

PLANNING CONSIDERATIONS

DRAFT

Planning for the next five years and beyond of public lands management must take into account trends of increased population growth, changing demographic composition and increased interest in recreation.

DEMOGRAPHICS

Demographic information is based on the 2010 U.S. Census, and estimates and projections from the Wisconsin Department of Administration.

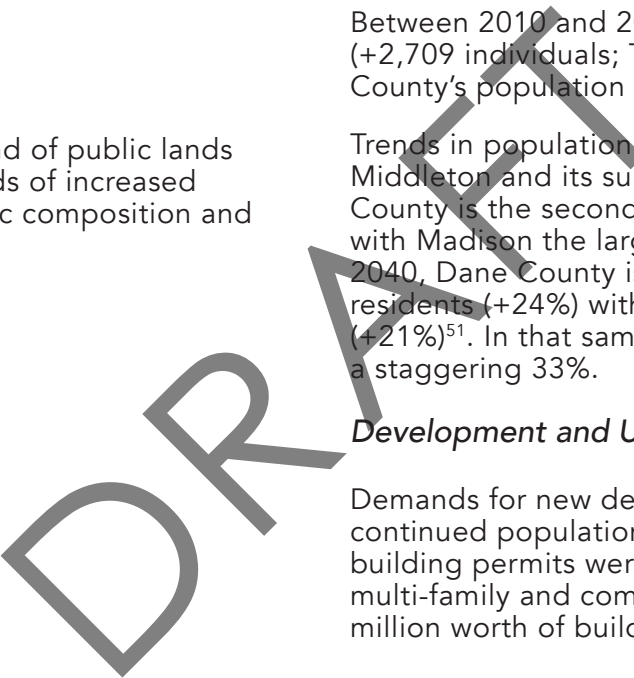
Population

Between 2010 and 2017 Middleton’s population grew over 15% (+2,709 individuals; Table 9-1)⁴⁸. Over that same period, Dane County’s population increased by 36,714 individuals (+7.5%)⁴⁹.

Trends in population growth are expected to continue for Middleton and its surrounding communities (Table 9-2)⁵⁰. Dane County is the second most populated county in Wisconsin, with Madison the largest municipality within the County. By 2040, Dane County is estimated to house an additional 120,000 residents (+24%) with Madison increasing by 31,077 residents (+21%)⁵¹. In that same period, Middleton is expected to grow by a staggering 33%.

Development and Urbanization

Demands for new development demonstrate the City’s continued population growth. Between 2010 and 2017, 35-70 building permits were issued each year for new single family, multi-family and commercial buildings. In 2017 alone over \$97 million worth of building permits were issued⁵².



48 Wisconsin Demographic Services Center. 2017. Official Final Estimates, 1/1/2017, Wisconsin Municipalities, With Comparison to Census 2010. Wisconsin Department of the Administration. PDF File
49 Wisconsin Demographic Services Center. 2017. Official Final Estimates, 1/1/2017, Wisconsin Counties, With Comparison to Census 2010. Wisconsin Department of the Administration. PDF File
50 Wisconsin Demographic Services Center. 2013. Population and Household Projections, produced in 2013, based from 2010 Census. Wisconsin Department of Administration. Accessed February 20, 2018 <http://doa.wi.gov>
51 Egan-Robertson D. 2013. Wisconsin’s Future Population: Projections for the State, Its Counties and Municipalities, 2010-2040. Prepared for the Wisconsin Department of Administration, Demographic Services Center. UW-Madison Applied Population Laboratory, Madison, WI. PDF File
52 Data sourced from the City of Middleton

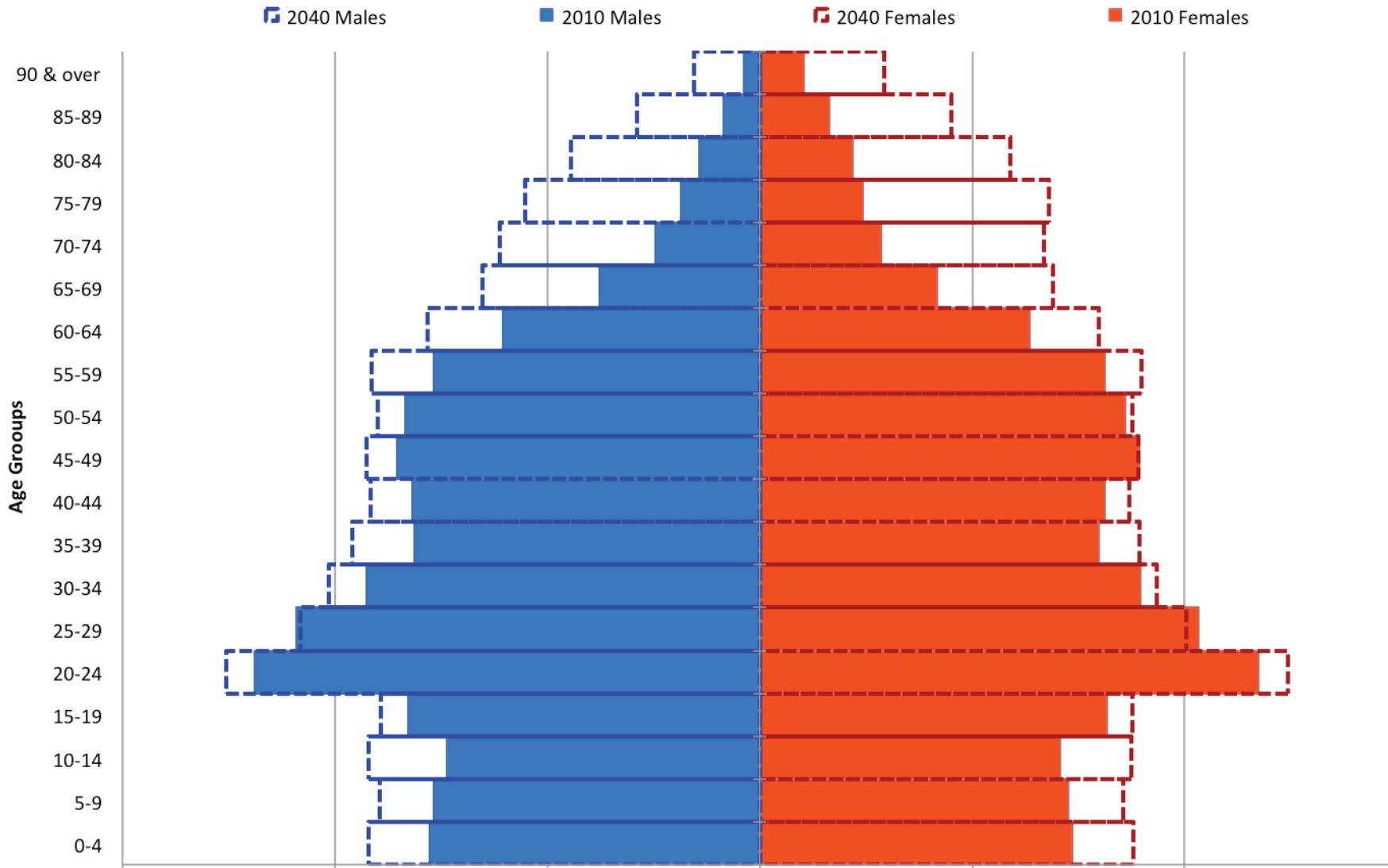


Figure 9-1. Dane County Age-Sex Pyramid, 2010 and 2040 Projections. Provided by the Wisconsin Department of Administration, 2013.

Age

As Middleton and Dane County’s population grows, it simultaneously ages. As of 2010, 12% of Middleton’s population was over 65, an increase of 2% percent from 2000. Projections for Dane County suggest the largest expected population growth is in age cohorts over 65 between 2010 and 2040 (Figure 9-1)⁵³. Although there is also expected growth in youth age cohorts under 19, the population gain for elderly groups (>65) is expected to triple the growth of youth groups. Conservancy lands should seek to accommodate accessibility needs of this growing senior population.

Race and Ethnicity

In 2010, the US Census indicated that the majority of Middleton residents were

White (87.1%). The second highest percentage was Hispanic or Latino (5.6%) followed by Asian (4.2%) and Black or African American (3.5%). In Dane County and the State, future projections suggest increased racial and ethnic diversity.

Table 9-1. Demographic Composition of Middleton, 2010

	2010 CENSUS	2017 ESTIMATE
Population	17,442	20,151
	% of population	
>65 years of age	12%	--
<5 years of age	5%	--
White	87.1%	--
Hispanic/Latino	5.6%	--
Asian	4.2%	--
Black/African American	3.5%	--

Source: Wisconsin Demographic Services, 2013

53 Wisconsin Demographic Services Center, 2013

Table 9-2. Wisconsin Department of Administration Projected Population Growth for the City of Middleton and Surrounding Communities.

MUNICIPALITY	CENSUS 2010	PROJECTION 2015	PROJECTION 2020	PROJECTION 2030	PROJECTION 2040	% CHANGE 2010-2040
Village of Cross Plains	3,538	3,615	3,795	4,125	4,230	22%
City of Madison	233,209	241,250	251,550	270,350	281,150	21%
City of Middleton	17,442	18,540	19,670	21,780	22,570	33%
Town of Middleton	5,877	6,205	6,695	7,735	8,330	42%
City of Verona	10,619	11,620	12,800	15,070	16,850	58%
Village of Waukakee	12,097	12,750	13,850	15,940	17,530	45%
Dane County	488,073	--	530,620	577,300	606,620	24%

Source: Wisconsin Demographic Services, 2013

RECOMMENDATIONS

Consider impacts of future population growth and subsequent urbanization and development on public lands in Middleton. Pressures on conservancy lands include provision of ecosystem services, such as storm water management.

Consider Middleton's aging population. See Accessibility recommendations.

TRENDS IN RECREATION

This past year, the Wisconsin DNR performed statewide and regional analyses assessing existing outdoor-based recreation opportunities and identifying future recreation needs in each region of the State. The Wisconsin Statewide Comprehensive Outdoor Recreation Plan (SCORP) documents outdoor recreation trends and issues throughout the state, and serves as a guiding document for outdoor recreation policies. A 2017-2022 SCORP will be published in 2018. The plan will include results of a recreation participation survey sent to 6,400 random residents.

A prior version of the SCORP was published in 2011. The 2011-2016 SCORP documents Wisconsin's recreation demands based on responses of Wisconsin residents (718) to the 2005-2009 National Survey on Recreation and the Environment.

Across the country Wisconsin boasts some of the highest rates of outdoor recreation with 87% of Wisconsinites enjoying some form of outdoor recreation. By far the most popular outdoor recreation activity is walking with 88% participation⁵⁴.

While walking occurs most commonly in developed settings: roads or sidewalks, parks and trails help promote walking and biking culture. Viewing natural scenery was the third most popular outdoor recreation activity, and is coupled with other activities such as walking and biking. According to a national Outdoor Foundation report, the most cited motivation for getting outdoors was exercise, and over half of respondents said pursuing outdoor recreation was a means of being close to nature⁵⁵.

⁵⁴ Wisconsin Department of Natural Resources. 2011. Wisconsin's Statewide Comprehensive Outdoor Recreation Plan 2011-2016. Wisconsin Department of Natural Resources, Bureau of Parks and Recreation. Madison, WI. Accessed January 5, 2018 <http://dnr.wi.gov/topic/parks/planning/scorp/>

⁵⁵ Outdoor Industry Association. 2017. Outdoor Recreation Topline Report 2017. Accessed February 21, 2018 <https://outdoorindustry.org/resource/outdoor-recreation-participation-topline-report-2017>

Activity	2005–2009 Participation		Activity	2005–2009 Participation	
	Percent Participating	Number of Participants (1,000s)		Percent Participating	Number of Participants (1,000s)
Walk for pleasure	87.7	3,947	Off-highway vehicle driving	19.8	891
Gardening or landscaping for pleasure	65.4	2,944	Trail running	18.6	773
View/photograph natural scenery	65.3	2,939	Snowmobiling	18.3	824
Attend outdoor sports events	65.0	2,926	Big game hunting	18.0	810
Family gathering	63.5	2,858	Canoeing	17.9	806
Visit nature centers, etc.	63.5	2,858	Visit prehistoric/archeological sites	15.5	698
View/photograph other wildlife	57.9	2,606	Boat tours or excursions	13.9	626
Driving for pleasure	52.8	2,377	Ice skating outdoors	13.5	608
View/photograph wildflowers, trees, etc.	52.4	2,359	Ice fishing	13.1	590
Sightseeing	50.6	2,278	Waterskiing	13.0	585
Bicycling	48.7	2,192	Coldwater fishing	12.8	576
Boating (any type)	47.3	2,129	Primitive camping	11.4	513
Picnicking	47.0	2,115	Small game hunting	11.3	509
Visit historic sites	46.7	2,102	Rafting	9.2	414
Snow/ice activities (any type)	45.9	2,066	Cross country skiing	8.8	396
Yard games, e.g., horseshoes	44.7	2,012	Horseback riding (any type)	8.7	392
Gather mushrooms, berries, etc.	42.8	1,926	Tennis outdoors	8.5	383
Visit a beach	42.3	1,904	Backpacking	7.4	333
Golf	41.8	1,881	Kayaking	7.3	329
Swimming in lakes, streams, etc.	41.7	1,877	Rowing	7.2	324
View/photograph birds	41.7	1,877	Downhill skiing	7.0	315
Freshwater fishing	37.4	1,683	Horseback riding on trails	6.6	297
Day hiking	36.7	1,652	Use personal watercraft	6.5	293
Motorboating	36.0	1,620	Snorkeling	6.2	279
Visit a farm or agricultural setting	35.3	1,589	Snowshoeing	6.1	275
Swimming in an outdoor pool	34.5	1,553	Migratory bird hunting	4.1	185
Visit a wilderness or primitive area	33.7	1,517	Sailing	3.9	176
Warmwater fishing	33.2	1,494	Rock climbing	3.8	171
Attend outdoor concerts, plays, etc.	32.8	1,476	Snowboarding	3.7	167
Soccer outdoors	32.3	1,460	Mountain climbing	2.7	122
Running or jogging	32.1	1,445	Caving	2.6	117
Mountain biking	30.7	1,382	Inline skating	2.5	113
Sledding	28.2	1,269	Orienteering	1.6	72
View/photograph fish	26.7	1,202	Scuba diving	1.1	50
Developed camping	25.4	1,143	Windsurfing	1.1	50
Handball or racquetball outdoors	23.5	1,058	Surfing	1.0	45
Visit other waterside (besides beach)	22.6	1,017			
Hunting (any type)	22.2	999			

See the 2005–2010 Wisconsin SCORP for additional detail on residents' participation in outdoor recreation.

Figure 9-2. Wisconsin Outdoor Recreation Participants by Participation Rate (Age 16+), 5-year view, prepared for the 2011-2016 Wisconsin SCORP report.

Limited development activities occur on primarily undeveloped or natural areas. The most popular forms of outdoor recreation in a limited development setting are water activities (47.3% boating, any kind; 42.3% visit a beach, 41.7% swimming; only 7.3% kayaking)⁵⁶.

Trends in Wisconsin over the last two decades show increasing outdoor recreation demands, increased urban outdoor recreation and changing recreational preferences. The largest recreation trend between 2000 and 2016 was the migration of rural populations to urban centers and the consequent increased demand for urban recreational activities⁵⁷. Expected population growth in Middleton, its adjacent municipalities, such as Madison, and Dane County will increase demand for urban-based recreation and change recreational preferences.

In roughly the past two decades some of the biggest numerical gains in recreation activity participation relevant to conservancy lands include: viewing and photographing birds and wildlife, walking for pleasure, bicycling, and running⁵⁸. All activities were also identified as popular activities in Middleton's conservancy lands, based on responses to the Conservancy Lands Plan Update Survey (Figure 9-3).

Statewide, the greatest percent change in recreation activities, a measure of increasing demand and projected future growth, includes: adventure racing, driving for pleasure, kayaking, visiting a dog park, bmx biking, climbing, and stand-up paddle boarding⁵⁹. Middleton currently has infrastructure for kayaking, using dog parks, and a mountain bike pump track.

The 2018-2023 Dane County Parks and Open Space Plan (POSP) identifies disc golf and mountain biking as the two largest growth areas in Dane County⁶⁰.

The 2018-2023 Dane County POSP also highlights the uniqueness of Dane County given its urban and diverse population. Activities uniquely popular to Dane County include food, exercise, education, gardening and pet exercise. Dane County also hosts a number of regionally significant recreation events such as the Wisconsin Ironman.

Middleton has the potential to become an important regional recreation event host with the development of privately-managed Community Olympic Development Center cross-country skiing facility adjacent to the Middleton Bike Park. This facility would connect City facilities with privately owned facilities including the Blackhawk Ski Area for both mountain biking and cross-country skiing. The Outdoor Foundation's annual participation report identified cross-country skiing as the second top outdoor activity for growth nationally over a three-year period (2013-2016).

56 Wisconsin Department of Natural Resources, 2011

57 Ibid

58 Ibid

59 Ibid

60 Dane County Parks Division. 2018. 2018-2013 Parks & Open Space Plan. Dane County Parks Division, Land and Water Resources Department, County of Dane. Madison, WI. PDF File

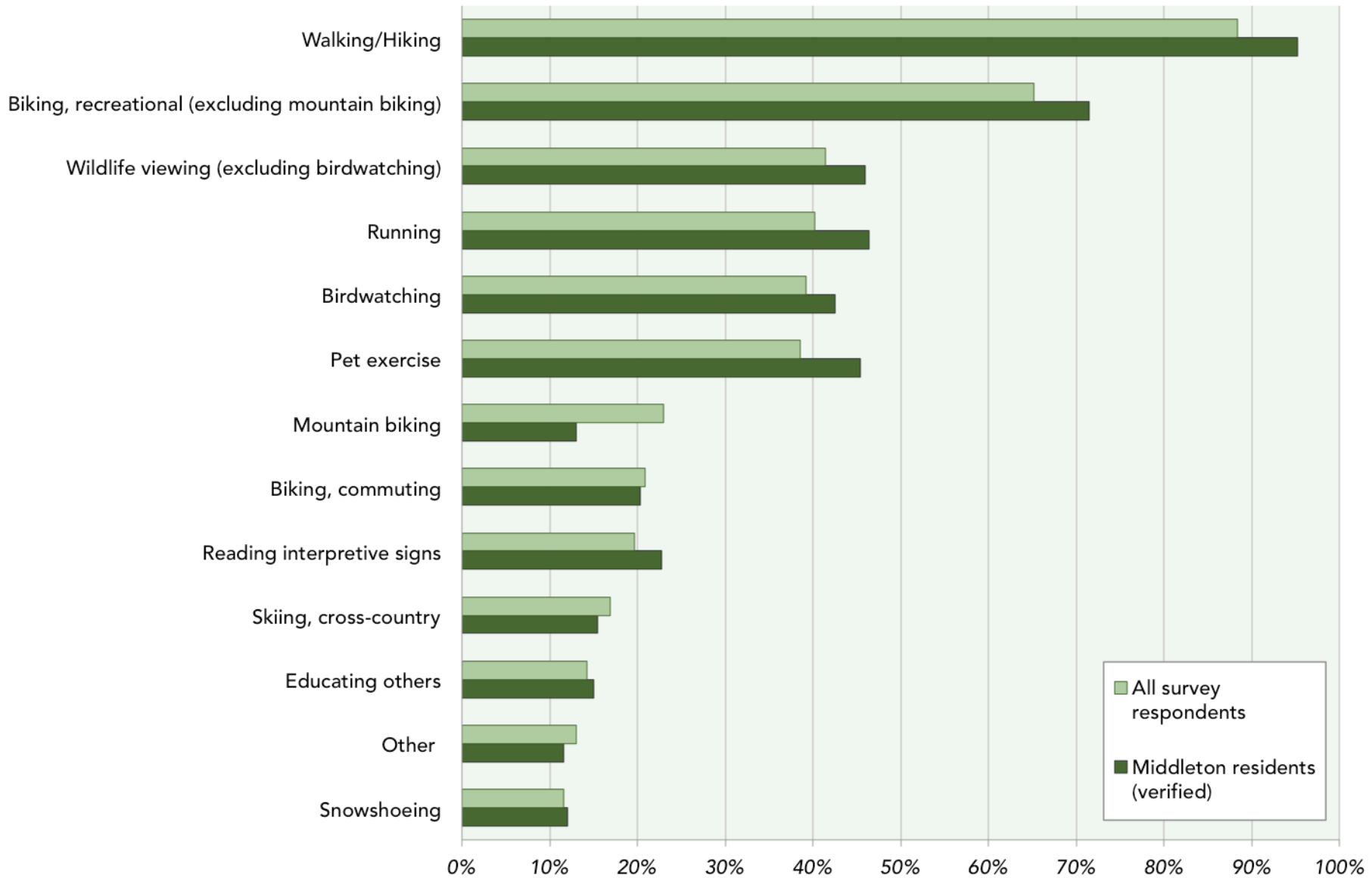


Figure 9-3. Most popular activities performed in conservancy lands in the last year (percent of respondents who performed each activity). Responses for total survey respondents and verified Middleton residents (registered voters) are displayed separately. Respondents could select multiple responses. "Other" included: ice skating, photography, looking at plants, driving for pleasure, geocaching, gardening (Bock Community Gardeners), kayaking and canoeing.

Increasing Demand 	Adventure racing	Popular as both an individual and a group activity.
	Driving for pleasure	An easy activity for the aging baby boomer generation.
	Developed/RV camping	Baby boomers are a continued driving force for this growth.
	Kayaking	Cheaper entry points have attracted more participants.
	Visit a dog park	Urban residents continue to demand more of these areas.
	Soccer outdoors	Youth growth is still strong in urban areas.
	BMX biking	X Games popularity may be driving this growth.
	Climbing	Indoor climbing walls have led to an outdoor resurgence.
	Stand up paddling/paddleboarding	A fast growing water sport sweeping the country.
	Triathlon (on- and off-road)	Varying distance events have allowed for growth.
	Off-highway vehicle driving	Post recession growth continues.
	Gardening or landscaping for pleasure	The "grow local" concept is taking hold at many levels.
Stable Demand 	Walk for pleasure	Market saturation does not allow for large growth.
	Running or jogging	Gen Y is replacing the baby boomers for this activity.
	Water parks	Recession may have caused this growth to slow.
	Motorboating	Still easy access in a water-based state.
	Day hiking	Popular with many generations.
	Golf	Time constraints do not allow for growth.
	Tent camping	Continues to be stable, but growth is illusive.
	Snowboarding	May have peaked after 20 years of growth.
	Trail running	A stable niche activity with Gen Y.
	View/photograph wildlife	An easy activity that spans generations.
	Bicycling (road and non-paved)	Popular with many generations – access is still key.
	Snowshoeing	After large growth, this has stabilized.
Decreasing Demand 	Hunting	Continues to struggle with generational loss and private access.
	Inline skating	A large decrease in the last six years, the bottom may be near.
	Skateboarding/skate parks	Gen M is free-skating with longboards.
	Horseback riding on trails	Recession impacts have caused this to decrease with no rebound.
	Softball	Baby boomers continue to leave this sport.
	Downhill skiing	Gen Y does not have the numbers to replace aging baby boomers.

Figure 9-4. Projected Trends in Wisconsin Outdoor Recreation Activities, prepared for the 2011-2016 Wisconsin SCORP.

RECOMMENDATIONS

Incorporate findings from the Wisconsin SCORP 2017-2022 into upcoming City of Middleton Parks and Open Space Plan.

Despite proximity to Lake Mendota, the City of Middleton has limited opportunities for water activities. Continue supporting water quality initiatives improving water quality in Lake Mendota. Consider future opportunities for Middleton's waterfront.

Incorporate changing recreation demands in future planning, while maintaining a long-term vision of conservancy areas. Promote recreation opportunities that have minimal impacts on on Middleton's natural resources.

ACCESSIBILITY

The City of Middleton and its partners are actively developing initiatives to improve accessibility in Middleton's conservancy and park lands. Current offerings include:

- 9 miles of ADA-compliant trails
- Adaptive fishing port at Lakeview Park
- Adaptive fishing equipment available for loan (free)
- Adaptive kayak/canoe port at Graber Pond
- All-terrain wheelchair for use in the Pheasant Branch Conservancy, housed at Orchid Heights Park (free)

The Friends of Pheasant Branch have taken a leading role in promoting accessibility in the Pheasant Branch Conservancy (Box 9-1). The Friends of Pheasant Branch, City of Middleton and partnering organizations formed an ad hoc Accessibility Committee in 2017 to further accessibility initiatives in Middleton. The Friends of Pheasant Branch also received a \$20,000 grant to promote accessibility in the Pheasant Branch Conservancy in 2017 and 2018.

In 2016 and 2017, the UW-Madison Urban and Regional Planning Department offered a graduate level course focused on the role of nature in human health and wellness. The Pheasant Branch Conservancy was chosen as study site and students explored, inventoried, mapped and quantified the assets of the Pheasant Branch Conservancy. Members of the Friends of Pheasant Branch participated in the study. Two papers resulted:

Pheasant Branch Conservancy Outreach and Facilities Plan, 2016⁶¹

The Plan assesses mechanisms for facilitating outdoor activity for aging populations, individuals with cognitive challenges, individuals with limited mobility, and youth generations. The document recommends facilities improvements, development of a Mobile Device App, and outreach. Recommended facilities improvements include updates to wayfinding and interpretive signage, creation of sensory corridors to host sensory tours, use of phenological calendars, and integration of interpretive programming with a Mobile Device App. Recommended outreach includes inclusive interpretive programming, community surveying, engagement through social media, and evaluation of online conservancy media through web analytics.

Planning for Access: Signage Guidelines for Pheasant Branch Conservancy, 2017⁶²

This document inventories and evaluates existing signage in the Pheasant Branch Conservancy and proposes a new signage framework, or a summary of recommendations based on published literature and results of focus group studies.

⁶¹ Urban and Regional Planning 590-2 Associates. 2016. Pheasant Branch Conservancy Outreach and Facilities Plan. Urban and Regional Planning Department, UW-Madison, Madison, WI. PDF Report.

⁶² Wessel S. 2017. Planning for Access- Signage Guidelines for Pheasant Branch Conservancy. Urban and Regional Planning Department, UW-Madison, Madison, WI. PDF file.

Public Input on Accessibility

The majority (>50%) of respondents of the Conservancy Lands Plan Update Survey were unaware of Middleton's all-terrain wheelchair, adaptive fishing equipment, and accessible kayak/canoe port.

Respondents provided suggestions for improved accessibility options: improve signage, increase the number of benches, update the emergency medical services (EMS) locator system, install handrails on steps, follow the City's ADA plan, reduce slipperiness of boardwalks, provide more shade, increase advertising of accessibility options, allow e-bikes, move the kayak/canoe port at Graber Pond to a more accessible location, and provide greater access to Lake Mendota.

The City of Middleton is exploring a number of initiatives related to the above suggestions.

- In 2017, in 2017 the City implemented a pilot project testing textured strips to reduce slipperiness on boardwalks.
- Updating signage in the Pheasant Branch Conservancy is a proposed project in 2019.
- Improving technology and security in Pheasant Branch Conservancy and Pheasant Branch Creek Corridor is a proposed project in 2020-2022 (including updating EMS locator system and investigating use of digital media and mobile apps for interpretation)
- Middleton's conservancy system averages one bench every ¼ mile.



Conservancy Lands Plan 2018-2023

BOX 9-1. THE FRIENDS OF PHEASANT BRANCH RECEIVED A 20K GRANT TO PROMOTE ACCESSIBILITY IN THE PHEASANT BRANCH CONSERVANCY IN 2017 AND 2018

“Make a Memory Days”: Outreach to seniors, individuals with cognitive challenges and those with limited mobility - written by John Daly

After months of planning by the Friends of Pheasant Branch (FOPB) Education Committee, the outreach initiative to the community's older adults, known as Make a Memory Days, took place over several days in August 2017 at the Pheasant Branch Conservancy. The participant attendance numbers indicate the success of these events; over 60 older adults did make a memory.

The participant evaluations thanked the FOPB for providing a learning experience in nature with several positive outcomes. Participants stated that the multi-hour event provided them an opportunity to recall childhood outdoor experiences; an awakening of the senses (smell, touch, hearing); and, a personal challenge to get outside more often and enjoy the uniqueness of this special place.

The Make a Memory Day events invited older adults, individuals with cognitive challenges and those with limited mobility to the Pheasant Branch Conservancy. The committee recruited and trained naturalists to lead tours into the conservancy with the use of large golf carts and the new all-terrain wheel chairs provided by Access Ability Wisconsin.

One can usually measure a program's degree of success by the percentage of returned evaluations. Research states that a 30% return of feedback forms is good. The participant response for these Make a Memory Days was over 63% and that was within a few days of the events. The participants thanked the Friends for providing a special day outside in Nature.



Photo credit: Dale Klubernatz

In 2015, the FOPB Senior Advisory Council was formed to help the Education Committee in their planning to out-reach to older adults. Research states that successful planning of a learning experience begins with the ideas, interests and the needs of the learners themselves. The FOPB Education Committee originated the planning for this program by asking members of this council and older adults from other community organizations a key question - “In what ways can the Pheasant Branch Conservancy be a part of your daily lives?”

The compilation of input provided guidance in the planning and design of program events like Make a Memory. It also contributed to the review of materials (print, website, etc.), the identification of potential concerns and enhancements with the infrastructure, as well membership services and volunteer opportunities.

Continued on page 9-16

BOX 9-1. THE FRIENDS OF PHEASANT BRANCH RECEIVE A 20K GRANT TO PROMOTE ACCESSIBILITY IN THE PHEASANT BRANCH CONSERVANCY IN 2017 AND 2018, continued

In 2016, the Friends of Pheasant Branch Conservancy was awarded a \$20,000 grant from Bader Philanthropies Inc. This two-year grant provides financial support for a variety of projects in 2017 and 2018. The grant has four components:

- Programming for older adults, individuals with memory loss and those with limited mobility;
- Critical review of current materials;
- Analysis of the Conservancy infrastructure (including signage); and,
- Capacity of the organization to continue the outreach to target populations in the community.

The Board of the Friends of Pheasant Branch Conservancy supports extending its community out-reach initiatives to older adults and has formed the Accessibility Ad Hoc Committee. This has been a natural progression of the growth of this non-profit organization and the efforts of the FOPB to promote lifelong learning reflecting the evolving community needs. In order to assure that the planning is inclusive the members of the Accessibility Committee have been recruited from various resource organizations and the community's senior centers and senior living communities.

Committee members include representatives from the following partners:

Alzheimer's and Dementia Alliance

Attic Angels Place

Brookdale Middleton

Dane County Parks Department

Dementia Friendly Communities

Middleton Glen

Middleton Public Lands, Recreation and Forestry

UW–Madison School of Nursing

UW–Madison Urban and Regional Planning

*Contributed by John Daly, Friends of Pheasant Branch Conservancy
jhdaly@charter.net
www.pheasantbranch.org*

RECOMMENDATIONS

Consider relocating the Graber Pond kayak/canoe port to a more accessible location. Consider length of trail and availability of parking.

Continue partnerships with the Friends of Pheasant Branch and other organizations to promote programming for seniors, those with cognitive challenges and those with limited mobility, such as the “Make a Memory Days” coordinated by the Friends of Pheasant Branch in 2017.

Consider accessibility when developing new conservancy signage, such as the Pheasant Branch Conservancy signage update planned for 2019.

Should Wisconsin laws regarding E-bikes change, consider accessibility issues as relates to e-bike use. Coordinate with the ad hoc Accessibility Committee regarding on e-bike use among individuals with mobility impairments. When creating motor bike/e-bike policy, consider policies in surrounding communities, such as the City of Madison, given the connectivity of bike trails.

Some Conservancy Lands Plan Update Survey respondents expressed concern that “overdoing” accessibility will take away from other’s experiences by adding to the development of conservancy areas. Search for a balance within the variety of preferences and needs of Middleton’s conservancy users.

YOUTH EDUCATION

Madison Cross Plains Area School District (MCPASD) uses conservancy lands for a number of teaching and service learning opportunities. Many events are coordinated by the Friends of Pheasant Branch and occur in Pheasant Branch Conservancy (Appendix 5).

Middleton's schools take advantage of their proximity to conservancy lands. Kromrey Middle School is directly adjacent to the Pheasant Branch Creek Corridor. Sixth grade students learn about the importance of native plants and storm water management in protecting the Pheasant Branch Creek through the school's native rain gardens. Kromrey students also pull garlic mustard in the Pheasant Branch Creek Corridor annually with the Friends of Pheasant Branch.

Middleton Hill School is just a block away from the Pheasant Branch Creek Corridor and a short bus ride from the Pheasant Branch Conservancy. High school students can participate in field trips to the Pheasant Branch Conservancy in introductory Biology, Field Biology, English, and art classes.

Elm Lawn Elementary School is located across from Tiedeman Pond and uses the Elm Lawn Savanna area as an outdoor classroom. Elm Lawn students have also participated in nature-based art projects involving field trips to the Pheasant Branch Conservancy.

The 21st Century eSchool, an alternative k-12 program using online and in-classroom teaching, offers outdoor classroom trips to the Pheasant Branch Conservancy.

Sauk Trail Elementary School borders Lakeview Park and Lakeview Conservancy.

RECOMMENDATIONS

Support the Friends of Pheasant Branch in coordinating educational and service events with MCPASD schools.

Seek to involve students and teachers in events occurring on conservancy lands.

Improve documentation and evaluation of educational events occurring on conservancy lands. Identify and protection conservancy lands features that support educational opportunities (for example, presence of a rare and threatened species, access to a natural stream, etc.).





Conservancy Lands Plan 2018-2023