5.6.2 Strategic Priority Investment Areas

While the composite service areas analysis helps identify portions of Garland with lower levels of access to parks and recreation service, the Social Needs and Conditions Index from Chapter 2 provides assistance in identifying locations in Garland with the greatest need for public services, including parks and recreation facilities. The combination of these two processes can help to identify areas within Garland most in need of additional park amenities (high social needs and low service levels).

A map showing these areas can be seen in Figure 5.19. The portions of the city indicated in this combined map may be in need of special consideration for park improvements, including additional features or potentially new parks. Non-residential areas were removed from these results. Areas representing the lowest levels of service (20% or lower) are also shown regardless of social need. Based on this figure, the following areas show high to medium levels of combined need:

- North Sector – Minimal areas of combined need, small areas southwest of Bisby Park and northeast of Holford Park; low levels of park service near One Eleven Ranch Park
- Central Sector – Western edge near border with Dallas and west of Central Park
- South Sector – West portion of sector (District 5); low service areas near Hayes Park/Wynne Joyce, Oaks Branch Greenbelt, and Ablon Park

5.7 TRENDS IN PARKS AND RECREATION

The following text provides an analysis of trends in outdoor recreation, including both activities and the associated facilities. The analysis begins with a review of participation rates of outdoor activities and is followed by an examination of facility and program trends in parks and recreation.

5.7.1 Trends in Recreation Participation

The Sport and Fitness Industry Association (SFIA) conducts an annual survey of individuals and households throughout the United States to determine participation in a variety of sports and fitness activities. The 2017 sample consisted of 24,134 online interviews (11,453 individuals and 12,681 households) and is intended to serve as representation of US population ages 6 and older. The following discussion uses data from the SFIA report.

Figure 5.20 shows the difference in participation rates between generations for seven types of sports. The youngest generation (Gen Z) had the highest participation rates for Individual Sports, Team Sports, and Outdoor Sports. Participation rates dropped for these three types of sports with each older generation. The youngest generation had the lowest participation in Fitness Sports, while the other three generational groups had the highest participation rates for this type of sport. The remaining three types of sports (Racquet, Winter, and Water Sports) have similar trends with Millennials and Gen Z representing the highest levels of participation.

The high demand for fitness sports programs in Garland is consistent with these findings (see Chapter 4, Figures 4.15-4.18). With growing percentages of residents in the older generation, this type of program is likely to increase in demand into the future. Despite decreasing in popularity with age, outdoor sports are still popular with all age groups. Team sports are far more popular with the youngest generation. The availability of these facilities and programs will be an important consideration for families with children when choosing to live in Garland.

Table 5.7 displays the 5-year participation rates for 50 different sports and fitness activities. This table also shows the 5-year annual growth rate and highlights activities with significant growth or decline in participation rates. The fastest growing sports are highlighted in blue with Stand Up Paddling, Adventure Racing, Rugby, and Bicycling (BMX) showing the fastest rate of growth over the last five years.

Walking for Fitness, Free Weights (Hand Weights), Running/Jogging, Hiking (Day), and Bicycling (Road/Paved Surface), and Fishing (Freshwater) have the largest number of participants. Walking for fitness has the greatest number of participants by a large margin at well over 100 million participants nationally, and Hiking (Day) is growing at nearly 5% annually despite the high level of participation (over 40 million). With four of the top five activities using trails, it is no surprise these facilities are in such high demand.

Residents of Garland have similarly expressed a strong interest in these types of trail-based activities, leading to a need for more of these facilities. Also, the city can accommodate for the fastest growing field sports, rugby and lacrosse, by making sure existing and new fields can accommodate these activities. Investment in trails and related programs in Garland would help meet the needs for trail running, hiking, and walking for fitness. Additional fitness and aerobic activities could potentially be met at the senior centers and recreation centers. Encouraging outdoor fitness classes or self-led gatherings at Neighborhood and Community Parks could also help meet the growing demand for these activities. Stand Up Paddling and Adventure Racing could be offered at several Garland parks or natural areas.

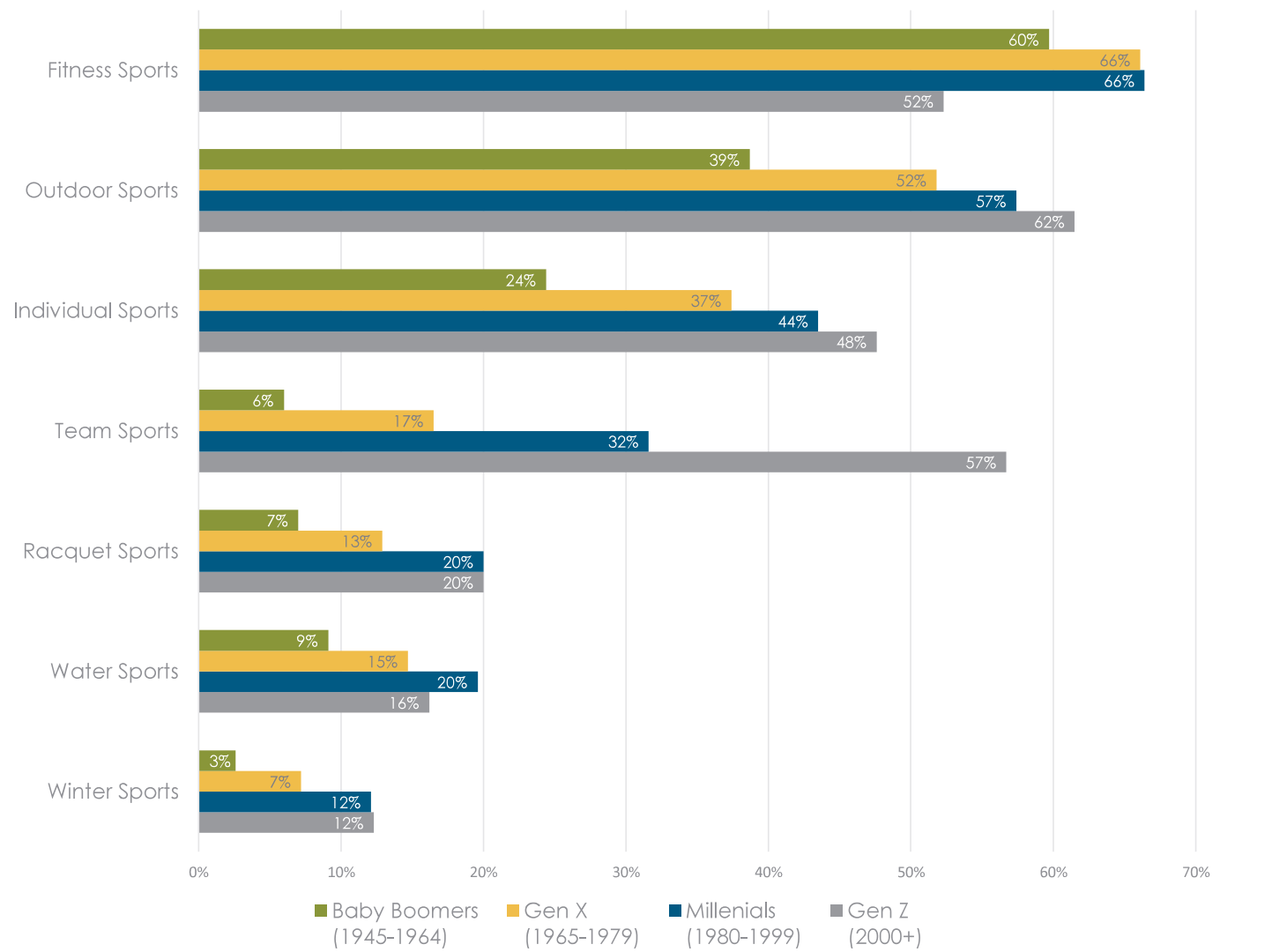**Figure 5.20: Participation Rates by Generation**

Table 5.7: Nationwide Five-Year History of Selected Sports Participation (2011-2016)

Sport/Fitness Activity	Category	Participants (In Thousands)						5-Year Average Annual Growth
		2011	2012	2013	2014	2016	2016	
Adventure Racing	Individual Sports	1,202	1,618	2,095	2,368	2,864	2,999	20.6%
Aquatic Exercise	Aerobic Activities	9,042	9,177	8,483	9,122	8,226	10,575	3.4%
Archery	Individual Sports	6,471	7,173	7,647	8,435	8,378	7,903	4.3%
Baseball	Team Sports	13,561	12,976	13,284	13,152	13,711	14,760	1.8%
Basketball	Team Sports	24,790	23,708	23,669	23,067	23,410	22,343	-2.0%

Table 5.7: Nationwide Five-Year History of Selected Sports Participation (2011-2016) (Continued)

Sport/Fitness Activity	Category	Participants (In Thousands)						5-Year Average Annual Growth
		2011	2012	2013	2014	2016	2016	
Bicycling (BMX)	Outdoor Activities	1,958	1,861	2,168	2,350	2,690	3,104	10.0%
Bicycling (Mountain/Non Bicycling)	Outdoor Activities	6,989	7,265	8,542	8,044	8,316	8,615	4.5%
Bicycling (Road/Paved Surface)	Outdoor Activities	39,834	39,790	40,888	39,725	38,280	38,365	-0.7%
Birdwatching (>¼ Mile from Home)	Outdoor Activities	13,067	13,535	14,152	13,179	13,093	11,589	-2.2%
Elliptical Motion Trainer	Aerobic Activities	29,734	28,560	30,410	31,826	32,321	32,218	1.7%
Fishing (Freshwater)	Outdoor Activities	38,864	39,002	37,796	37,821	37,682	38,121	-0.4%
Football (Tackle)	Team Sports	6,448	6,220	6,165	5,978	6,222	5,481	-3.1%
Cheerleading	Team Sports	3,049	3,244	3,235	3,456	3,608	4,029	5.8%
Free Weights (Hand Weights)	Strength	N/A	N/A	58,267	56,124	54,716	51,513	4.0%*
Gymnastics	Team Sports	4,824	5,115	4,972	4,621	4,679	5,381	2.5%
High Impact/Intensity & Training	Aerobic Activities	15,755	16,178	17,323	19,746	20,464	21,390	6.4%
Hiking (Day)	Outdoor Activities	33,494	34,519	34,378	36,222	37,232	42,128	4.8%
Ice Hockey	Team Sports	2,131	2,363	2,393	2,421	2,546	2,697	4.9%
Ice Skating	Individual Sports	11,626	11,214	10,679	10,649	10,485	10,315	-2.4%
Kayaking (Recreational)	Water Sports	7,347	8,187	8,716	8,855	9,499	10,017	6.4%
Lacrosse	Team Sports	1,501	1,607	1,813	2,011	2,094	2,090	7.0%
Kayaking (White Water)	Water Sports	1,694	1,878	2,146	2,351	2,518	2,552	8.6%
Martial Arts	Individual Sports	5,037	5,075	5,314	5,364	5,507	5,745	2.7%
Mixed Martial Arts for Fitness	Individual Sports	1,697	1,977	2,255	2,455	2,612	2,446	7.9%
Pickleball	Racquet Sports	N/A	N/A	N/A	2,462	2,506	2,815	7.1%*
Pilates Training	Conditioning	8,507	8,519	8,069	8,504	8,594	8,893	1.0%
Rugby	Team Sports	850	887	1,183	1,276	1,349	1,550	13.3%
Running/Jogging	Aerobic Activities	50,061	51,450	54,188	51,127	48,496	47,384	-1.0%
Scuba Diving	Water Sports	2,866	2,781	3,174	3,145	3,274	3,111	1.9%
Skateboarding	Individual Sports	6,318	6,227	6,350	6,582	6,436	6,442	0.4%
Soccer (Outdoor)	Team Sports	13,667	12,944	12,726	12,592	12,646	11,932	-2.6%
Softball (Fast Pitch)	Team Sports	2,400	2,624	2,498	2,424	2,460	2,467	0.7%
Softball (Slow-Pitch)	Team Sports	7,809	7,411	6,868	7,077	7,114	7,690	-0.2%
Soccer (Indoor)	Team Sports	4,631	4,617	4,803	4,530	4,813	5,117	2.1%
Stand Up Paddling	Water Sports	1,146	1,392	1,993	2,751	3,020	3,220	23.8%
Stationary Cycling	Aerobic Activities	36,341	35,987	35,293	35,693	35,553	36,188	-0.1%
Swimming for Fitness	Aerobic Activities	21,517	23,216	26,354	25,304	26,319	26,601	4.5%
Swimming on a Team	Team Sports	2,363	2,502	2,638	2,710	2,892	3,369	7.4%
Table Tennis	Racquet Sports	18,561	16,823	17,079	16,385	16,565	16,568	-2.2%
Tai Chi	Conditioning	2,975	3,203	3,469	3,446	3,651	3,706	4.6%
Tennis	Racquet Sports	17,772	17,020	17,678	17,904	17,963	18,079	0.4%
Trail Running	Individual Sports	5,373	5,806	6,792	7,531	8,139	8,582	9.9%
Track and Field	Team Sports	4,341	4,257	4,071	4,105	4,222	4,116	-1.0%
Triathlon (Traditional/Road)	Individual Sports	1,686	1,789	2,262	2,203	2,498	2,374	7.7%
Ultimate Frisbee	Team Sports	4,868	5,131	5,077	4,530	4,409	3,673	-5.2%
Volleyball (Beach/Sand)	Team Sports	4,451	4,505	4,769	4,651	4,785	5,489	4.4%
Volleyball (Court)	Team Sports	6,662	6,384	6,433	6,304	6,423	6,216	-1.3%
Walking for Fitness	Aerobic Activities	112,715	114,029	117,351	112,583	109,829	107,895	-0.8%
Weight/Resistance Machines	Strength	39,548	38,999	36,267	35,841	35,310	35,768	-2.0%
Yoga	Conditioning	22,107	23,253	24,310	25,262	25,289	26,268	3.5%

*Based on reduced time period. SFIA has not yet collected five years of participation for Pickleball or Free Weights.

Legend

	>5% Increase
	2-5% Increase
	Minimal Change
	1-3% Decrease
	>3% Decrease

5.7.2 The Aging Population

Throughout the United States, as in Garland, the average age of the population is increasing. The number of persons in the age group 65 and over is growing rapidly. Census data indicates that the percentage of the Garland population age 65 and older was 7% in 2000 and is expected to increase to 14% by 2023 (see Chapter 2).

The relative health of these individuals is better than ever before and the activities they desire are more active than in the past. Senior citizens centers where seniors play cards and participate in more sedentary activities have become less desirable to these residents who have indicated a desire for more active fitness programs, which could include hiking and biking programs as well as other nature programs. This aging of the population encourages parks and recreation agencies to invest more in activities, programs, and facilities for the older population, increasing demand for walking trails, fishing areas, community gardens, and cultural and nature education programs, which are in demand for multiple age groups.

This data points clearly to the growing need to provide quality facilities and programs for this growing population in Garland. The Senior Activity Center and Carver Senior Center provide programs for age 55 and over; however, the Parks and Recreation Survey, as well as other forms of public engagement (see Chapter 4), indicates support from the community for providing additional programs and facilities for residents age 50 and older. Programs for these residents ranked in the top three for most needed programs and as the second ranked priority for investment.

5.7.3 Demand for Universal Access

Many park systems are developing unique facilities that are designed to go well beyond the minimum requirement for the Americans with Disabilities Act. By creating an environment that is totally accessible to persons of all ages and abilities, park system administrators are setting the best example for other organizations to follow.

Textured edging on trails can help to make the facilities more accessible to the visually impaired. Fragrant plants and sensory gardens, interactive displays that allow a hands-on approach to education have also been developed to promote a better experience for special populations. Universal access should extend to interpretive facilities, buildings, and all programs and facilities offered by the community. Providing barrier-free parks can and should be part of the process for any park improvement. Accessibility demands extend to outreach and technology, including the city website.

Parks, Recreation, and Cultural Arts has been investing in improving accessibility throughout the park system, but park assessments conducted during this planning process showed that many park and facilities still fall short of accessibility goals. An ongoing effort is necessary for Garland to realize a goal of universal access.

5.7.4 Technology

The use of technology is becoming increasingly common in parks and recreation. Many park users desire to remain connected while visiting parks and desire instant access to information about facilities and programs at those parks. They also desire mobile registration for the events and programs they discover. Apps like Pokemon GO can be utilized to encourage young people to experience the outdoors. Technology provides a tool to enhance park experiences and may be necessary to keep today's youth engaged.

The use of technology in park has many advantages. Many users desire Wi-Fi to stay connected to social media or other online activities. Charging benches can be used to keep those devices powered-up. Park apps can inform visitors of opportunities at the park or other parks in the system. A park app in Los Angeles allows visitors to report areas in need of maintenance or cleaning.

This technology can be also provide data about park usage. For example, Wi-Fi connections can record the number of connections or searches for hotspots, providing visitation trends. This data can also be used to compare park activity at different times or after new features are added. Sensors along paths can distinguish between walkers, runners, and cyclists and provide counts of usage.

Garland has begun to take advantage of social media for marketing and promotion, but it has many more untapped applications. When visitors share their park experiences on social media, they assist with park promotion and encourage future use. Some parks have used social media as "crowd-sourced, data-gathering tools" to monitor wildlife or vegetation, including invasive species.[7]

5.7.5 Geocaching

Geocaching is a technology-based activity that has been growing in popularity since 2000 when GPS technology improved significantly. Participants travel to local parks and open spaces to hunt for objects previously hidden by others armed with only a set of coordinates and a digital GPS device, usually a smart phone. Once found, geocachers often take the item and replace it with another so another participant can use the same geocache in the future. The games can have varying levels of complexity where one cache leads to another or a puzzle must be completed.[8] Geocaches are likely already present at several Garland parks, but opportunities exist for the department to promote and encourage this activity in Garland by creating caches and organizing events.

5.7.6 Fitness and Wellness Activities

A strong emphasis has been placed at the state and the federal levels to improve the fitness of individuals throughout the United States. Local parks and recreation departments are often building upon this message with programs to encourage active lifestyles. These departments are in a good position to make an impact on the overall fitness of the community through programs, promotions, and facilities that are available to residents.

The health benefits that can be provided by parks extend to mental health benefits as studies indicate that a connection to nature can relieve stress, improve interpersonal relationships, and improves mental health.[9] Respondents to the Park and Recreation Survey indicated adult fitness and wellness as the most important and second most needed type of program with 51% of households reporting a need.

To meet the growing demand for these activities (also noted in Subsection 5.7.1), facilities are needed to accommodate both scheduled and self-led programs. Fitness facilities do not need to be confined to indoor spaces as modern equipment can now be provided in outdoor environments that are similar to those seen typically in fitness centers. Such facilities can serve as an alternative to the old fitness and par-course trails. Garland offers such facilities at a few parks, including Armstrong Park. These features could potentially be offered at many more parks. Additionally, many communities partner with health providers to offer programs, including citywide wellness campaigns.

5.7.7 Economic Impact of Sports Tournaments

Tournaments can be revenue generators by exacting entrance or rental fees and promoting concession sales. Developing tournament level facilities is a trend aimed to attract better teams and better tournaments to the facilities. These high-quality facilities are an asset to local leagues and activities when not being used for tournaments. A balance is needed between local league use and use for tournaments.

Facilities designed to accommodate tournaments require larger parking lots and an arrangement of fields in a cluster for easy accessibility, such as a wagon wheel configuration for baseball and softball fields. Quality

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[7] National Recreation and Park Association, "Parks Using Technology to Engage and Inspire," https://www.nrpa.org/parks-recreation-magazine/2017/may/parks-using-technology-to-engage-and-inspire/. (May 1, 2017)

[8] National Recreation and Park Association, "How to Leverage Geocaching to Promote Park and Recreation Events," https://www.nrpa.org/parks-recreation-magazine/2017/october/how-to-leverage-geocaching-to-promote-park-and-recreation-events/. (October 5, 2017)

[9] National Recreation and Park Association, "Health and Wellness," http://www.nrpa.org/About-NRPA/Impacting-Communities/Health-and-Wellness/, (August 31, 2016)

restroom facilities are necessary, and concessions, shade, and other amenities should be available throughout the park that make it a desirable place to spend the day or a weekend.

Garland has tournament facilities in at Winters and Audubon Parks for diamond fields sports and rectangular field sports. The complexes need some improvements in order to improve their ability to draw tournaments, but funding for many of these improvements was authorized in the recently passed bond.

5.7.8 Environmental Best Management Practices (BMPs)

Many communities utilize parks as examples of best management practices (BMPs) to serve as models for minimizing environmental impacts and maximizing the sustainability of both park sites and operations. Park districts are in great positions to lead in the implementation of these practices because they are typically among the largest landowners (if not the largest) in their jurisdictions. To assist in the implementation of these practices, some park districts establish manuals detailing the BMPs which are generally divided into categories.[10] Some potential categories include (with examples):

- Site Selection (which properties to acquire and protect)
- Design (strategies for management of stormwater, water quality, riparian/wetland buffers; use of vegetation; choice of building materials)
- Construction (controlling of pollutants, soil restoration, recycling of construction materials)
- Operation and Maintenance (practices for water conservation, weed control, composting, energy use, etc.)
- Programs and Special Events (consider carrying capacity of facility, provide recycling receptacles)

5.7.9 Environmental Education

The success of environmental education centers throughout the country combined with a strong desire for nature education demonstrated through the public input, including the public meetings, indicates a need for expanded environmental education opportunities. Potential subjects include natural processes, resource management, and nature education activities.

Environmental education cultivates understanding of the benefits of natural habitats and open spaces (including those owned and managed by Garland). Many park agencies take an outreach approach by providing environmental curriculum to schools in the form of nature center classes and activities. This tactic provides a method for promoting more use and appreciation of parks. These programs also provide an opportunity for regional park systems and universities to work closely with local parks and recreation departments to provide a level of programming that the municipalities could not perform on their own.

Salamander Search (Lexington, KY)

Garland currently has limited environmental education programs despite the large amount of natural area in the city, including over 1,000 acres at the Greenbelts. Partnerships with the Garland Independent School District could also increase youth programming opportunities. Nature education provides opportunities to engage all ages and abilities. These activities also provide great opportunities for intergenerational programming. Programs can be formatted as guided hikes, camps, community events, field trips, or classes and cover topic such as habitat restoration, wildlife identification (see bird watching below), invasive species removal, and more.

5.7.10 Birdwatching (or Birding)

According to the U.S. Fish and Wildlife Service nearly 50 million Americans participate in birdwatching (as of 2011) or about 20 percent of the population. The most common form of birding is watching birds near one's

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[10] Environmental Best Management Practices Manual. City of Fort Collins Parks and Recreation. 2011.

home; however, 38 percent of birders, or 18 million people, participate in birding away from the home. Participants in birdwatching tend to be older and more highly educated than the general population.

The U.S. Fish and Wildlife Service report also includes an analysis of the economic impact of birdwatching activities. Birdwatchers direct substantial amounts of dollars into the economy as a result of trip-related ($15 million) and equipment expenditures ($26 million). The report finds that the birding industry, including indirect effects resulting from the multiplier effect, generates over $100 billion annually throughout the United States and supports 666,000 jobs. These expenditures lead to an additional $6 million in state tax revenues and $7 million in federal tax revenues.[11] Several Garland parks offer potential birdwatching programming opportunities, including the Greenbelts, Audubon Park, and Hayes Park at Rosehill.

5.7.11 Trails and Interconnectivity

The demand for increased availability of trails and trail linkages between parks and open spaces (and other popular destinations) has been growing in many communities, including Garland. A high level of demand for these facilities is identified in nearly every community where surveys have been conducted. Even communities with extensive trail systems have a strong desire to continually connect and link the trails to neighborhoods, schools, shopping areas, and other community facilities.

Communities with extensive, connected trail systems are very livable communities where residents report a high quality of life. The need for trails for both recreational use and for transportation was conveyed clearly in all forms of public input. Trails received the second highest allocation in the dollar voting exercise. Trails represented a top potential improvement to parks in the Parks and Recreation Survey (second after restrooms) as well as the top unmet needs in the city. Eighty-two percent (82%) of respondents indicated they were very or somewhat supportive of new recreational trail development.

Ablon Park Trail

Many parks in Garland could potentially offer additional trails. As noted in Subsection 5.5.13, many parks in the city do not currently offer trails. Many of the parks with trails could be extended or improved to offer complete loops. Trail connections throughout Garland are the subject of another plan currently in development.

5.7.12 Mountain Bike and BMX Facilities

Off-road bicycling activities are growing in popularity, although they still represent a relatively small percentage of all bicycling activities. Modern mountain biking originated in the 1970s in California with a group of enthusiasts who modified existing bikes for off-road use. These cyclists organized first downhill races which they called "Repack." This name referred to the need to "repack" the brakes with fresh grease after each race due to the excessive heat from braking during the descent.[12]

Flow Trail

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[11] Birding in the United States: A Demographic and Economic Analysis. U.S. Fish and Wildlife Service. 2011.
[12] Marin Museum of Bicycling, "Mountain Biking History," http://mmbhof.org/mtn-bike-hall-of-fame/history/, (April 15, 2016).

During the early years of mountain biking, enthusiasts used singletrack trails intended for hiking as bikes were not specifically forbidden from using these trails. However, as the sport gained in popularly, bikes have been banned from most hiking trails, and singletrack trails designed specifically for mountain bikes have been established.[13] More recently, a new style of trail called a "flow trail" has appear which provides more predictable surfaces, banked turns, and a lack of obstacles. These trails require little peddling and minimal braking that appeal to a wider variety of users, including families. These trails can be designed to allow beginners to bypass any more technical trails.[14]

Pump Track

Another trend in off-road bicycle facilities is the pump track. These tracks, which began to appear in the 2000s, are looping tracks that can be ridden continuously without the need to pedal. A user's speed is dependent on "pumping" the terrain transitions of the track. A pump track requires approximately 50' by 50' of space (minimum) and generally feature a series of rollers and steeply bermed corners.[15] Unlike many of the other off-road facilities, pump tracks are usable both mountain bike and BMX riders.

Garland offers one mountain biking trail at Rowlett Creek Greenbelt, approximately 16.3 miles in length, which was built as part of a partnership with the Dallas Off Road Bicycle Association (DORBA) who help maintain the trail. Pump tracks are often offered in locations with other bike related facilities, such as a mountain bike trail or a trailhead to a major trail. One is available in Frisco, TX at Katie Jackson Park, adjacent to the mountain bike trail, also maintained by DORBA. Several of Garland's parks serve as trailheads to the trail network and many more have the potential to do so.

5.7.13 Nature Play Areas

Many parks and recreation agencies are placing increased emphasis on the availability of nature play areas and programming for children. The Natural Learning Initiative (NLI) and the National Wildlife Federation (NWF) recently released a document titled Nature Play & Learning Places, which provides a series of national guidelines for the creation of places for children to interact with nature. The guidelines are intended to help communities develop opportunities for children to learn about the natural environment and to promote physical activity. Additionally, the guidelines indicate that these areas should be characterized by natural materials, including plants, stones, water, fallen trees, and other natural elements that allow children to interact with the natural environment. The document defines a nature play or learning place as:

"A designated, managed area in an existing or modified outdoor environment where children of all ages and abilities play and learn by engaging with and manipulating diverse natural elements, materials, organisms, and habitats, through sensory, fine motor and gross motor experiences."[16]

Some potential nature play area features are described in the text below.

Natural Play Structure
(Silver Falls State Park, Oregon

Natural Play Structures

Permanent play structures can be constructed from natural materials such as logs and rocks. The guidelines encourage the engagement of local children for ideas and the use of indigenous materials in the design.

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[13] Singletracks, "Visiting the Birthplace of Mountain Biking: Marin County, California," http://www.singletracks.com/blog/mtb-trails/visiting-the-birthplace-of-mountain-biking-marin-county-california/, (April 15, 2016).

[14] IMBA, "Flow Trails," https://www.imba.com/model-trails/flow-trails, (April 15, 2016).

[15] Adventure Sports Journal, "Pumpin': An Introduction to the World of Pump Tracks," http://adventuresportsjournal.com/pumpin-an-introduction-to-the-world-of-pump-tracks/, (April 15, 2016).

[16] TTMoore, R. (2014). Nature Play & Learning Places. Creating and managing places where children engage with nature. Raleigh, NC: Natural Learning Initiative and Reston, VA: National Wildlife Federation. Version 1.6. (pages vii, 5, 7-8, 51, 65, 71-83).

Multipurpose Lawns

Multipurpose lawns, depending on size, can support a wide variety of activities and events. These lawns can be utilized for programmed and unprogrammed play for both large and small groups.

Meadows and Woodlands

Meadows, or fields of non-woody plants, can be utilized to provide ecosystems that children can explore and observe wildlife, most notably insects. These fields can also provide opportunities for children to see a variety of plants and learn about the diversity of these ecosystems, particularly compared to a carefully managed lawn.

Woodlands also offer diverse ecosystems of plants and wildlife and can provide a multitude of educational and play opportunities. Additionally, woodlands can be utilized for learning about seasonal plant cycles.

Vegetable Gardens

Vegetable gardens allow children to participate in the growth of vegetables and can provide opportunities for them to eat fresh vegetables. The children are able to learn more about the source of the food that they eat.

Aquatics

Existing natural streams, ponds, wetlands, and marshes provide educational opportunities, and these features can be constructed if not already available at a park. Aquatic features can provide children with multi-sensory experiences and the opportunity to interact with aquatic wildlife.

Gathering and Performance Structures

Gathering structures provide places for users to gather for social interaction and for programming opportunities and can be in the form of decks, patios, or gazebos. Performance structures include features such as stages, campfire circles, and small amphitheaters which can be utilized to encourage teamwork and group presentations.[17]

Frog Pond – Fishing for Tadpoles
(The Arboretum, Lexington, KY)

Opportunities in Garland

Few of these features are currently offered at Garland parks, but many could be implemented. Several parks have woodland areas or meadows that could be utilized for education. Duck Creek, Rowlett Creek, and Spring Creek Greenbelts provide excellent opportunities for these features. Many could also be incorporated into the development of Hayes Parks as well as many of the smaller passive parks in Garland.

5.7.14 Dog Parks

Dog parks are an ongoing trend that have been increasing in popularity. The development of these fence enclosed areas where dogs can run leash free can be a positive addition to a community. Dog parks are good for improving the social interaction skills of dogs and are a very good social attraction for the dog owners.

Quality dog parks need careful planning and a fairly extensive operating budget for maintenance and upkeep. At a minimum, a dog park should provide three areas of at least an acre each: one for large dogs, one for small dogs,

Dog Park with Water Feature

[17]Moore, R. (2014). Nature Play & Learning Places. Creating and managing places where children engage with nature. Raleigh, NC: Natural Learning Initiative and Reston, VA: National Wildlife Federation. Version 1.6. (pages vii, 5, 7-8, 51, 65, 71-83).

and one rotating, unused area to allow for regeneration of turf. Small dog parks often require a mulch or gravel surface as turf cannot be maintained due to heavy use. Shade, sitting areas, water, and restrooms are typical amenities at these parks.

Dog parks ranked as the eighth most important facility to households in the Parks and Recreation Survey, and dog parks ranked eighth for households with unmet facility needs. Pet exercise programs also ranked highly in survey questions, indicating that residents desire more organized activities at the dog park. Many dog owners requested more of these facilities at the public meetings, including the public workshop and the stakeholder groups.

Garland currently has one dog park in development at Central Park. A combination of large and small dog parks is likely needed to meet the growing needs of dog owners who increasingly use dog parks as community gathering spaces.

5.7.15 Disc Golf

Disc golf, formalized in the 1970s, is similar to traditional golf in many ways. The disc, or Frisbee, is thrown from a tee toward a hole which is most commonly in the form of a "Pole Hole." The player makes consecutive throws from the location of the landing of the previous throw until the disc lands in the basket or Pole Hole. Disc golf differs from traditional golf in some important ways: green fees are rarely required and only an inexpensive flying disc is needed to play. Disc golf appeals to a wide range of participants of all ages as well as those with disabilities, and the game can be played year-round. Courses also require much less land than traditional golf (as little as five acres for a nine-hole course).[18] The sport continues to grow in popularity and courses are available at many parks around the country.

Garland currently offers one disc golf course in the southern edge of the city in Audubon Park. Because these facilities can utilize land unsuitable for other amenities, they can be developed in almost any park. Quality courses can host tournaments, which can potentially bring visitors to Garland as disc golfers play year-round and are known to travel to access challenging courses.

5.8 CONCLUSIONS

The analysis conducted throughout this chapter serves to provide an indication of needs for parks and recreation services in Garland. The analysis indicates that many types of parks and facilities are located throughout the city; however, not all amenities exist in sufficient quantities and many are not evenly distributed throughout Garland.

The level of service standards in the first part of this chapter, which were developed with consideration to public input from residents of Garland, provide guidelines for the number of parks, recreation facilities, and open space acres needed in Garland. The geographic analysis of service areas identifies specific areas to target for investment in additional parks and facilities and highlights where investment will be the most impactful.

The mapping analysis helps to identify specific locations for potential improvements. These needs could be met through the development of new parks, development of additional facilities at existing parks, or increasing access to these parks. A combination of these three options most likely represents the best solution to improving access to facilities in Garland. The analysis from this chapter and the preceding chapters provides the foundation for the specific recommendations presented in Chapter 6.

Finally, Garland is behind many of the trends in parks and recreation, but the city is in a good position to confront those that have not been addressed. The aging population of Garland, like most of the country, provides additional incentive for the city to address many of these trends, including fitness programming, universal access, nature education, and expansion of trails.

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[18] Professional Disc Golf Association, "A Guide to Disc Golf from the PDGA," http://www.pdga.com, (September 20, 2019).