	> 10,000
Vilas (Henry) Park	> 5,000
Hoyt Park	> 5,000
Huegel-Jamestown Park	> 5,000
Tenney Park	> 5,000
Warner Park	> 5,000
Olbrich Park	> 5,000
Yahara Place Park	> 2,500
Central Park	> 2,500

Exhibit 8 illustrates the population density served by each park. Many of the parks located on or near the isthmus are surrounded by a higher density of residents, and experience greater demands for space and amenities, than the parks located on the periphery of the City.

Exhibit 8: Population Served by Park

Legend

Population* Served by Park (Half Mile from Park)

- 274 - 1,500
- 1,501 - 3,000
- 3,001 - 4,500
- 4,501 - 6,500
- 6,501 - 20,000
- Other Public Park/Open Space

* Based on 2010 Census data

Note: Population data based on 2010 U.S. Census

Lake Mendota
Lake Monona
Lake Wingra
Lake Waubesa
Cherokee Marsh Conservation Park (North Unit)
Cherokee Marsh Conservation Park (School Road Unit)
North East Park
Warner Park
Reindahl Park
Sycamore Park
Demetral Park
Hiestand Park
Door Creek Park
Kennedy Park
North Star Park
Tenney Park
Olbrich Park
McPike Park
James Madison Park
Marshall Park
Wexford Park
Blackhawk Park
Walnut Grove Park
Rennebohm Park
Hoyt Park
Vilas Park
Garner Park
Monona Golf Course
Goodman Park
Olin Park
Turville Point Conservation Park
Hill Creek Park
Elver Park
Marlborough Park
Country Grove Park
0 0.5 1 Miles

5.3 Method Three: Service Area Analysis

A standard NRPA method for reviewing parkland access is the park service area analysis. The size of a park's service area is determined according to park classification as defined by the NRPA (Lancaster, 1983), shown in Table 5.4.

Table 5.4: NRPA Service Area by Park Type

Park Type	Service Area (Radius)
Mini	1/4 Mile
Neighborhood	1/2 Mile
Community	Two miles

Photo: Basketball Tournament at Olbrich

The intent of NRPA service area analysis is to identify existing gaps in traditional core facilities. This analysis only evaluates service areas for parks classified as mini, neighborhood, or community. Special parks, conservation parks, trafficways, greenways, open space or other such as are not covered in this analysis.

The park service area analysis is a commonly used method for determining park deficiencies but should not be used exclusively. This analysis method does not include other important factors such as population density, geographic or cultural limitations, or household type or size. For instance, the park needs in a neighborhood with backyards large enough to have gardens and play equipment are undoubtedly different from the needs of downtown areas which are comprised primarily of multifamily apartments and condominiums with little or no backyards. Acknowledgement and understanding of these limitations must be included in the analyses to identify park needs for communities.

Photo: B.B. Clarke Park Playground

Mini and Neighborhood Park Service Area Analysis

Mini and neighborhood park deficiencies are present if a residential area is not within a quarter-mile radius of a mini park or a half-mile radius of a neighborhood park or community park[03,04]. The City of Madison provides most core facilities in neighborhood parks. Mini parks are intended to fill voids between neighborhood park service areas, or in areas where land uses or geographical boundaries limit development of larger neighborhood parks.

03 This analysis excluded neighborhoods that have adopted Neighborhood Development Plans or Special Area Plans that are not fully developed.
04 For this evaluation, community parks have a half-mile service area, serving as neighborhood parks to their immediate neighborhood.

The City has mini and neighborhood park coverage for 93% of the City of Madison residential areas, excluding areas within the Neighborhood Development Plans that are not fully developed. The areas that lack mini and neighborhood park coverage are shown in Exhibit 9.

As part of the service area analysis, school facilities were reviewed to evaluate their contribution to eliminating park deficiencies. Public schools often serve their adjoining residential areas by providing play fields and playground facilities. Exhibit 10 identifies park deficiencies when a quarter-mile service area radius is applied to elementary schools and a half-mile service area radius is applied to middle schools. This analysis excluded high schools, which are typically heavily utilized by the high school during the day and after school hours.

The schools with the greatest contributions to eliminating park deficiencies include:

- Lindberg Elementary School
- Lincoln Elementary School
- Muir Elementary School
- Orchard Ridge Elementary School/Toki Middle School
- Glendale Elementary School
- Mendota Elementary School

Photo: Lindberg Elementary School

Photo: Muir Elementary School

Photo: Glendale Elementary School

Exhibit 9: Mini and Neighborhood Park Deficiencies Based on Service Areas

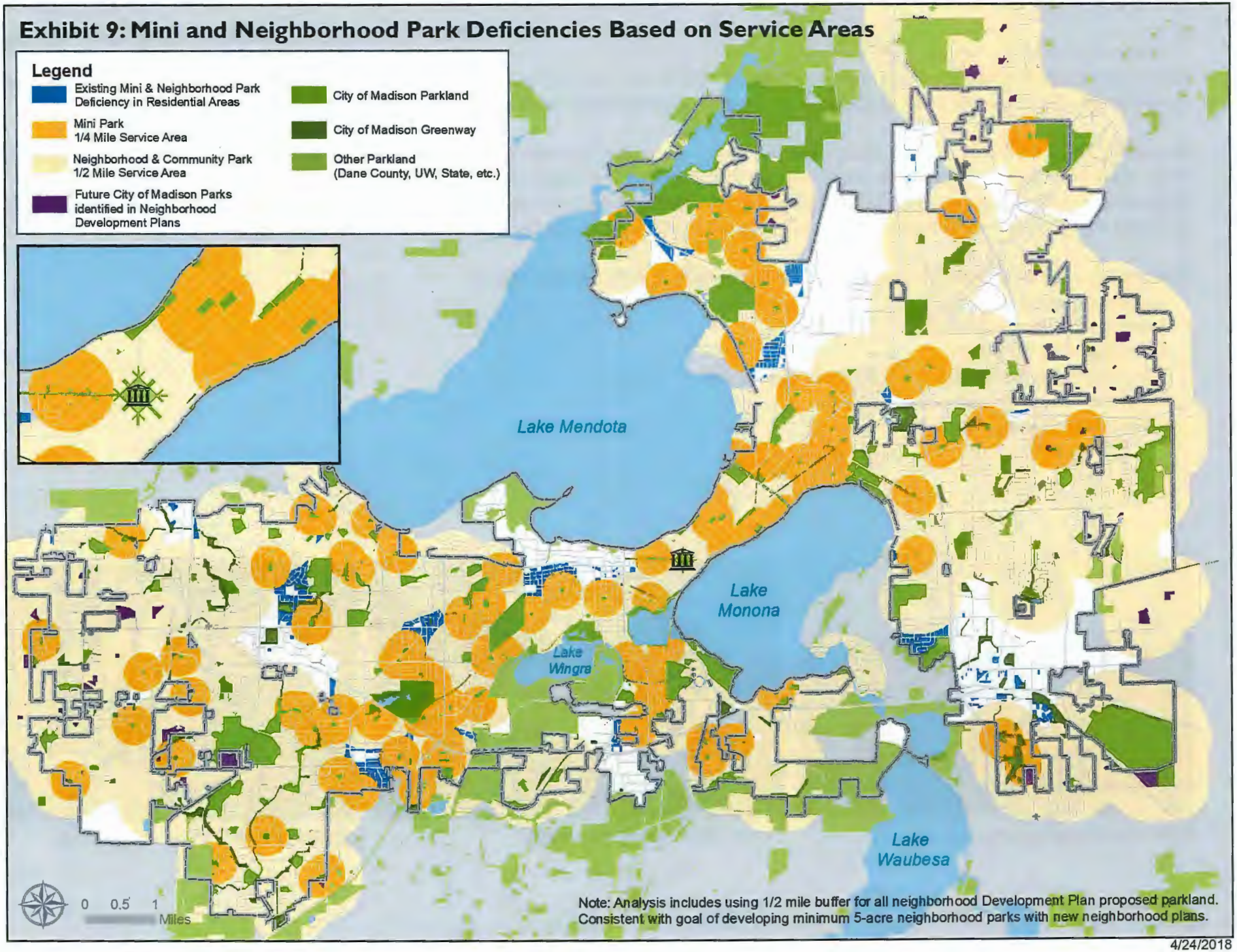


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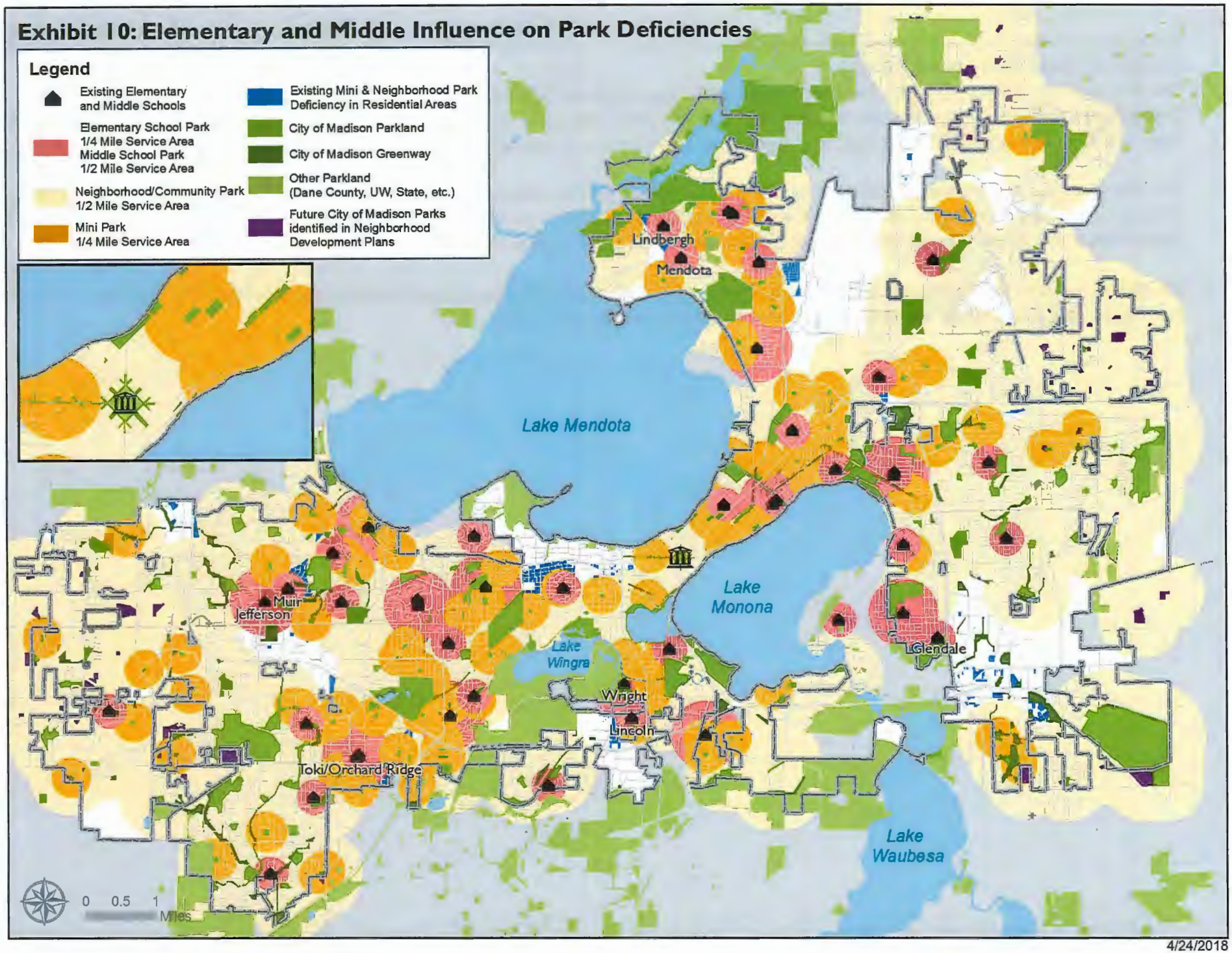
Exhibit 10: Elementary and Middle Influence on Park Deficiencies



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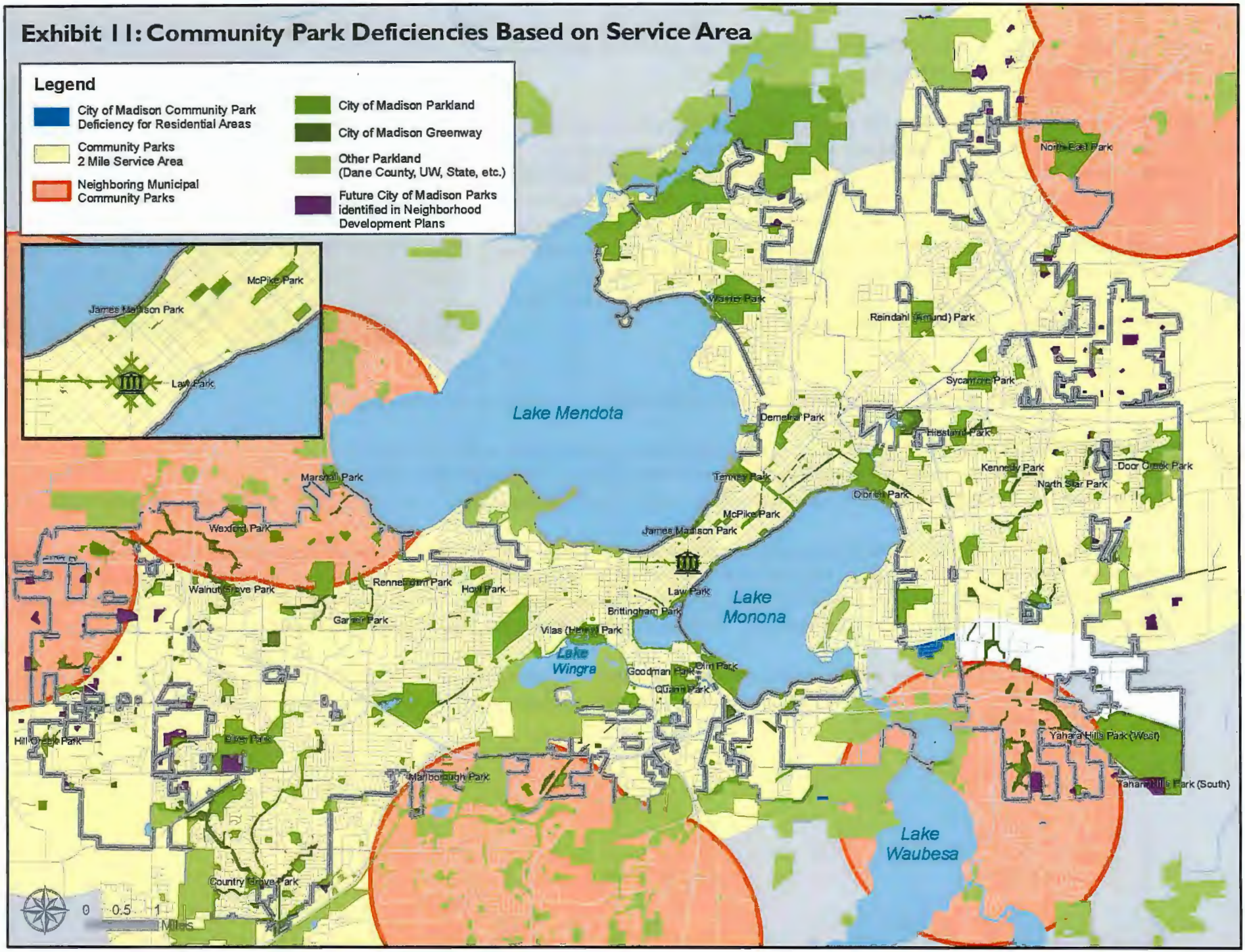
Community Park Service Area Analysis

The City provides community park service area coverage for approximately 97% of all areas of residential land use, including Neighborhood Development Plan areas. Areas that are deficient in community park coverage are shown in Exhibit 11. Community park development relies on regional efforts when evaluating coverage, thus community parks from neighboring municipalities are included in the analysis.

The City proposes development of Yahara Hills Community Park to provide community park facilities for the southeast side of Madison. This land is currently owned by the Parks Division and is partially developed with a golf course. Additional development of community parks is planned for the northeast side of the City. North-East Park is currently owned by the City of Madison Parks Division.

The downtown area has many community parks but few neighborhood parks. The recommendations proposed in the City of Madison's *Downtown Plan* suggest acquiring land for development of a new downtown neighborhood park.

Exhibit 11: Community Park Deficiencies Based on Service Area



4/25/2018

5.4 Method Four: Access Analysis

An emerging method for evaluating the distribution of parkland is by examining walkable and public transportation access to parks. Walkable access analysis evaluates the general accessibility of mini, neighborhood, community, conservation parks, and public elementary and middle schools within communities based on a five- to ten-minute walk along a sidewalk or path. While both schools and conservation parks are excluded from the NRPA service area standards, they play an important role in providing access to playgrounds, playing field games, nature-viewing, environmental education, imaginative play, hiking, and cross-country skiing and snowshoeing, and thus have been included in this analysis.

"Parental safety perceptions of safe walking routes have decreased throughout the decades."
(J Transp Health. 2014 Jun; 1(2): 108–115.).

"Declines in walking have been greatest among elementary-aged children and for children who live within one mile of their school" (Ibid.).

Walkability

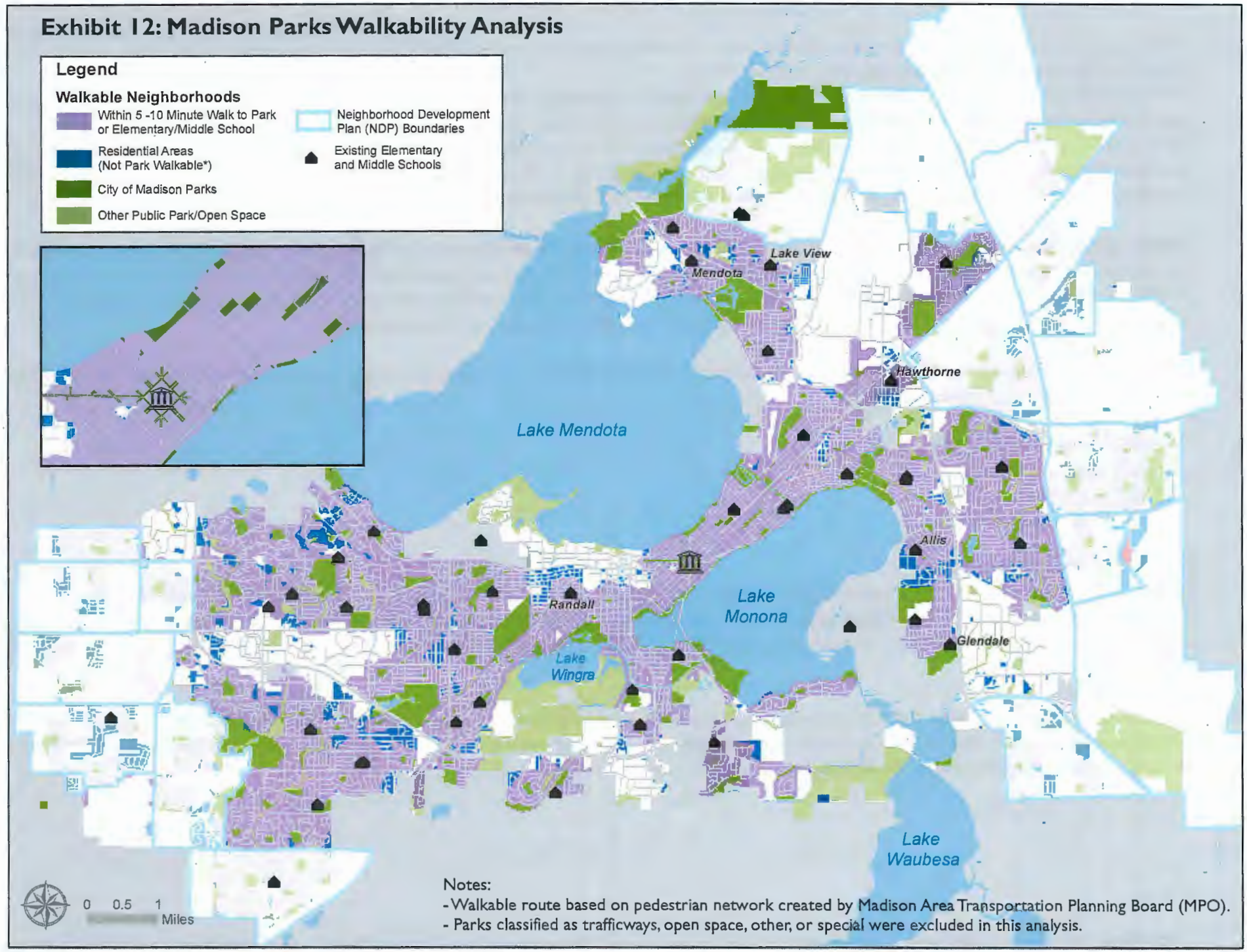
Walkable access to mini, neighborhood, community and conservation parks assumes the following:

- Mini parks and elementary schools serve the community within a five-minute walk to the park.
- Neighborhood parks and middle schools serve the community within a ten-minute walk to the park.
- Community and conservation parks function as neighborhood parks, serving the community within a ten-minute walk to the park.

The walkability analysis excludes walking routes where the pedestrian has to cross a road with speeds greater than 35 mph and only evaluates walkability within residential or mixed use areas along sidewalks and paths. In addition, this evaluation specifically excludes agricultural, military, or industrial properties and properties owned by Dane County, other municipalities, or the University of Wisconsin. Walkable access within Neighborhood Development Plan Areas are excluded, as the network of pedestrian routes, parks, and paths is not yet fully developed.

A geographic analysis of walkability for mini, neighborhood, community, and conservation parks reveals that most residential neighborhoods in Madison are within a five- to ten-minute walk to a mini, neighborhood, community, or conservation park. Areas that lack walkable access to these facilities are identified in Exhibit 12.

Exhibit 12: Madison Parks Walkability Analysis



Notes:
- Walkable route based on pedestrian network created by Madison Area Transportation Planning Board (MPO).
- Parks classified as trafficways, open space, other, or special were excluded in this analysis.

Walkability Results in Areas Below the Poverty Line

The Parks Division worked with staff and members of the Parks Long Range Planning Subcommittee, using the City's Racial Equity and Social Justice (RESJ) tool to analyze the distribution of park facilities across Madison. The RESJ tool was developed as part of the City's Racial Equity and Social Justice Initiative and is designed to "facilitate conscious consideration of equity and examine how communities of color and low-income populations will be affected by a proposed action/decision of the City" (City of Madison, RESJ TOOL). The Parks Division then examined these analyses to understand deficiencies in the distribution of park facilities and walkability to people living below the poverty line.

Exhibit 13 illustrates disparities in walkable access by poverty level. While some of these areas lack access to mini, neighborhood, conservation, and community parks and schools, they do have access to other forms of public open space, such as public land owned by the University of Wisconsin, Dane County, and other municipalities. Areas along the periphery of the City within identified Neighborhood Development Plans have been excluded, since the plans do not reflect the most current demographic information available.

Schools that are the most important in providing access to a walkable open space where parks may not be accessible include the following:

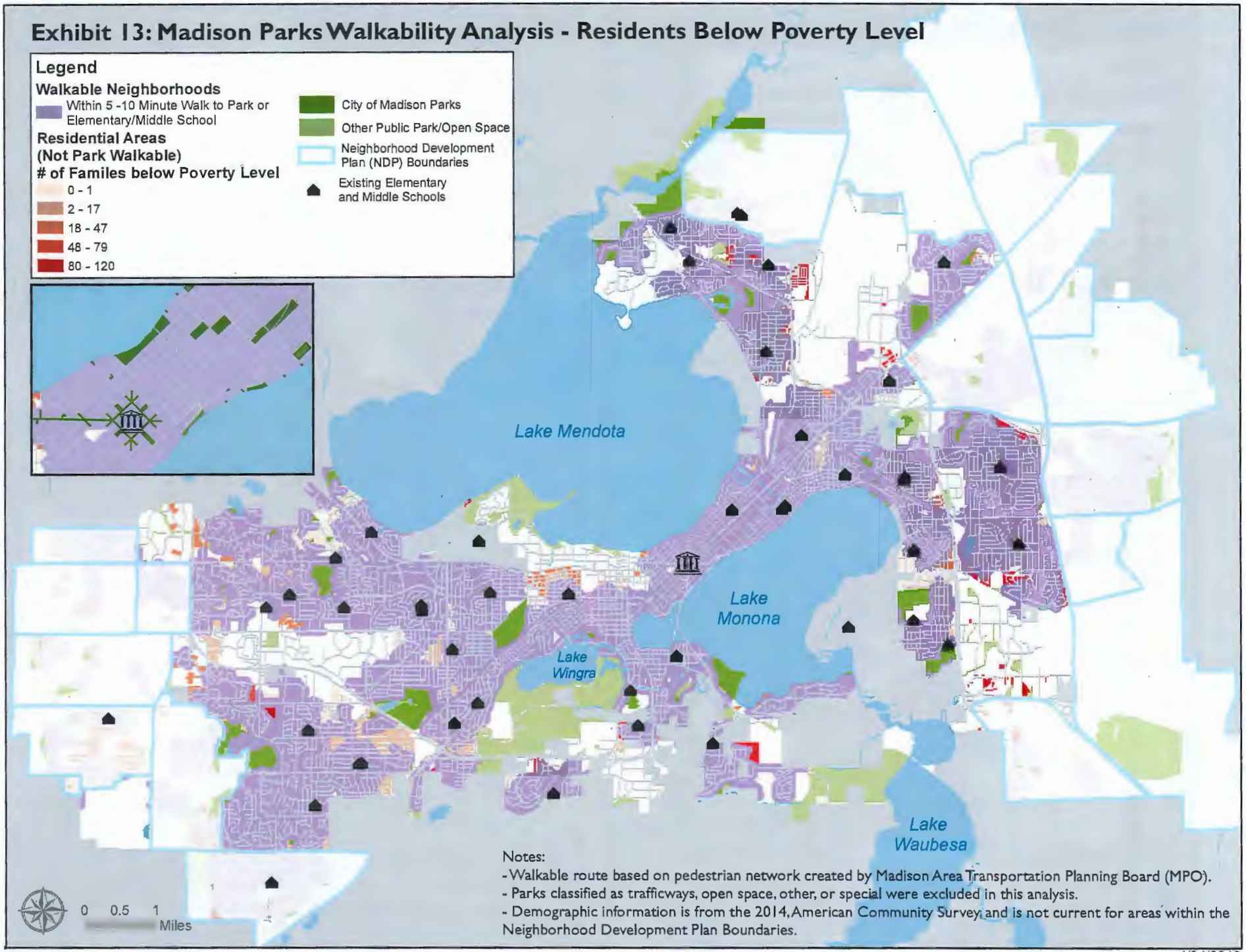
- Mendota Elementary School
- Lake View Elementary School
- Hawthorne Elementary School
- Allis Elementary School
- Glendale Elementary School
- Randall Elementary School

Public Transportation

Exhibit 14 identifies areas of higher concentrations of poverty that are not within a 20-minute combination bus ride/walking route. These areas very closely match the areas identified above in the walkability analysis. Areas of neighborhoods with high concentrations of families living below the poverty line, which lack both walkable access and public transportation to parkland are especially vulnerable to public health conditions.

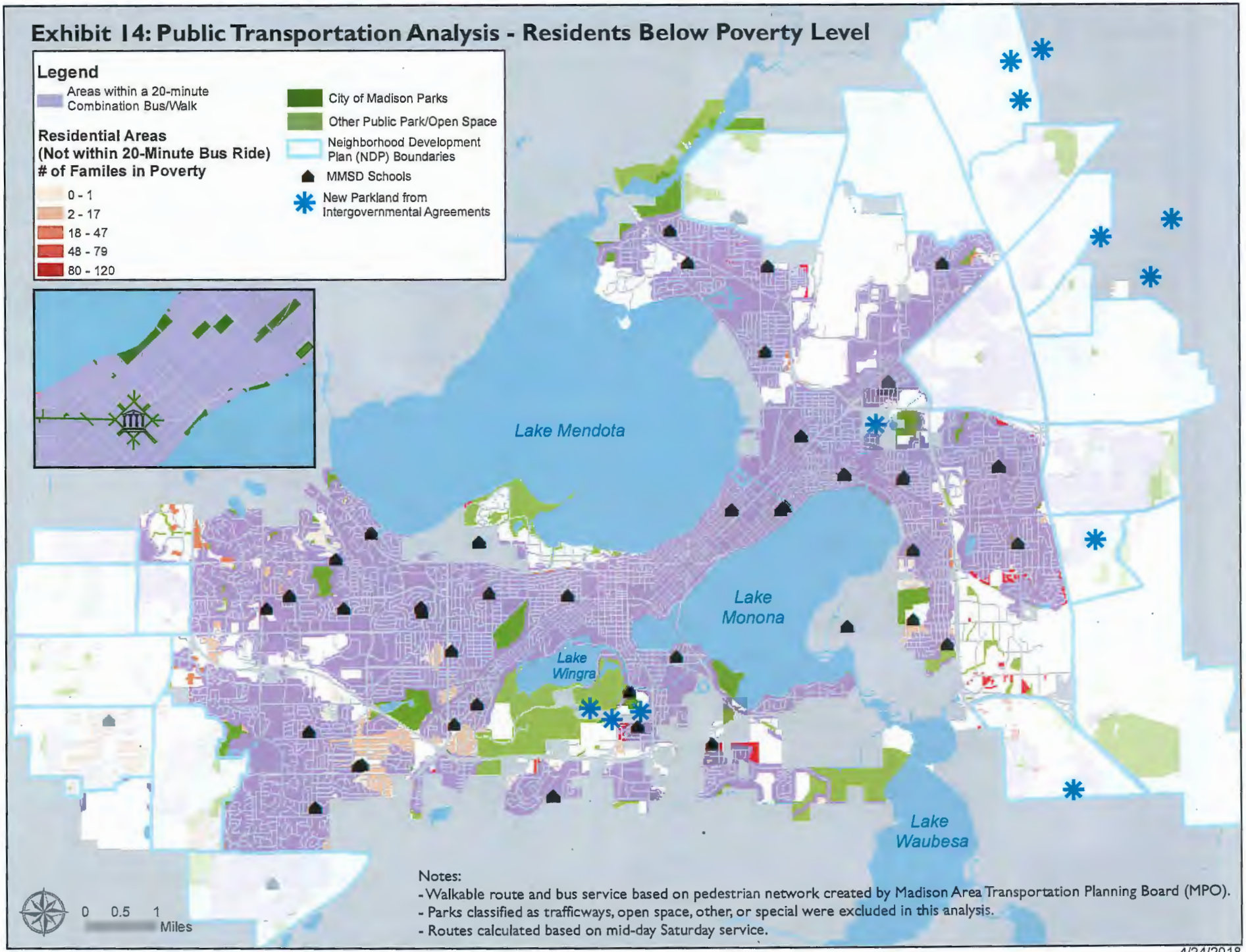
Exhibit X uses existing Madison Metropolitan Planning Organization data to evaluate public transportation on a mid-day weekend, when both parents and children are may be able to spend time to travel to a park. Bus routes frequently change to meet customer demands, and the most up-to-date routes may not always be reflected in the MPO data.

Exhibit 13: Madison Parks Walkability Analysis - Residents Below Poverty Level



Notes:
- Walkable route based on pedestrian network created by Madison Area Transportation Planning Board (MPO).
- Parks classified as trafficways, open space, other, or special were excluded in this analysis.
- Demographic information is from the 2014, American Community Survey, and is not current for areas within the Neighborhood Development Plan Boundaries.

Exhibit 14: Public Transportation Analysis - Residents Below Poverty Level



Notes:
- Walkable route and bus service based on pedestrian network created by Madison Area Transportation Planning Board (MPO).
- Parks classified as trafficways, open space, other, or special were excluded in this analysis.
- Routes calculated based on mid-day Saturday service.

Chapter Six: Relevant Plans

6.1 How this Plan Relates to Other Plans

The Park and Open Space Plan provides analysis and recommendations regarding the overall system of parks in Madison. The plan reviews city-wide parkland distribution, structure, funding mechanisms, and relationships to changing demographics, land development, and future growth across the City. The plan works in conjunction with other planning documents, such as master plans, neighborhood plans, and special area plans, to inform the development of the park system. This plan does not include specific recommendations for individual parks. Figure 6.1 illustrates the relationship of the Park and Open Space Plan to the over 60 planning documents that may include recommendations for parkland. The recommendations contained in the Park and Open Space Plan will be included as a supplement to Imagine Madison Comprehensive Plan.

Figure 6.1: Planning Document Organizational Hierarchy

Imagine Madison: City of Madison Comprehensive Plan

Park and Open Space Plan

Citywide Plans
- Community Gardens: Opportunities for Madison & Dane County
- Connecting Children to Nature Implementation Plan
- Madison Cultural Plan
- Public Art Framework Plan
- Public Health Madison and Dane County Strategic Plan
- Transportation Master Plan

Environmental Plans
- CARP Land Use Water Quality Plan
- Cherokee Special Area Plan
- Dane County Water Quality Plan
- Lake Wingra Watershed Management Plan
- Madison Sustainability Plan
- Pollinator Task Force Report
- Warner Lagoon Plan
- Yahara Monona Priority Watershed Plan

Neighborhood Plans
- Allied-Dunn's Marsh
- Allied-Dunn's Marsh-Belmar
- Arbor Hills-Leopold
- Bay Creek
- Brittingham-Vilas
- Broadway-Simpson
- Carpenter-Ridgeway
- Emerson-East-Eken Park-Yahara
- Greenbush
- Greenbush-Vilas Neighborhood Housing Revitalization Plan
- Heistand
- Hoyt Park Area
- Marquette Neighborhood Center
- Marquette-Schenk-Atwood
- Midvale Heights-Westmorland
- Northport-Warner Park-Sherman
- Regent Street-South Campus
- Schenk-Atwood-Starkweather-Worthington
- South Madison
- Southwest
- Spring Harbor
- Tenney-Lapham
- University Avenue Corridor
- University Hill Farms
- Wingra Creek BUILD

Special Area Plans
- Downtown Plan
- Dane County Land Use & Transportation Plan
- East Washington Avenue Capitol Gateway Corridor Plan
- Lamp House Block
- Monroe Street Commercial District Plan
- South Capitol Transit Oriented Development Plan
- Stoughton Road Revitalization Project Plan
- University Avenue Corridor Plan

Neighborhood Development Plans
- Blackhawk
- Cherokee
- Cottage Grove
- Cross Country
- East Towne-Burke Heights
- Elderberry
- Felland
- Hanson Road
- High Point-Raymond
- Junction
- Marsh Road
- Midtown
- Nelson
- Northeast Neighborhoods
- Pioneer
- Pumpkin Hollow
- Rattman
- Sprecher
- Yahara Hills

In this Chapter

6.2 State Comprehensive Outdoor Recreation Plan

The State of Wisconsin Department of Natural Resources (WDNR) completes a study of outdoor recreation resources, called the *Statewide Comprehensive Outdoor Recreation Plan* (SCORP), every five years. The SCORP examines outdoor recreation supply, demand, trends, and issues, both on a state-wide and regional basis. This study provide broad guidelines and data to governments at all levels, communities, and organizations on recreation needs and opportunities. The 2017-2022 SCORP was not completed at the time this plan was written, so the previous 2011-2016 SCORP is referenced for this Park and Open Space Plan.

The regional profiles section in the 2011-2016 SCORP reviews social, development, and economic factors influencing public use and accessibility to outdoor recreation. Each regional profile includes a chapter on population trends, economic context, land use perspective, and recreation outlook. Madison falls within the WDNR's Southern Gateways region (Region 9), which includes Richland, Sauk, Columbia, Dane, Dodge, Iowa, Jefferson, Lafayette, Green, and Rock counties. The State of Wisconsin manages a variety of resources, primarily conservation-oriented, within this region. The management goals of the 20 state parks/recreation areas, 6 trails, and 36 state wildlife areas are available to view at http://dnr.wi.gov/topic/Lands/RecAnalysis/. The recreation outlook analysis for the Southern Gateways region indicates the top 10 uses include (listed in descending order of demand): picnicking, boating, visiting a beach, swimming, snow/ice activities, visit a wilderness or primitive area, day hiking, freshwater fishing, motorized boating, and developed camping.

Tables 6.1 and 6.2 from the 2011-2016 SCORP identify regional recreation supply shortages for the Southern Gateways Region including: backcountry/walk-in camping, boat launches, natural areas, parks, public water access, trails for hiking, bicycle, and horseback riding, educational camps, dog parks, ice skating rinks (2005 only), nature centers, picnic areas, sailboat clubs/rentals, and tennis courts, and associated programs. The study also suggests that tourists from Chicago and the Twin Cities use the Southern Gateways region for downhill skiing, sightseeing, picnicking, camping, bird watching, and hiking.

Table 6.1: 2005 Regional Recreation Supply Shortages for the Southern Gateways Region

Nature-based	Developed Settings
Backcountry/walk-in camping	Boat launches - trailerable
Boat launches	Camps - educational
Natural areas	Dog parks
Parks	Ice Skating Rinks
Public water access	Nature Centers
Trails-hiking	Picnic Areas
Trails-horsebackriding	Sailboat clubs/rentals
	Tennis courts
	Tennis programs
	Trails - bicycle

Table 6.2: 2011 Regional Recreation Supply Shortages for the Southern Gateways Region

Nature-based	Developed Settings
Backcountry/walk-in camping	Boat launches - trailerable
Boat launches - carry-in	Camps - educational
Natural areas	Dog parks
Parks	Nature Centers
Public water access	Picnic Areas
Trails-hiking	Sailboat clubs/rentals
Trails-horsebackriding	

The SCORP regional profile brings together vast amounts of information regarding demographics, land use patterns, and projected recreational trends. The summary of this analysis identifies the following important recreation issues for the Southern Gateways Region.

- The region is densely populated and experiencing rapid population growth. Dane and Sauk cities are growing the fastest, with over 10% population growth between 2000 and 2008.
- "As a whole, Region 9 is slightly more educated, has a higher median income and is considerably younger than the state as a whole. While the region is currently relatively young, the population is expected to age considerably over the next decade with the 65 and older group projected to increase in size by 49%. The rapidly increasing over 65 age class will increase demand for more passive types of recreation and more easily accessible facilities" (p. 24, Regional Profile: Region 9, Wisconsin Department of Natural Resources).
- "The population of the region is somewhat more diverse than the state as a whole; 14% of the state's minorities live in the region. Dane County is the most diverse with its minority population steadily increasing. The region is home to over 19% of the state's Asians and has a rapidly growing Hispanic population. The diverse and growing ethnic populations typically have somewhat different recreation preferences and rates of participation than whites. For example, the Hispanic community tends to heavily use various facilities for family gatherings"(p. 24, Regional Profile: Region 9, Wisconsin Department of Natural Resources).
- In comparison to the state of Wisconsin overall, the region has a greater proportion of agricultural land. The economic vitality and population growth subjects agricultural land to intense development pressure, resulting in high land values, parcelization, and decreasing opportunities for significant recreational and conservation land acquisition.

- "With its proximity to Wisconsin's population centers, Region 9 offers some of the most accessible recreational opportunities in the state. Public lands and waters are very heavily used and demand for recreation is rapidly exceeding the capacity of existing facilities and resources. Supply shortages were identified by SCORP for back country/walk-in camping, boat launches (carry-in and trailerable) and other public water access, parks and natural areas, hiking and horseback riding trails, picnic areas, and nature centers. Addressing these recreational supply shortages will take additional effort, and the high demand, cost, and parcelization of land in the region will make it increasingly difficult to acquire significant amounts of additional recreation land". (p. 24, Regional Profile: Region 9, Wisconsin Department of Natural Resources).

The 2011 *Wisconsin Outdoor Recreation Demand Report*, developed by the WDNR, also presents information on statewide recreation trends relevant to the City of Madison. The report describes the results of the 2005-2009 National Survey on Recreation and the Environment (NSRE). The NSRE was initiated by the federal government in 1960 and has since conducted eight surveys. The NSRE is an in-home phone survey, which gathers data from over 90,000 households across all ethnic groups throughout the United States. Chapter three of the *Wisconsin Outdoor Recreation Demand Report* lists activity trends and activity popularity for the State of Wisconsin. Tables 6.3 through 6.9 are from the *Wisconsin Outdoor Recreation Demand Report*. This data does not take into consideration regional differences within the state of Wisconsin, and should not be construed as data that is specific to local municipalities such as Madison. For more information on recreational trends in Wisconsin, refer to http://dnr.wi.gov/topic/lands/scorp/

Table 6.3: 10 Most Popular Outdoor Recreation Activities

2011 Wisconsin Outdoor Recreation Demand

Activity	Percent Participating	Number of participants (1,000's)
Walk for pleasure	87.7	3,947
Gardening or landscaping for pleasure	65.4	2,944
View/photograph natural scenery	65.3	2,939
Attend outdoor sports events	65.0	2,926
Family gathering	63.5	2,858

Table 6.4: Participation Rates for Developed-setting Land Activities
2011 Wisconsin Outdoor Recreation Demand

Activity	Percent Participating	Number of participants (1,000's)
Walking for pleasure	87.7	3,947
Gardening or landscaping for pleasure	65.4	2,944
Family gathering	63.5	2,858
Driving for pleasure	52.8	2,377
Bicycling	48.7	2,192

Table 6.5: Participation Rates for Outdoor Sports
2011 Wisconsin Outdoor Recreation Demand

Activity	Percent Participating	Number of participants (1,000's)
Attend outdoor sports events	65.0	2,926
Golf	41.8	1,881
Running or jogging	32.1	1,445
Handball or racquetball outdoors	23.5	1,058
Tennis outdoors	8.5	383

Table 6.6: Participation Rates for Snow and Ice-based Activities
2011 Wisconsin Outdoor Recreation Demand

Activity	Percent Participating	Number of participants (1,000's)
Snow/ice activities (any type)	45.9	2,066
Sledding	28.2	1,269
Snowmobiling	18.3	824
Ice skating outdoors	13.5	608
Ice fishing	13.1	590

Table 6.7: Participation Rates for Nature-based Land Activities
2011 Wisconsin Outdoor Recreation Demand

Activity	Percent Participating	Number of participants (1,000's)
Day hiking	36.7	1,652
Visit a wilderness or primitive area	33.7	1,517
Mountain biking	30.7	1,382
Developed camping	25.4	1,143
Hunting (any type)	22.2	999

Table 6.8: Participation Rates for Viewing/Learning Activities
2011 Wisconsin Outdoor Recreation Demand

Activity	Percent Participating	Number of participants (1,000's)
View/photograph natural scenery	65.3	2,939
Visit nature centers, etc.	63.5	2,858
View/photograph other wildlife	57.9	2,606
View/photograph wildflowers, trees, etc.	52.4	2,359
Sightseeing	50.6	2,278

Table 6.9: Participation Rates for Water-based Activities
2011 Wisconsin Outdoor Recreation Demand

Activity	Percent Participating	Number of participants (1,000's)
Boating (any type)	47.3	2,129
Visit a beach	42.3	1,904
Swimming in lakes, streams, etc.	41.7	1,877
Freshwater fishing	37.4	1,683
Motor boating	36.0	1,620

6.4 Dane County Parks and Open Space Plan

Similar to the City of Madison, Dane County completes a Parks and Open Space Plan (POSP) every five years. The goal of the County's 2018-2023 POSP is to identify significant cultural, historical, and natural resources to be considered for protection, preservation, or restoration. In addition, the plan seeks to analyze recreation needs and demands on a county-wide level.

The County's POSP draws information from the *Wisconsin Statewide Comprehensive Outdoor Recreation Plan*, Wisconsin Demographic Services Center, Bicycle Transportation Plan (published by the Madison Area Transportation Planning Board), and the Outdoor Recreation Participation Report (published by The Outdoor Foundation). Dane County also gathered input through an online survey and examined trends in activity participation rates based on past permit sales (disc golf, dog park, lake access, etc.).

The goal of the County's online survey was to gauge user satisfaction, recreation trends, barriers, and areas of potential improvement. Overall, survey responders indicated that they would be most interested in seeing more of the following: land acquisition and natural resource management, trails (hiking, bicycle/pedestrian, and mountain bike), dog parks, walk-in or rustic camping, disc golf courses, activities to attract youth, facilities for the elderly and disabled, and greater overall connectivity of land, trails, and facilities.

Tracking of annual permit sales allows the County to monitor recreation user numbers, demand for facilities, and trends over many years. The following graphs, provided by Dane County Parks, illustrate the quantity of permits sold per year. Overall, there have been steady increases in the demand for mountain bike trails, dog exercise areas, lake access points/boat launches, and disc golf courses.

Figure 6.2: Annual Trail Permit Sales

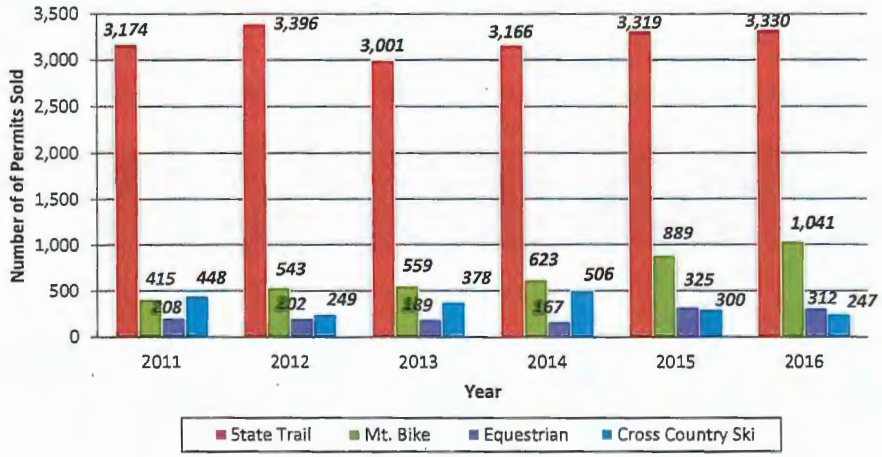
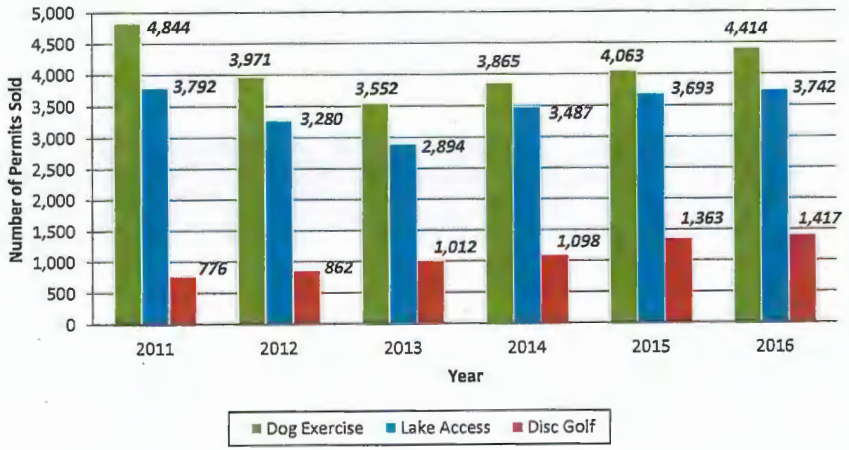


Figure 6.3: Annual Recreation Permit Sales



Dane County has several natural resource areas and park properties that lie within the City of Madison limits. These properties are identified in Chapter Four and include the Jenni & Kyle Preserve, Lake Farm County Park, Lake View Hill Park, the Nine Springs E-Way, the Capital City Trail, the Lower Yahara River Trail, Yahara Heights County Park, the Cherokee Marsh Natural Resource Area and the Blooming Grove Natural Resource Area.

6.5 Imagine Madison: City of Madison Comprehensive Plan

Wisconsin State Statutes Section 66.1001 mandates local governments to create and maintain and update a comprehensive plan every 10 years. The City of Madison is currently in the process of developing the Imagine Madison Comprehensive Plan, and expects to adopt this plan in the summer of 2018. Since this plan is not yet adopted, the discussion in this section is based on the draft plan.

Development of the draft *Imagine Madison Comprehensive Plan* included a robust public commentary campaign, starting in Fall 2016. This plan included over 13,900 comments collected through community meetings, resident panels, and Neighborhood Resource Teams. This information was synthesized into major themes and trends, which were used to draft the Plans goals, strategies, actions and priorities.

Several themes emerged which pose significance to City of Madison Parks including: changing demographics, changing preferences in housing and neighborhoods, continued desire for public transportation and trails, strong community value in culture and character of neighborhoods, and continued concerns regarding the environment.

Changing Demographics

Both the *Imagine Madison Comprehensive Plan* and this plan identify that Madison's demographics are changing. Baby boomers are aging, millennials are moving to Madison in large numbers, and racial and ethnic diversity continues to increase. Madison Parks must be able to accommodate these changing demographics and provide recreation opportunities for diverse community groups.

Changes in Housing and Neighborhoods

The comprehensive plan also identifies that Madison is facing increased development and density. These changes will increase the demand for parks and open spaces, especially in downtown areas. The plan estimates that the City will grow by another 70,000 residents by 2040, and a majority of residents surveyed through Imagine Madison supported accommodating a majority of this growth through infill and redevelopment.

Desired for Trails and Increased Connectivity

Madison in Motion, the City of Madison's Transportation Master Plan identifies existing and proposed sidewalks and paths. This plan is the City's adopted pedestrian plan that identifies priorities for improving the City's connectivity and eliminating gaps. Some of these paths are located in parks, reviewed, and budgeted for as part of the annual budget processes.

Strong Community Value in Culture and Character of Neighborhoods

As increasingly diverse population contributes to cultures and experiences to the community, the City's investment in opportunities that provide for a broad range of users is increasingly important. The comprehensive plan identifies that places such as cultural and entertainment venues, historic and special places, and vibrant community spaces add to the value of communities.

Concerns Regarding the Environment

Similar to the Park and Open Space Plan engagement process, Imagine Madison heard concerns from the public about environmental health, specifically to lakes, streams, urban canopy, biodiversity, agriculture, landfills, energy usage, and drinking water. Parks play a vital role in preservation of natural habitat, and rely significantly on healthy lakes and streams for community recreation. On-going efforts to improve our environment under increasing environmental pressure will be a priority of the City

6.6 Neighborhood Development Plans

Neighborhood Development Plans (NDPs) identify land use and proposed parkland along largely undeveloped lands at the City of Madison's periphery. The plans provide a framework for the growth and development of the City's peripheral urban expansion areas where development is expected to occur in the near future. NDPs are created through an extensive planning and public input process. New parkland proposed by NDPs is shown in Exhibit 5: New Parkland Identified in Neighborhood Development Plans.

Current NDPs identify 52 new parks along the City's periphery totaling 384 acres. Of the seventeen developed Neighborhood Plans, ten plans call for new parkland development, with 20 of the 52 proposed new parks in the Northeast Neighborhoods Development Plan. The proposed quantity of new parks in each NDP are as follows:

- Cherokee: 1
- Elderberry: 5
- Felland: 1
- Junction Road: 1
- Marsh Road: 1
- Midtown: 3
- Northeast: 20
- Pumpkin Hollow: 9
- Sprecher: 5
- Yahara Hills: 6

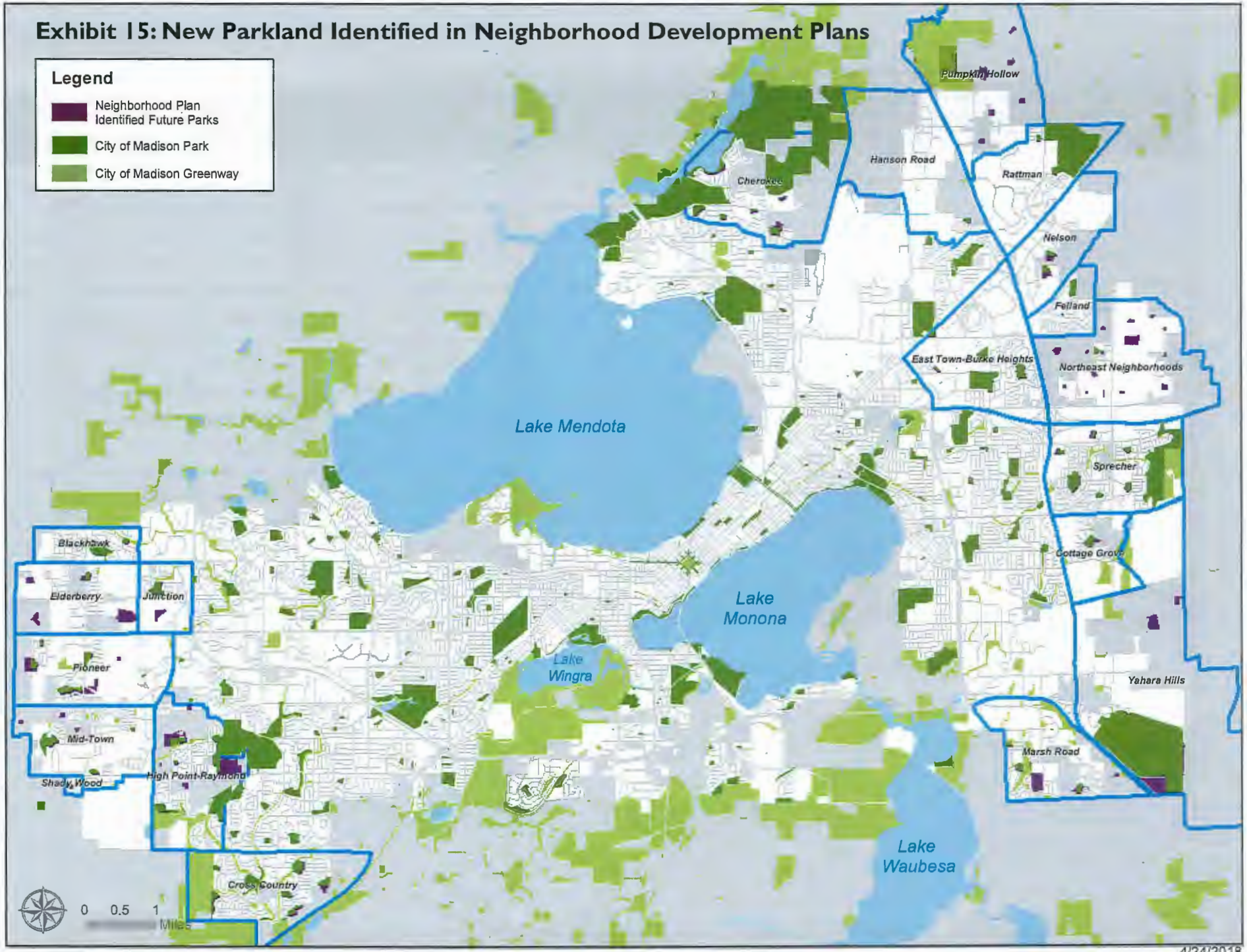
New parkland identified in NDPs is determined by using parkland dedication requirements for new residential development. Reviewing the existing NDP proposed population build-out, in comparison with the City's standard for parkland dedication, many of these neighborhoods would fall short of the City's standards for parkland dedication once the neighborhood is fully developed. Staff will continue to work with City agencies involved in developing these plans to ensure that future neighborhoods have adequate parkland to meet future population growth.

Table 6.10: Neighborhood Development Plan Proposed Park Acreages as of 1/1/2018[05]

NDP	Estimated Population at Build-Out	Existing City of Madison Parkland	Proposed City of Madison Parkland	Mini,Neigh, & Community Parkland at Full Build Out	Park Acreage per 1,000 residents
Cherokee	5,236	44.07	6.11	50.18	9.58
Cottage Grove	5,262	10.25	3.77	14.02	2.66
Cross Country	7,803	63.86	5.99	69.85	8.95
Elderberry	9,441	4.6	46.28	50.88	5.39
Felland	2,747	13.52	0.59	14.11	5.14
Hanson Road	917	3.03	0.90	3.93	4.29
High Point-Raymond	12,155	285.9	19.86	305.76	25.15
Junction	4,139	14.33	8.89	23.22	5.61
Marsh Road	4,699	13.32	5.72	19.04	4.05
Midtown	7,189	31.88	7.90	39.78	5.53
Nelson	3,642	11.15	9.43	20.58	5.65
Northeast Neighborhoods	18,433	4.75	50.96	55.72	3.02
Pioneer	9,340	16.73	26.78	43.51	4.66
Pumpkin Hollow	10,779	0	40.85	40.85	3.79
Shady Wood	301	2.16	1.98	4.14	13.74
Sprecher	11,177	204.57	4.89	209.46	18.74
Yahara Hills	6,856	43.59	138.30	181.89	26.53
Grand Total	120,116	762.96	383.96	1146.92	9.55

05 This table will be updated with the anticipated 2018 adoption of Junction, Elderberry & Pioneer NDP's. NDP's with increase in proposed parkland are excluded from this table.

Exhibit 15: New Parkland Identified in Neighborhood Development Plans



6.7 City of Madison Downtown Plan

The purpose of the *Downtown Plan* is to describe the desired future for Madison's downtown and to provide a framework to help achieve it. It establishes a decision making framework to ensure that incremental actions made over time (such as budgeting and land use decisions) achieve a common vision for the future. The City of Madison *Downtown Plan* was adopted in July 2012.

The recommendations proposed in the *Downtown Plan* were prepared and developed through a 3+ year planning process based on a vigorous public input process. The public comments and suggestions from this process can be viewed at the City's website for the *Downtown Plan* at: https://www.cityofmadison.com/dpced/planning/documents/Downtown_Plan.pdf

The *Downtown Plan's* recommendations regarding parks and open spaces are primarily found in the sections entitled "Key 1: Celebrating the Lakes" and "Key 8: Expanding Recreational, Cultural and Entertainment Offerings". Notable recommendations include:

- Expanding the eastern portion of Law Park to create a signature city park and public gathering place, including a shelter based on Frank Lloyd Wright's boathouse design for this park, short term boat docking and land bridge/plazas connecting the park to the heart of Downtown.
    + This is currently in progress with $500,000 allocated to the Parks Capital Budget in 2018.
- Completing the Lake Mendota pedestrian-bicycle path by acquiring the remaining parcels and constructing the segment between Butler Street and Lake Street. This segment will complete the remaining 25% of the 3-mile long lakeshore path from James Madison Park to Picnic Point.
- Creating a gateway entrance in that portion of Brittingham Park along John Nolen Drive between Bedford Street/North Shore Drive and Broom Street. This area is proposed to be redesigned to include greatly enhanced landscaping, expanded use opportunities, and a redesigned dog park.
    + This work is currently in process with the redesigned Brittingham dog park anticipated to be completed in 2019.
- Restoring Brittingham Beach and reactivating the existing shelter, including the potential rental of small sailboats, canoes and kayaks, a new fishing pier and possibly establishing food service.
    + The Madison Parks Division partnered with Brittingham Boats in 2013 to improve the shelter, and provide rentals for kayaks, canoes, stand up paddle boards, row boats, and paddle boats, and a small cafe.
- Establishing a new neighborhood park near Bassett Street and West Johnson Street intersection to meet the needs of the under served high-density housing at this location.
    + City is currently reviewing options for developing a new neighborhood park.
- Preparing new master plans for James Madison Park and Brittingham Park.
    + The Parks Division is currently conducting a robust master planning effort for James Madison Park, with anticipated completion in 2018.

Chapter Seven: Park Acquisition, Development, and Improvement Mechanisms

Resources are continuously needed to build and maintain City parks. The City of Madison has established a strong record of developing innovative funding mechanisms for infrastructure and programming.

This Chapter focuses on four factors of parkland development and improvements:

- Parkland acquisition
- Parkland development
- Revenues
- Partnerships and volunteer programs

In this Chapter

Parkland Acquisition

Parkland Development

Revenues

Partnerships and Volunteer Programs

7.1 Parkland Acquisition

Needs Assessment

Wisconsin State Statutes permit local governments to enact ordinances requiring developers to provide land and/or funds for the development of public parks. Municipalities codified these developer obligations in two ways, either through the land dedication ordinance and/or through impact fees. Land dedication ordinances require developers to dedicate a specific amount of land area for public parks as part of the subdivision approval process. This amount of land is based on a formula relating the parkland area to the number of proposed dwelling units. In situations where the City of Madison determines it is not feasible or desirable to acquire additional parkland, this requirement includes the option for the City to receive a monetary amount in lieu of the land. The fees collected are then used by the City to acquire parkland in a more appropriate location.

Prior to 2017, the requirements for land dedication and impact fees were based on a Public Facility Needs Assessment prepared internally in 2002 by Parks Division staff. In accordance with State Statutes, the City hired an outside consultant to prepare a new Public Facility Needs Assessment. This new needs assessment was prepared in 2016 using data gathered from around the nation and within Wisconsin, the City's Park and Open Space Plan, and the City's existing park inventory. Recommendations from the Needs Assessment were enacted on November 1, 2016 through Legislative File 43500, amending sections of the Madison General Ordinances. Implementation of the new park impact fees based on this Needs Assessment began on January 1, 2017 and will be fully implemented over a three-year period (80% in 2017, 90% in 2018, and 100% in 2019 and beyond).

Parkland Dedication

The parkland dedication requirements adopted in 2017, ensure that new residential development will be provided with parkland at the current level of service of 10+ acres/1,000 residents. Previous land dedication requirements fell short of meeting this standard as shown in Figure 7.1.[06] The 2017 parkland dedication requirements reflect a level of service of 10.13 acres/1,000 residents as identified in the Needs Assessment. This level of services includes all active parkland such as sports complexes, some trafficways, and some special parks.

The new parkland dedication ordinance added a category for large multifamily units (four bedrooms or more), as well as updating the requirement for age-restricted units and group living quarters reflective of housing development trends. The new ordinance also provided exemptions for low-cost housing and updated requirements for accessory dwelling units, which became permissible with enactment of the new Zoning Code in 2013.

Figure 7.1: Comparison of 2002 and 2016 Parkland Dedication Requirements

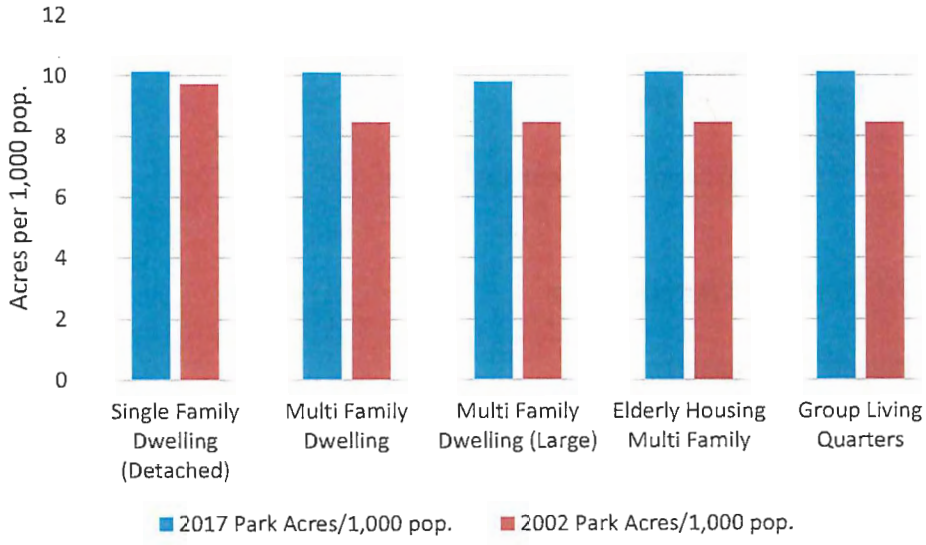


Table 7.1: Parkland Dedication Analysis[07]

Unit Type	2017 Dedication Required (sf)	2002 Dedication Required	2017 Park Ac./1,000 Residents	2002 Park Ac./1,000 Residents
Single Family Dwelling Unit (Detached)	1081	1100	10.13	9.71
Multi Family Dwelling Unit (fewer than 4 bedrooms)	734	700	10.40	8.46
Multi Family Dwelling Unit (4 bedrooms or more)	1424	700	9.85	8.46
Age Restricted Multifamily	573	350	10.12	8.46
Group Living Quarters	410	350	10.12	8.46

06 Based on analysis of 100 proposed units of each dwelling type.

07 The 2002 land dedication requirements did not differentiate between multifamily units with more than 3 units and group living quarters.

Park-Land Impact Fees

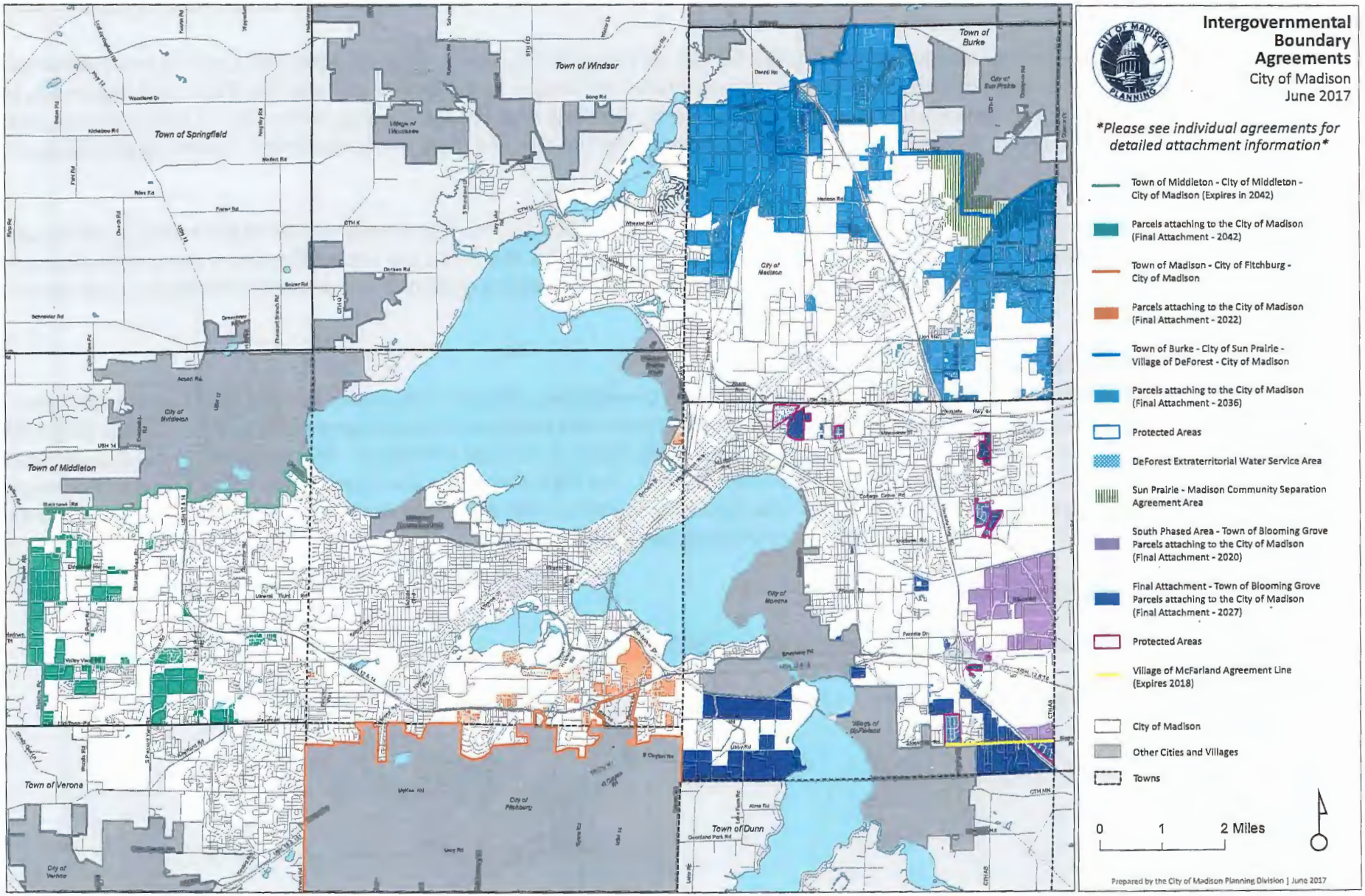
In situations where the City of Madison determines it is not feasible or desirable to acquire additional parkland as part of new residential development, developers are required to pay a monetary amount (Park-Land Impact Fee) in lieu of the land. The Park-Land Impact Fee ensures that when a development cannot dedicate parkland within its property, the developer provides funding to the City to independently purchase parkland. This requirement assures that the demand for parkland caused by the increase in population from new residential development is met.

The Park-Land Impact Fee is calculated based on the average assessed value of land in the City as determined by the annual certified tax roll to accommodate varying square foot land prices across the city. By using this method, the Park-Land Impact Fee better recognizes the cost to the City to acquire parkland and the annual fluctuations in land values, as well as eliminating confusion and potential challenges to the impact fee determination.

Intergovernmental Agreements

In addition to parkland dedicated in conjunction with new residential development, Madison will acquire existing parkland in neighboring communities as part of intergovernmental agreements. The City of Madison has intergovernmental agreements with the Towns of Blooming Grove, Burke, Madison, and Middleton to attach parcels in these communities to the City of Madison. This will result in the City of Madison obtaining several new parks that were previously in other municipalities. The City of Madison anticipates seven new parks will become part of the City of Madison park system by 2027. The City has also reached agreements with three neighboring communities to acquire 15 new parks by 2036. See Exhibit X for new parks due to Intergovernmental Agreements.

- Town of Madison - Final Attachment in 2022
  - Three new parks.
- Town of Blooming Grove - Phased Attachments in 2020 and 2027
  - Four new parks
- Town of Burke - Final Attachment in 2036
  - Eight new parks


Intergovernmental Boundary Agreements
City of Madison
June 2017
Please see individual agreements for detailed attachment information
Town of Middleton - City of Middleton - City of Madison (Expires in 2042)
Parcels attaching to the City of Madison (Final Attachment - 2042)
Town of Madison - City of Fitchburg - City of Madison
Parcels attaching to the City of Madison (Final Attachment - 2022)
Town of Burke - City of Sun Prairie - Village of DeForest - City of Madison
Parcels attaching to the City of Madison (Final Attachment - 2036)
Protected Areas
DeForest Extraterritorial Water Service Area
Sun Prairie - Madison Community Separation Agreement Area
South Phased Area - Town of Blooming Grove Parcels attaching to the City of Madison (Final Attachment - 2020)
Final Attachment - Town of Blooming Grove Parcels attaching to the City of Madison (Final Attachment - 2027)
Protected Areas
Village of McFarland Agreement Line (Expires 2018)
City of Madison
Other Cities and Villages
Towns
0
1
2 Miles
Prepared by the City of Madison Planning Division | June 2017
Town of Springfield
Town of Windsor
Town of Burke
Town of Middleton
Town of Verona
Town of Dunn
City of Madison
City of Middleton
City of Monona
City of Fitchburg
City of Verona
Village of McFarland

7.2 Parkland Development

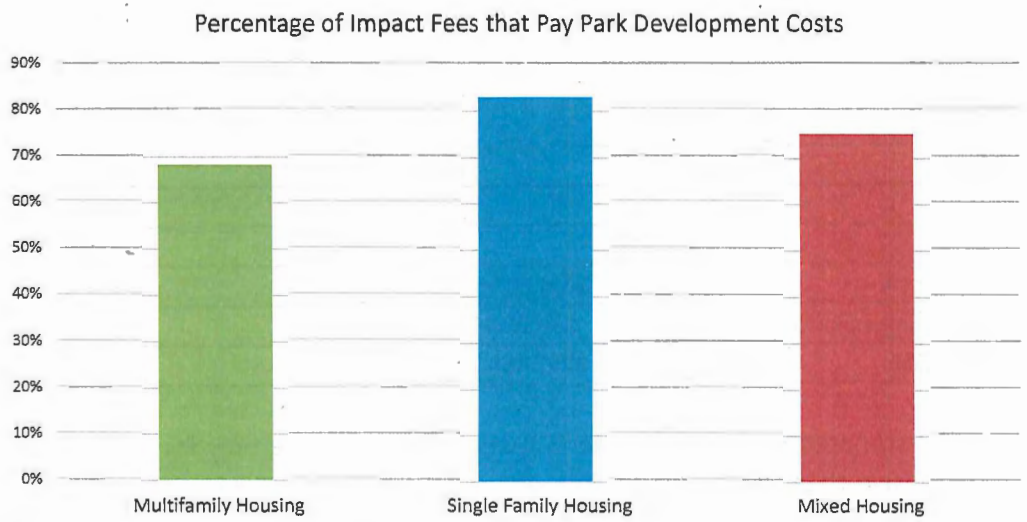
Funding for development of facilities in new parks is typically through Park-Infrastructure Impact Fees and/or general obligation debt appropriated through the Capital Budget process. This section of the plan reviews the role of Park-Infrastructure Impact Fees. Information regarding park development funding through general obligation debt and other mechanisms is discussed in Chapter Eight.

Park-Infrastructure Impact Fees

In addition to the Park-Land Impact Fee, the Madison General Ordinances require developers to pay a Park-Infrastructure Impact Fee to offset costs necessary to develop the park. The Park-Infrastructure Impact Fee funds park development at a comparable level to existing park facilities and is based on the number of units and type of housing developed. This fee was updated in 2016 as part of the updated Needs Assessment and subsequent ordinance amendment and implemented on January 1, 2017.

Prior to the 2017 ordinance update, impact fees had to be spent in the district where they were accumulated, development patterns lent themselves to create some districts flush with impact fees, while other adjoining districts were short on funding to address infrastructure needs. The 2017 ordinance amendment reduced the existing 11 benefit districts to 4 districts to create a more equitable distribution of impact fee funding.

Figure 7.2: Example Scenario of Park Impact Fees vs. Park Development Costs



While park impact fees offset park development costs, they typically do not fund the entire park development. For example, Table 7.2 on the following page identifies potential facility development costs for a mini, neighborhood, and community parks. Using the City's standard of 10+ acres/1,000 population, a new 10-acre neighborhood park for 1,000 residents would require a payment of between $530,000 and $640,000 in Park-Infrastructure Impact Fees. As shown in Figure 7.2, compared to the cost to develop a 10-acre neighborhood park (Table 7.2), the acquired fees may only offset the park development costs by an average of 74% depending on the type of housing development.

Providing a direct cost correlation is complex and includes many factors. Figure 7.2 shows that the type of housing development within a community is one of many variables impacting funding available for park development due to park impact fees and therefore cannot be the only source for funding park development.

Table 7.2 Potential Park Facility Development Costs[08]

Mini Park (1.7 ac)		Neighborhood Park (10 ac)		Community Park (50 ac)	
Master Plan	$8,000	Master Plan	$20,000	Master Plan	$80,000
Site Engineering	$10,000	Site Engineering	$20,000	Site Engineering	$250,000
Grading and Site Prep	$20,000	Grading and Site Prep	$50,000	Grading and Site Prep	$100,000
Finish Grading & Restoration	$10,000	Finish Grading and Restoration	$100,000	Finish Grading and Restoration	$300,000
Landscaping	$10,000	Landscaping	$40,000	Landscaping	$80,000
Utility Services	$5,000	Utility Services	$10,000	Utility Services	$20,000
(1) Playground	$80,000	(1) Playground	$80,000	(1) Playground with play equipment for 2-5 and 5-12	$160,000
(2) Picnic Tables	$6,000	(5) Picnic Tables	$15,000	(7) Picnic Tables	$21,000
(1) Park Sign	$2,000	(1) Park Sign	$2,000	(1) Park Sign	$2,000
(1) Park Kiosk	$7,000	(1) Park Kiosk	$7,000	(1) Park Kiosk	$7,000
(3) Trash/Recycling Bins	$1,500	(7) Trash/Recycling Bins	$3,500	(10) Trash/Recycling Bins	$5,000
(3) Benches	$4,500	(6) Benches	$9,000	(10) Benches	$15,000
(1) Paved 1/2 Basketball Court	$30,000	(1) Bike Rack	$5,000	(1) Bike Rack	$5,000
(1/4 mi) Paved Trails	$65,000	(1) Neighborhood Backstop	$5,000	(8) Tennis Courts with lights	$900,000
		(1) Open-air Shelter	$60,000	(3) Baseball Diamonds (with lights and bleachers)	$600,000
		(3) Soccer Fields	$15,000	(1) Shelter building with restroom	$1,000,000
		(25) Car parking lot with lighting	$100,000	(1) Open air shelter	$50,000
		(1/2 mi) Paved Trails	$130,000	(4) Soccer Fields	$10,000
				(100) Car parking Lot with lighting	$400,000
				(1 mi) Paved Trails	$260,000
Subtotal	$259,000		$671,500		$4,265,000
Contingency (15%)	$38,850		$100,725		$639,750
TOTAL	$297,850		$772,225		$4,904,750

The estimated park development costs in Table 7.2 are only for new development on undeveloped (typically agricultural) property, which is less expensive than redeveloping an existing developed property (infill development). As the City continues to increase the density of residential areas, the City may need to rely more heavily on acquisition and development of existing developed sites for parkland as opposed to agriculture land. The City is looking towards existing developed sites to locate a park as part of the recommendations of the Downtown Plan.

08 The above list is not a list of typical facilities, and is only used specifically as an analysis to better understand impact fees. Cost includes a general amount for site grading, utility constructions, and subbase preparation. Conditions will vary for each park depending on specific facilities installed. Master Planning and Site Engineering Costs are estimated using City Staff costs for Mini and Neighborhood Parks based on 2018 pricing. Master Planning and Site Engineering costs for Community Parks are estimated using consultant fees.

Park development to convert an existing developed property to parkland (especially in the downtown) will incur significant costs, including acquisition, demolition, and potential site remediation. As can be seen in Appendix X: DNR Inventory of Contaminated Properties, properties in developed areas such as the downtown may have contamination issues. Depending on the proposed construction and existing contamination, remediation of the site can cost anywhere from several thousand to several hundreds of thousands of dollars per acre.

As the City of Madison relies more on redevelopment for park facilities, it is reasonable to expect that the total park development costs could triple or quadruple when dealing with redevelopment of existing parcels, resulting in impact fee revenue contributing significantly less of the total park development costs.

The City has allowed developers to construct park improvements on parkland dedicated through a subdivision plat rather than pay park-infrastructure fees. This process requires an approved developer's agreement, approved by City staff and the Common Council, to construct park amenities identified in the adopted master plan, and constructed to City standards. This process allows developers to expedite parkland development, constructing the park along with the subdivision development, rather than waiting for the City to develop the park through the capital budget process. Since the 2012-2017 Park and Open Space Plan, the City has entered into developer agreements for construction of Sugar Maple Park and Thousand Oaks Park. Sugar Maple Park was constructed and opened in 2017, and Thousand Oaks Park is anticipated to be completed in 2018.

7.3 Revenues

The City of Madison collects Park-Land and Park-Infrastructure Fees as discussed previously in this chapter. These fees must be used to acquire land or to make park improvements. Impact fee revenues are highly variable, as they depend on the strength of the local real estate market. Large developments can also push revenues higher in certain years. As shown in Figure 7.3, there was a market downturn in 2009; the market began seeing a dramatic increase in the number of residential building permits starting in 2011. Table 7.3 shows the fees collected from 2012-2017.

Figure 7.3: 2009-2016 City of Madison Issued Residential Building Permit

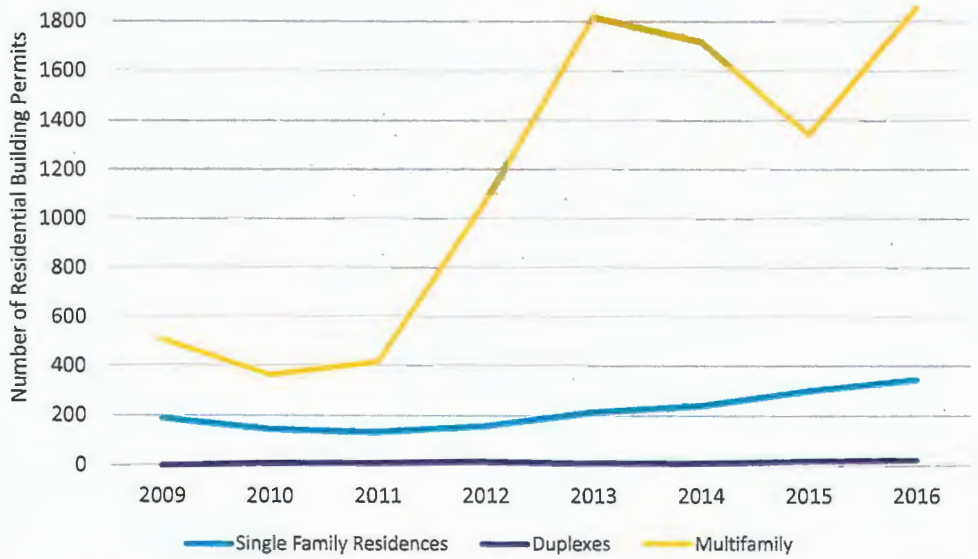


Table 7.3: 2012-2016 Park-Land and Park-Infrastructure Fees

	2012	2013	2014	2015	2016	2017
Park Acquisition (Park-Land Fees)	$1,280,182	$3,521,143	$1,682,318	$4,158,798	$3,658,532	$3,179,765
Park Development (Park-Infrastructure Fees)	$ 558,551	$1,371,752	$812,433	$1,662,660	$1,864,063	$2,187,331
Total Impact Fees	$1,838,733	$4,892,895	$2,494,751	$5,821,458	$5,522,595	$5,367,066
% Change from Previous Year	-	166.1%	-49.0%	133.3%	-5.1%	-2.8%

Since 2012, parkland dedications and/or Park-Land Impact Fees have resulted in the following park acquisitions or park expansions:

Parkland Dedication
- Acer Park
- Allied Park
- Camar Park
- Hill Creek Expansion
- Jeffy Trail Park
- Kestrel Park
- North Star Park Expansion
- Sugar Maple Park
- Thousand Oaks Park
- Woods Farm Park

Park-Land Impact Fees
- Cherokee Marsh Expansion
- McPike Park Expansion (formerly Central Park)
- Merrill Springs Park Expansion

The City of Madison offsets a portion of operational costs with General Park Revenues, which is generated from items such as athletic field reservation fees, lake access fees, concessions, cross country ski permits, dog park licenses, disc golf fees, lease agreement revenue, scheduling fees, shelter reservations, and special event permits. Park use fees (athletic field use fees, event permits, and shelter reservation fees) account for approximately 40% of the General Park Revenue, and lake access and boating permit fees account for an additional 15%. Additional revenues that are not associated with General Park Revenue include the Warner Park Community Recreation Center (WPCRC), Aquatics (the Goodman Pool and beaches), Olbrich, mall special charges, cemetery, and golf course revenues. These facilities generate revenue that is reinvested into their respective operations and programs. Grants and private donations are used primarily in funding capital improvement projects. Many of the City's largest park projects include significant amounts of private contributions.

Starting in 2015, the City of Madison imposed an Urban Forestry special charge on City parcels to offset operational costs in the Forestry Section. This special charge partially offset Forestry operational costs in 2015 and 2016 and will fully offset Forestry operational expenses in 2017 and 2018. The fee determination is annually approved by the Common Council as adopted in MGO Sec. 4.095 and is collected as part of the municipal services bill issued monthly by the Madison Water Utility

Table 7.4 below illustrates General Park Revenue and Urban Forestry Special Charge Revenue from 2012-2017.

Table 7.4: 2012-2017 General Park Revenue[09]

Category	2012	2013	2014	2015	2016	2017
General Park Revenue	$1,176,207	$1,381,237	$1,594,868	$1,539,709	$1,715,942	$1,803,673
Donations-Grants	$107,005	$176,923	$129,614	$42,184	$32,909	$16,787
Urban Forestry	$0	$0	$0	$1,000,000	$2,500,000	$3,100,345
Total	$1,283,212	$1,558,160	$1,724,482	$2,581,893	$4,248,851	$4,920,802
% Change from Previous Year	-	+21.4%	+10.7%	+49.7%	+64.6%	+15.8%

The City of Madison Parks Division manages one trust fund with a total value of approximately $700,000. This trust fund covers approximately $25,000 of annual parks beautification expenses. The Parks Divisions also manages the Forest Hill Cemetery perpetual care fund, which has been funded with proceeds from lot sales. An annual allocation is made towards the maintenance of the cemetery from this fund. Trust and donation funds are used for appropriate projects and improvements pursuant to the terms of the donation or trust and with the Board of Park Commissioners' approval.

Table 7.5: 2012-2016 WPCRC, Golf, and Aquatics Revenues

	2012	2013	2014	2015	2016	2017
WPCRC	$223,960	$216,831	$207,334	$201,874	$224,848	$228,419
Golf Courses	$2,447,912	$2,798,144	$2,667,619	$3,065,706	$3,217,296	$2,859,254
Aquatics	$464,006	$417,676	$348,400	$401,192	$396,600	$375,824
Total Revenue	$3,135,878	$3,432,651	$3,223,353	$3,668,772	$3,838,744	$3,463,497
% Change from Previous Year	-	9.5%	-6.1%	13.8%	4.6%	-9.8%

09 Revenue identified in this table does not include the Forest Hill Cemetery, golf courses, State Street/Mall Concourse special charges, Olbrich Botanical Gardens, Aquatics, or the Warner Park Community Recreation Center. It also does not include donations to capital projects.

7.3 Partnerships and Volunteer Programs

Madison Parks Foundation[10]

The Madison Parks Foundation is a private non-profit organization. Founded in 2002, the Foundation is an enthusiastic advocate for City of Madison's parks and open spaces. The Foundation is committed to identifying and supporting park improvement opportunities by encouraging and mobilizing the financial support of neighborhood groups, foundations, and individuals. The resources of the Madison Parks Foundation are not intended to replace or substitute for tax revenues generated for the annual ongoing maintenance activities of the Parks Division.

The Madison Parks Foundation has been instrumental in fund-raising and providing neighborhood resources for significant park projects such as the Goodman Pool, Cypress Spray Park, Period Garden Park improvements, Carpenter-Ridgeway park labyrinth, Wexford Park playground, Elver and Reindahl splash parks, and the Rennebohm Park playground. They also assist with coordinating donor memorial bench and tree installations.

Madison Parks and Volunteers

Volunteers are critical to creating and maintaining our vibrant park system, contributing either on a one-time basis or as an ongoing commitment. In 2016, Madison Parks had 1994 volunteers who provided over 30,000 hours of time towards improving and enhancing the park system. These donated hours supplement a significant amount of Parks staff time and budget, which allows Madison Parks to provide an even greater level of service to the community. Parks staff work together with neighborhood associations and other groups to approve projects and identify potential private fund-raising sources and goals. The Parks Division can leverage these funds with existing City resources to move projects forward more quickly. Projects funded through these means vary, but some examples are additional playground equipment, landscaping, and shelters.

Some of the notable volunteer programs and events of 2016 are summarized in Table 7.6.

Table 7.6 2016 Notable Volunteer Events

Name	Dates	Number of Parks	Number of Volunteers
Adopt Ice	Jan. & Feb.	7	25
Dog Park Cleanup	Sat., March 26	8	76
Earth Day Challenge	Sat., April 23	31	186
Flower Garden Program	May - Sept.	17	33
Ride the Drive	Sun., July 31	4	91
West Fest	Sat., Aug. 27	1	54
Pickleball Lessons	June 16 - Sept. 29	1	2
Bird & Nature Walks	Sundays, year-round	3	40

10 Information obtained from Madison Parks Foundation website www.madisonparksfoundation.org/

Madison Parks strives to involve additional individuals and organized groups such as neighborhood associations, corporations, Friends groups and other affiliated organizations to commit on an ongoing basis to a specific park or project. These sustained engagements encourage collaboration between Madison Parks' staff and volunteers to address large scale improvements, safety issues in our parks, and other initiatives.

Public Private Partnerships

Over the past several years Parks has had success with creative programing and placemaking initiatives, many of which would not have been possible without public-private partnerships, which facilitated repairs to aging infrastructure. Entities that enter into agreements/contracts with Parks for these type of uses are held to high standards and specified goals, operations, and reporting procedures. Example of these initiatives include the Wingra, Brittingham, Marshall, and Olbrich boat rentals and camps, Let's Eat Out food cart nights, the Mendota and Camp Randall Rowing Clubs improvements to historic boathouses, the Biergarten at Olbrich Park, and the Mallards Baseball Stadium at Warner Park and Breese Stevens Field.

Madison School and Community Recreation

The City of Madison provides year-round activities within the park system, but does not manage recreation programs. Madison School and Community Recreation (MSCR) is the primary public recreation provider for the residents of Madison. MSCR provides the organization and coordination for a variety of athletic organizations that use City of Madison Park recreational facilities. Madison School and Community Recreation (MSCR) typically has the highest number of athletic facility reservations per year with over 80,000 participants in its recreation programs. The primary Madison park facilities used by MSCR are for softball, baseball, tennis, kickball and pontoon rides. MSCR also uses the City of Madison Park's Warner Park Community Recreation Center (WPCRC) for various programs ranging from childcare to art classes. The partnership between Madison Parks and MSCR provides a large portion of the recreational programming in Madison Parks.

Chapter Eight: Park Division Operations and Staff

In this Chapter

Structure and Responsibilities

Operating and Capital Budgets

Staffing Analysis

The Parks Division has numerous responsibilities, which include designing, planning, and maintaining the City's park system, programming, and coordination of special events and reservations. The Parks Central, East and West Operations staff are responsible for the maintenance and care of over 270 parks and 580 park facilities. Parks facilities include 82 reservable park shelters (including sun shelters) and approximately 500 athletic facilities, such as ball diamonds, tennis courts and multiuse field areas. They are also responsible for mowing an additional 925 acres of public land outside park boundaries, including greenways and road-right-of way. The Parks Conservation staff are responsible for managing over 1,700 acres of city-owned conservation parks.

The Parks Division also manages non-traditional facilities, such as the State Street/Mall Concourse, Olbrich Botanical Gardens, Goodman Pool, Forest Hill Cemetery (on the National Register of Historic Places), four golf courses, and the Warner Park Community Recreation Center. The Forestry Section is included within this Division and is responsible for street trees in public rights-of-way.

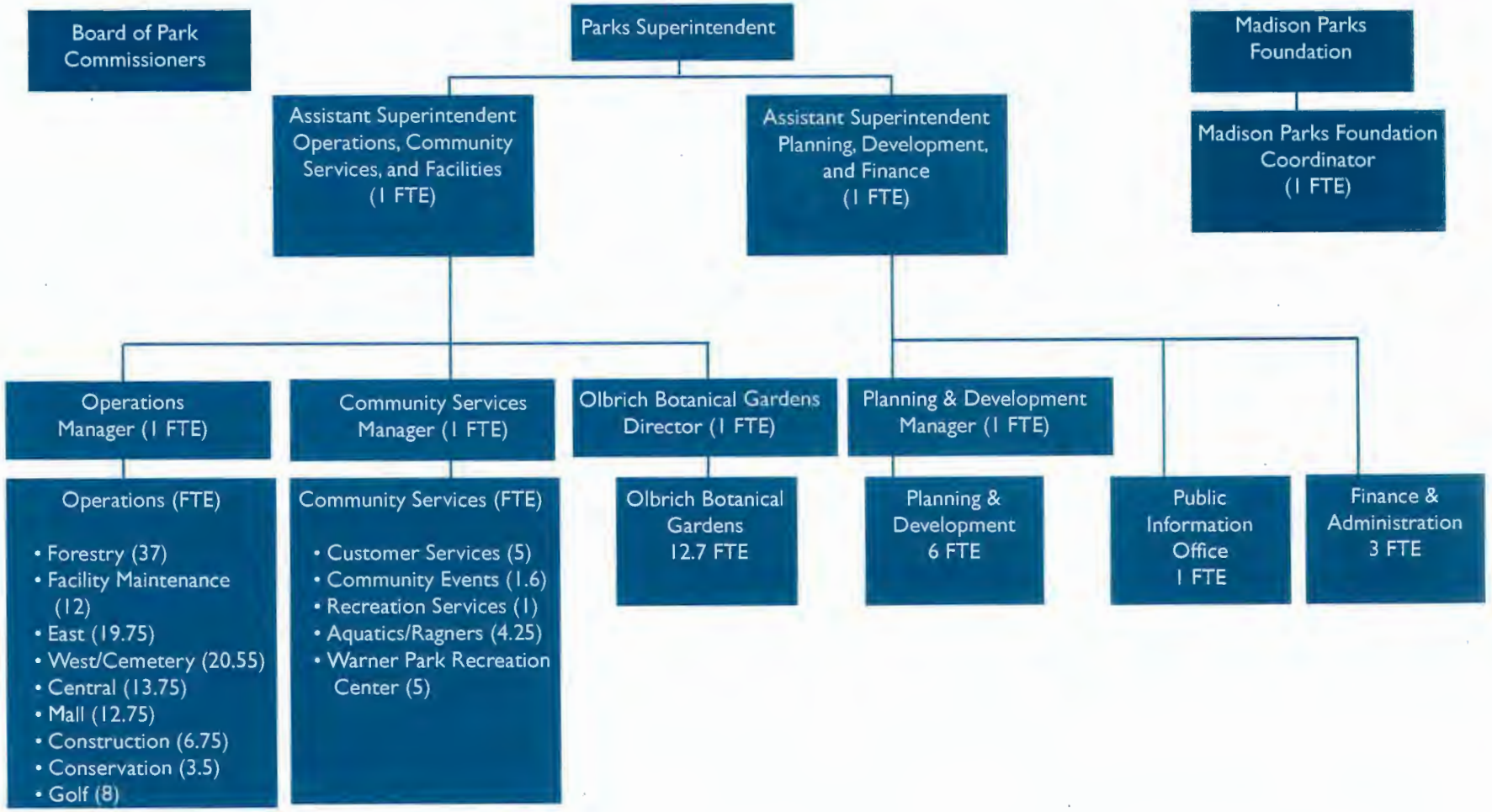
These duties are performed throughout the year by 180 full-time employees and 370 seasonal employees.

8.1 Structure and Responsibilities

In the City of Madison, the Parks Division is separate from recreation programming services. The primary recreation program is the responsibility of Madison Community and School Recreation (MSCR) run by the Madison Metropolitan School District, which has had a recreation program since 1926.

Figure 8.1 outlines the various divisions and sections within the Parks Division. The two main categories are Operations, Community Services and Facilities; and Planning, Development, and Finance. The following is a general description of the main responsibilities of each section.

Figure 8.1: Parks Division Organizational Structure



Community Services

Community Services coordinates all special events and festivals on public land, provides new event initiatives, coordinates programming events on State Street/Capitol Mall Concourse, schedules and coordinates athletic field and shelter reservations, coordinates and processes permitting such as electrical, vending, lake access, dog park, Capitol Square and State Street street-use, and public amplification, coordinates volunteer programs, and manages operations of aquatics, park rangers, and Warner Park Community Recreation Center.

Finance and Administration

Parks Finance and Administration manages payroll, purchasing, revenue billing, budgeting, and administrative policy. It also coordinates hiring procedures, human resource tasks, and employee onboarding.

Olbrich Botanical Gardens

The Olbrich Botanical Gardens provides horticultural displays and botanical collections. The garden is a public/private partnership between the Parks Division and the non-profit Olbrich Botanical Society. Olbrich Botanical Gardens serves approximately 325,530 visitors throughout the year and provides educational programs and workshops to the public.

Operations

Parks Operations is in charge of operations and maintenance of all parks, including the State Street/Capitol Mall Concourse district, and the Forestry Section. Responsibilities of Operations staff are vast and include facility construction, maintenance and repairs, shoreline cleanup and maintenance of boat ramps, docks, boathouses, and sailboat storage facilities, mowing and maintaining athletic facilities, and maintenance of trails and parking lots. Parks operation staff also maintains several boulevards, street right of ways, historic sites and bike trails. Parks Operation staff also maintain the City's cemetery, conservation lands, four public golf courses, and several landfills used as parks.

As a component of the Parks Operations department, the Forestry Section manages all street trees. They provide professional tree care and planting for over 100,000 street trees along Madison's 700 miles of city streets. Forestry is also responsible for public safety by responding to broken limbs or storm damaged trees that pose a risk to the public. Plans and recommendations regarding urban forestry and specific concerns regarding Emerald Ash Borer (EAB) are not addressed in this plan as they are being addressed separately through the City's EAB Task Force process.

Planning and Development

Planning and Development oversees all aspects of park planning and development, including long range planning and policies, park master planning, design and construction of parks, intergovernmental coordination of policies and ordinances, and assists with the site design approval process related to the dedication of parkland and park impact fees, including collection of park impact fees.

Public Information Office

The Public Information Office oversees communications by managing the Parks Division's website, blog posts, social media, news releases, photo library, and publications such as the annual calendar, the Parks Newsletter: Out & About, kiosk messaging, and promotional materials. The Public Information Office also coordinates media inquiries.

8.2 Operating and Capital Budgets

The Parks Division is funded through the City's annual budgeting process. The Parks Operating Budget includes funding for staffing, maintenance, utilities, and operational expenses. The Capital Budget provides funding for the Parks Division's capital improvement projects including new facilities, major equipment, and infrastructure repairs.

Operating Budget

The Operating Budget is funded via the property tax levy, permit fees, parks use fees, leases, and reimbursement of expenses. The Parks Division has a 2018 Operating Budget of approximately $19.9 million, excluding golf. The operating budget is offset with total revenue of approximately $6.3 million. The operating budget includes funding for the maintenance and operations of all parkland and operation of specialized facilities and services, such as the Warner Park Community Recreation Center, Olbrich Botanical Gardens, and Forestry. The City of Madison offsets a portion of operational costs with revenues generated from items such as shelter fees, dog park licenses, cross country ski permits, concessions, and lease agreements revenues.

Table 8.1: 2012-2018 Operating Budget

Year	2012	2013	2014	2015	2016	2017	2018
Parks Expenditure Authority	$12,492,725	$12,447,736	$12,955,424	$12,923,768	$14,180,676	$14,496,704	$14,850,122
Parks Revenues	$2,185,606	$2,360,852	$2,501,317	$2,550,583	$2,694,942	$2,815,442	$2,794,757
Levy Support	$10,307,119	$10,086,884	$10,454,107	$10,373,185	$11,485,734	$11,681,262	$12,055,365

The above Table 8.1 details the operating budget for the Parks Division, excluding Forestry, Golf, and Olbrich Botanical Gardens. Forestry is excluded, because it maintains right-of-way trees and is funded by the urban forestry special charge. Olbrich Botanical Gardens is excluded due to its public-private relationship with the Olbrich Botanical Society. The Parks Expenditure Authority is the total appropriation for salaries, benefits, supplies, services, and other expenditure types. Parks Revenues is all funding sources other than levy support that is attributed to the Parks operating budget. Levy support is general property tax funding. Approximately 81% of the operational expenses are funded through levy support. Levy support over the 2012 to 2018 period has been relatively stable. Operating funding beyond 2018 will be provided as a part of the City's annual budget process.

Table 8.2: 2012-2018 Parks Expenditure Authority By Service Area

Year	2012	2013	2014	2015	2016	2017	2018
Community Services	$2,347,842	$2,562,831	$2,488,140	$2,772,058	$2,509,454	$2,675,092	$2,797,409
Conservation	$357,093	$367,509	$392,626	$391,223	$354,148	$348,790	$357,509
General Parks Maintenance	$9,100,399	$8,938,988	$9,448,751	$8,923,044	$10,459,058	$10,594,233	$10,938,482
Planning and Development	$687,391	$578,408	$625,907	$837,443	$858,016	$878,589	$756,772
Total Expenditure Authority	$12,492,725	$12,447,736	$12,955,424	$12,923,768	$14,180,676	$14,496,704	$14,850,122

Table 8.2 above further breaks down the total expenditure authority into the four main service areas: community services, conservation, general parks maintenance and planning and development. The funding levels for the four service areas has stayed relatively stable from year-to-year. Changes from year-to-year are caused by changing funding levels, charges to capital projects and changes in employee positions and expense allocations.

Table 8.3: 2012-2018 Golf Budgets

Year	2012	2013	2014	2015	2016	2017	2018
Golf Expenditure Authority	$2,247,000	$3,263,842	$3,167,400	$3,016,662	$3,235,333	$3,257,656	$3,245,313

Table 8.3 above details the 2012-2018 operating budgets for the four city golf courses that are managed by the Parks Division. The golf service is budgeted to cover all expenditures with golf course revenues. It does not receive levy support.

Overall, if external revenue streams to the City are not significantly reduced, the Parks Division's budgetary outlook for the next five to ten years is positive. Anticipated growth in levy support is not likely to be high, but in conjunction with other revenue opportunities, should provide additional resources for the Parks Division. The City's system of parks and open spaces will continue to expand to meet the demands of an ever-growing population and increased funding will be needed to continue providing quality service delivery. Additionally, increasing volunteerism, growing private fund-raising, and evolving land management practices will also play a significant role in the overarching budgetary picture for Madison Parks.

There are numerous potential funding challenges facing the City in coming years mostly related to declining or stagnating state revenues. It is probable that revenue limitations to the City as a whole will have an adverse impact on funding levels for the Parks Division.

Capital Budget

The Parks Division develops and updates its five-year Capital Improvement Program every year based on a review of existing infrastructure needs, planned development, and resident and aldermanic input. Depending on funding availability and priorities, projects are identified each year to move forward for review and approval as part of the Capital Budget process. This annual adjustment accounts for changes in available funding, as well as infrastructure improvements required as part of new development.

The Capital Budget includes an annual allocation for capital improvement projects. These projects are funded primarily using ten-year general obligation bonds issued by the City with the debt service being paid by the property tax levy. Significant other revenues for Capital projects include private contributions, state grants, federal grants and impact fees. Table 8.4 highlights the Capital Budget for the Parks Division for the period 2012-2018. This funding provides for new capital assets and/or improvements to existing park assets. The level of funding has grown for over this period. Table 8.5 shows significant increases and decreases over the five years of the Capital Improvement Program due to the impact of large projects budgeted in future years. Table 8.6 identifies the role of donations and contributions becoming an ever more important aspect of capital funding. Given the potential for the overall funding reductions highlighted above, it is important to recognize that future planned capital improvements are still subject to annual appropriation as part of the City's budget process.

Table 8.4: 2012-2018 *Capital Budget*[01]

Year	2012	2013	2014	2015	2016	2017	2018
General Obligation	$4,134,500	$4,651,000	$6,859,000	$4,862,000	$6,791,000	$6,838,240	$9,556,000
Other	$4,512,400	$5,699,000	$2,362,000	$3,950,000	$9,481,000	$7,912,000	$12,152,000
Total	$8,646,900	$10,350,000	$9,221,000	$8,812,000	$16,272,000	$14,750,240	$21,708,000

01 "Other" funding includes grants, impact fees and donations. Budgets are original adopted budgets and do not include budget revisions.

Table 8.5: 2019-2023 Capital Improvement Program[02]

Source	2019	2020	2021	2022	2023
General Obligation	$6,579,000	$8,625,750	$8,370,000	$12,558,750	$9,108,750
Other	$3,806,000	$5,521,000	$2,113,000	$5,147,250	$2,201,250
Total	$10,385,000	$14,146,750	$10,483,000	$17,706,000	$11,310,000

Table 8.6: 2012-2016 Capital Donations/Contributions

Category	2012	2013	2014	2015	2016	2017
Donations/ Contributions	$99,725	$91,682	$137,219	$383,391	$471,382	$171,814.57

8.3 Staffing Analysis

This section of the plan analyzes staffing hours within the past five years in regards to planning, maintenance, and development of the City's general park facilities. It is difficult to make definitive correlations between operating and capital budgets versus additional land and responsibilities as demands placed on staff members differ from year to year, varying in terms of weather, difficulty and size of public works projects, specific requests from alder person and neighborhood associations, etc. Additionally, while staff hours may decrease, corresponding increases in technology and efficiency may reduce the required number of staff hours to complete the work.

The comparison provided in this chapter is purely an informative table. It compares data within a five-year period, corresponding to the required five year updates of the Park and Open Space Plan.

Because of the general analysis of this plan specifically as it relates to parkland, the following service areas within the Parks Division are used as indicators to compare staff hours with increased park acreage. This analysis does not include staff hours for Olbrich Botantical Gardens, Forestry or Golf.

02 The Capital Improvement Program is a plan of future expenditures for Parks Capital needs, which is subject to annual appropriation as part of the Capital Budget process.

Table 8.7: 2012-2017 Staff Hours

Year	2012	2013	2014	2015	2016	2017
Community Services	69,920	78,854	88,029	85,356	91,201	89,103
Conservation	9,628	10,253	9,734	9,573	8,848	8,987
General Parks Maintenance	203,415	197,529	202,568	209,866	210,707	210,163
Planning and Development	13,796	13,796	15,876	18,752	17,704	18,012
Total	296,759	300,432	316,207	323,547	328,460	326,265
Acreage Change from Previous Year		+2.25 Acres	-25.18 Acres	+2.97 Acres	+35.76 Acres	+6.12 Acres

Chapter Nine Strategies

1. Strategy: Improve lake and stream water quality.
    - Connect the community to water by improving water access and quality to promote water recreation.

2. Strategy: Develop park facilities to accommodate diverse activities and gatherings.
    - Provide flexible spaces that can respond to changing recreational trends and park needs
    - Incorporate preferences specific to different cultures, age groups, and abilities.
    - Create flexible spaces that can be used for multiple recreation opportunities.
    - Develop reservable recreational fields and courts that can be used for multiple purposes and that have multiple facilities at one location, allowing organizers to host games, practices and tournaments at one location.
    - Ensure parks in high-density areas provide a wide variety of uses to meet community and capacity demands by creating flexible spaces that can be used for multiple recreation opportunities.

3. Strategy: Protect and enhance natural and cultural resources.
    - Manage invasive species in high quality natural areas.
    - Continue to acquire conservation parkland.
    - Continue to develop native habitat as identified in the Pollinator Protection Task Force Report.
    - Preserve the unique habitats and ecosystems within conservation parks.
    - Continue to recognize, preserve and enhance historic parks.

4. Strategy: Develop a healthy and diverse urban tree canopy.
    - Improve the City's capacity to withstand future change through increasing tree canopy diversity, and continue to promote and expand the urban tree canopy, particularly in areas susceptible to the heat-island effect.

5. Strategy: Improve public access to lakes.
    - Continue to promote water recreation.
    - Something about beaches.

6. Strategy: Ensure that new development occurs in locations that can be efficiently served to minimize costs on the community as a whole.
    - Minimize the number of mini parks along the City's periphery by requiring larger, minimum five-acre parks.
    - Investigate opportunities to expand existing parkland to meet parkland needs.
    - Evaluate parks coming into the City through intergovernmental agreements to provide adequate funding to address necessary infrastructure improvements.
    - Madison Parks shall evaluate existing operations facilities and staffing to ensure levels of service are maintained with the increasing responsibilities associated with new residential development, specifically at the City's rapidly developing periphery.
    - Evaluate parks coming into the City through intergovernmental agreements to provide adequate funding to address necessary infrastructure improvements.

7. Strategy: Create safe and affirming community spaces that bring people together and provide social outlets for underrepresented groups.
    - Incorporate public engagement methods and partnerships, which help to ensure all members of the Madison community are represented in the park planning process.
    - Provide a park system that meets the needs to Madison's increasingly diverse population by working with neighborhood residents and local groups to remove barriers to engagement and identify park and open space preferences that create equitable, inclusive park experiences.

8. Strategy: Pursue regional solutions to regional issues.
    - The network of trails and parks in the City of Madison is a joint effort by Dane County and the City of Madison. City and county agencies should continue to work together to create a comprehensive system of greenspace connections. (Dane County POSP)
    - Where possible, enhance or develop regional recreation facilities identified by the Wisconsin SCORP for the Southern Gateways Region to address supply shortages.
    - Continue joint planning efforts with Dane County to implement recommendations of the Dane County Park and Open Space Plan on property within the City of Madison.
    - Develop joint-use agreements with organizations that provide public recreational amenities that can fill outdoor recreation demand in areas where it is not appropriate to acquire parkland.

9. Strategy: Increase connectivity between parks including pedestrian, biking and water trails.
    - The network of trails and parks in the City of Madison is a joint effort by Dane County and the City of Madison. City and county agencies should continue to work together to create a comprehensive system of greenspace connections. (Dane County POSP)

10. Strategy: Improve the City's Division capacity to withstand future environmental changes.
    - Continue to incorporate best management practices for stormwater runoff and infiltration to minimize the predicted impacts of increased storm severity.
    - Develop a strategy to improve winter activities impacted by climate change.
    - Coordinate with educational agencies to improve public knowledge of best practices related to climate change, sustainability/adaptability efforts and land stewardship in Madison Parks.
    - Improve the Park's Division's capacity to withstand future change through the provision of additional resources dedicated towards analyzing and planning for the impacts of climate change and other environmental pressures.

11. Strategy: Continue to acquire parkland to alleviate parkland deficiencies and address increasing density.
    - Review parkland dedication and park impact fees every ten years.
    - In areas of high density preserve undeveloped land for open space or acquire parkland.
    - Ensure that new parkland in NDP's meets parkland requirements.
    - Develop joint-use agreements with organizations that provide public recreational amenities that can fill outdoor recreation demand in areas where it is not appropriate to acquire parkland.
    - Where there is no walkable access to mini, neighborhood, conservation or community parkland, but there are other public recreation spaces that provide outdoor recreation amenities, engage these entities to explore partnerships to enhance outdoor recreation to the surrounding community.
    - Provide adequate funding to acquire and develop parkland in high-density areas, particularly as it relates to the conversion and redevelopment of low or non-residential properties as identified in the Comprehensive Plan.

12. Strategy: Build on the existing positive relationship with public and private organizations for donations and volunteers to aid in park system development.

    - Continue to increase opportunities and effectiveness of organizations and partnerships dedicated to engaging communities in their local parks.
    - Continue to improve existing partnerships to ensure efforts are distributed equally across geographic regions of the City and that efforts are performed in conjunction with identified land management strategies and master plans.
    - Investigate opportunities to collaborate on development and maintenance of popular recreation activities such as community gardens and edible landscapes, dog parks, and non-commuter recreational biking (i.e. cyclocross, mountain, fat tire, etc.).