



# Parks and Recreation Master Plan Update

November 2016



City of  
Golden

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# Acknowledgements

## Mayor and City Council

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Joe Behm, Mayor Pro Tem (Ward 2)  
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**RESOLUTION NO. 2540**

**A RESOLUTION OF THE GOLDEN CITY COUNCIL TO ADOPT  
THE "PARKS AND RECREATION MASTER PLAN UPDATE" AS  
A TOOL FOR THE FUTURE PLANNING AND PRIORITIES OF  
THE GOLDEN PARKS AND RECREATION DEPARTMENT**

WHEREAS, the Golden City Council adopted a Parks and Recreation Department Master Plan in 2008; and

WHEREAS, the City has embarked on an ambitious effort to have one of the best parks and recreation systems in the country; and

WHEREAS, easy and equitable access to high quality park and recreation facilities is a highly valued element of the community; and

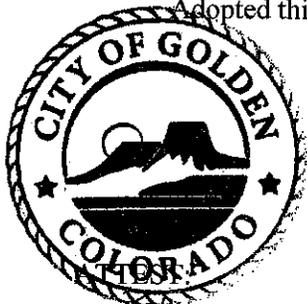
WHEREAS, there is a focus in exploring the community's connection of parks and recreation to overall health and well-being;

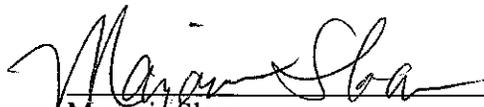
WHEREAS, the 2008 plan has accomplished certain goals and the community has future goals for parks and recreation as identified in the Master Plan Update;

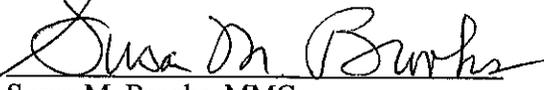
THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF GOLDEN, COLORADO:

Section 1. The Golden City Council approves the Golden Parks and Recreation Advisory Board and staff's recommendation to adopt the "Parks and Recreation Master Plan Update."

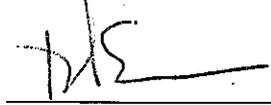
Adopted this 12th day of January, 2017.



  
\_\_\_\_\_  
Marjorie Sloan  
Mayor

  
\_\_\_\_\_  
Susan M. Brooks, MMC  
City Clerk

APPROVED AS TO FORM:

  
\_\_\_\_\_  
David S. Williamson  
City Attorney

## I. Executive Summary

The City of Golden is strategically located in an area with access to a variety of natural resources, including the Clear Creek corridor, North and South Table Mountains, open space, and the front range of the Colorado Rockies. Residents and visitors in Golden enjoy one of the most comprehensive park and recreation systems in the country, contributing to the City's reputation as a preferred location for people to live, work, and play.

The award-winning Golden Parks and Recreation Department oversees 565 acres of parks and open space over 25 different sites, and 24 miles of trails, in addition to a broad variety of recreation programs and numerous facilities including the Cemetery, Golden Community Center, Splash Aquatic Park, Clear Creek RV Park, Clear Creek White Water Park, Fossil Trace Golf Club, and Golden History Museums.



### Purpose of this Plan

The City of Golden has experienced growth and transition in the 30 years since completing the first master plan in 1986. Once a sleepy suburb of Denver, it now is an active and vital part of the metropolitan framework, connected by significant transportation alternatives including interstate and state highways, light rail, and commuter trails. The Parks and Recreation Department adopted a Master Plan in 2008 that set out a vision to become the best parks and recreation department in the country.<sup>1</sup>

This current plan update furthers that thought by celebrating the accomplishment of certain goals outlined in the 2008 plan, and building a roadmap for success as the Department looks to the future. Of special significance in this update is exploring and documenting the community's connection of parks and recreation to overall health and well-being.

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<sup>1</sup> City of Golden Parks and Recreation Master Plan 2008, by EDAW; page 1-2

## Planning Process Summary

The process for updating the Golden Park and Recreation Department's 2008 Master Plan began in February 2016. The development process for this Master Plan included an integrated Project Team consisting of staff representing various divisions in the Department. This project team provided detailed input to the GreenPlay team consistent with the planning process. This allowed for a collaborative approach in creating a master plan that incorporates staff and consultant expertise, as well as local knowledge and institutional history that only community engagement can provide. Plan development included the following tasks:

### Community Profile Development

Review of a variety of documents and reports to gain an understanding of the community, the City, the Department, and the amenities and services provided.

- Document Collection and Review
- Demographics Review
- Trends Review

### Inventory

Inventory of parks and facilities using existing mapping, staff interviews, and on-site visits to verify amenities and assess the condition of the facilities and surrounding areas.

- GRASP® Level of Service Analysis
  - Analysis and measurement of the current delivery of service for parks and recreation facilities using the GRASP® Level of Service Analysis.
  - Targeting a level of service that is both feasible and aligned with the desires of citizens as expressed through the statistical survey and other public outreach methods.
  - Graphic representation of analysis in GRASP® Perspectives.
- Programs and Services Gaps
- Strengths, Weaknesses, Opportunities, and Threats (SWOT) Staff Exercise
- Alternative Providers Analysis
- Capital Improvement Plan Development

### Community Engagement and Outreach

Providing a variety of methods for the community to participate results in the richest data for analysis. The following methods were utilized during this process:

- Statistically-Valid Random Sample Community Interest and Opinion Survey
- Open Link Surveys
- Focus Groups
- Stakeholder Meetings
- SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis with staff
- Open Public Meetings
- Findings Presentation

## Needs Assessment

Includes consideration of a variety of tools – demographics, trends, and survey results along with community and staff input to complete analysis and research relative to organizational needs and financial considerations.

- Organizational Assessment
- Alternative Funding Opportunities
- Financial Assessment

## Implementation Strategies and Action Plan

Includes identification and categorization of recommendations into themes with goals and objectives. An action plan outlines specific steps for implementation and capital improvements, including operational impacts and timeframe to support implementation.

- Identification of Key Issues
- Visioning Session
- Development of Goals, Objectives and Implementable Action Plan

## Key Issues Summary

Through the public process and analysis mentioned, several key issues were identified and considered by the project team. Management is encouraged to increase marketing efforts to promote the story of Parks and Recreation positive impact on community health. The Department's status as a public health provider could be amplified through community messaging. In addition, Parks and Recreation is supported in maintaining its National Parks and Recreation Association Gold Medal status and to continue with CAPRA accreditation. Increasing staff size to meet needs was also a common theme.



The call for more programming opportunities relative to nature play was heard, along with a wide range of individual opportunities to unique sports and needs such as pickle ball, long boarding, and BMX biking. Special events in the Clear Creek Corridor were frequently discussed, with the feedback ranging from increasing opportunities for special event partnerships to exploring alternative locations outside of the Downtown/Clear Creek Corridor area.

The increasing demand on Parks and Recreation services and bold master plan vision for the Department call for creative opportunities for financial sustainability including partnerships, sponsorships, and continued cost recovery assessment.

Golden Parks and Recreation is noted for offering quality facilities and amenities to residents and visitors. Feedback supported the Department in continuing to preserve open spaces, trails, and pathways in the spirit of increasing connectivity in the park system. Adding and repurposing park amenities will help maintain the high level of service that Golden provides.

### Inventory Assessment Summary

This Master Plan Update employed a pioneering new public health framework for inventorying the state of Golden parks, trails, and open space. An analytical technique known as **GRASP® (Geo-Referenced Amenities Standard Process)**, **analytical maps and data were created to examine access to recreation across the city**. This process, used exclusively by GreenPlay and Design Concepts, is used to analyze Level of Service of recreation assets.

**GRASP® Active**, an adaptation of **GRASP®** focused on physical health, was used to assess the potential for physical activity in Golden parks as well as walkability from surrounding neighborhoods to parks and trails. Each park was then scored on these values. In addition to scoring components, each park site was assessed for its comfort, convenience, and ambient qualities. This includes the availability of amenities such as restrooms, drinking water, shade, scenery, etc. These **modifier** values then serve to enhance or amplify component scores at any given location.

The overall goal of such analysis is to identify potential gaps in the current level of service based on equitable distribution across the system. Recent research has found evidence that “park proximity is associated with higher levels of park use and physical activity, particularly among youth,” (Active Living Research, 2010). Research also suggests that more parks and more park acreage correlate with higher physical activity levels. **GRASP® Active** also looked at participation of Golden residents in common park activities such as organized sports, biking, and walking for exercise. A detailed history and description of **GRASP®** Methodology may be found in **Appendix F**.

Proximity and transportation are relevant factors affecting level of service in Golden. The provision and distribution of assets is reasonably equitable across the city, especially given resident access to motorized transportation. Analysis would indicate that Golden is currently providing recreation opportunities in the form of larger, neighborhood based parks.

As this walkability analysis accounts for pedestrian barriers, levels of service are notably truncated in many areas such as along I-70, Highway 58, or Highway 6. One of the greatest concentrations of access to recreation assets is in the northcentral part of the city near Lions Park. A resident in this high service area can walk to 37 different components in eight parks and the Golden Community Center, four trailheads, and eight trail access points plus two open space parcels, and Colorado School of Mines.

Lack of park land available for development in some sections of town also limits access. Areas receiving lower scores were considered areas of opportunity to improve walkability. These are areas where land and assets are currently available but do not meet the minimum standard threshold value. There may be multiple options to address these areas. One solution may be to address pedestrian barriers in the immediate area. It may also be possible to improve the quantity and quality of assets to raise the level of service without the need for acquiring new lands.

Effective strategies to increase overall level of service might be to add assets in any area with lower service, acquire and develop additional park land, or develop partnerships in areas lacking current service. As compared to other similar cities in the GRASP® dataset, Golden ranks highest in average components per site and second in average score per site. This would indicate that while Golden may have fewer parks than comparable cities, it has larger, more developed, or active parks than other similar cities. When compared to national databases, Golden fares better than the national median ratio of residents per basketball courts, diamond ballfields, dog parks, rectangle multi-purpose fields, and playgrounds.

## Re-Creating Golden: An Action Plan for Success

A thorough analysis of the Key Issues, a summary of all planning and policy research, the qualitative and quantitative data, inventory assessment, Level of Service analysis, public engagement sessions and staff input assembled for this study yielded various Findings. These have resulted in the development of recommendations to provide guidance in consideration of how to continue to provide quality parks and recreation services and amenities in Golden, and how to plan for the future.

This section describes ways to enhance the level of service and the quality of life with improvement through organizational efficiencies, improved programming and service delivery, maintenance and improvements to facilities and amenities, and financial opportunities. A key theme in this document is the impact of parks and recreation on public health. While any of the recommendations may serve to improve a program, site or opportunity, the larger picture is the overall health of the community. As the provider of parks and recreation services for Golden and the surrounding area, large populations can be impacted with improved health through the programs, parks, open space, and trails that the City provides.

The following Goals, Objectives, and Actions support the recommendations. This Action Plan is intended to help Golden celebrate current award winning status and to continually re-create that opportunity as the department moves into the future. Most costs will be dependent on the extent of the enhancements and improvements determined at the time. Timeframe to complete action steps will need to be prioritized annually considering other projects and financial resources. The Action Plan is broken down into general Goals, more directed Objectives, and lastly specific actions that can be taken to help achieve stated goals.

### Goal 1: Enhance Organizational and Operational Efficiencies

Golden has a proven success in parks and recreation services, as evidenced by numerous awards and citations bestowed upon the Department. The Department needs to share its story with the public and engage them with new and exciting opportunities and relationships, especially with regard to public health. Partnering with local health providers and developing unique programs will offer some valuable, unique benefits to this community. To maintain this award winning status requires a focus on staffing appropriately and including all aspects of the Department, including museums and cultural heritage sites.

#### Objective 1.1: Increase marketing efforts

- **1.1.a** Utilize trending and social media to promote Department and foster community engagement
- **1.1.b** Continually evaluate website for interactive opportunities

- **1.1.c** Develop relationships with outside agencies to tell the Department's story or feature opportunities
- **1.1.d** Develop partnerships to create niche and market relative to public health and prevention

### **Objective 1.2: Appropriately staff to maintain Level of Service**

- **1.2.a** Utilize the NRPA Field Report or other benchmarking to evaluate staffing levels
- **1.2.b** Work with Human Resources Department to evaluate classifications and pay scale of non-full time staff

### **Objective 1.3: Maintain award-winning status**

- **1.3.a** Seek re-accreditation utilizing 2008 Goal Analysis and 2016 Action Plan
- **1.3.b** Review requirements for Gold medal status and incorporate standards to reflect level of service

### **Objective 1.4: Focus on Planning for Museums**

- **1.4.a** Develop a Strategic Plan for museums and cultural properties
- **1.4.b** Include division in future departmental master planning efforts

## **Goal 2: Enhance Programming Opportunities**

Many alternative providers for environmental and adventure programming exist in Golden; therefore, these programs are not recommended to be repeated by the Department. However, cross marketing and referral could ease customer location of such opportunities and afford partnerships if and when appropriate.

While the community desires the social atmosphere that community events offer, developing alternative sites would relieve the pressure of such events on the downtown area. Again, partnerships might afford opportunities for developing access to more individualized recreational opportunities.

### **Objective 2.1: Add programming for gap areas**

- **2.1.a** Note information and referral for environmental and adventure opportunities
- **2.1.b** Develop opportunities for unstructured nature play

### **Objective 2.2: Develop additional special event opportunities**

- **2.2.a** Emphasize local events and partnerships
- **2.2.b** Develop alternative sites for special events and criteria for their use

### **Objective 2.3: Seek opportunities for individual active recreation**

- **2.3.a** Pursue partnerships to develop amenities for unique needs such as pickle ball or longboarding
- **2.3.b** Pursue opportunities to increase access for unique regional sports (paragliding, white water, etc.)

## **Goal 3: Enhance Financial Sustainability**

As more and more demands are placed on public parks and recreation departments, it becomes imperative to adopt good business practices. In the public survey, Golden voters expressed support for considering a lodging tax, which could supplement revenues for the Department. Formal policies defining partnerships and sponsorships would also assist in securing additional funding. While the Department does exercise a cost recovery philosophy, it should be evaluated and updated as needed.

### **Objective 3.1: Pursue additional revenue**

- **3.1.a** Explore opportunity for dedicated revenue source, such as lodging tax

### **Objective 3.2: Adopt policies reflective of revenue enhancement opportunities**

- **3.2.a** Review sample and adopt formal Sponsorship Policy
- **3.2.b** Review sample and adopt formal Partnership Policy

### **Objective 3.3: Formalize cost recovery methods**

- **3.3.a** Evaluate and assess cost recovery efforts

## **Goal 4: Address Level of Service and Identified Gap Areas by Maintaining or Improving Existing Facilities and Amenities**

This planning process produced a thorough inventory and GIS database for Golden Parks and Recreation. Keeping this data up to date will allow it to be utilized to make decisions about replacing, upgrading, renovating, or adding amenities to existing sites. Additionally, the survey and inventory can provide direction for completing trail connections and developing an integrated trail network.

### **Objective 4.1: Assess and monitor park inventory on a regular basis**

- **4.1.a** Annually assess and update asset inventory
- **4.1.b** Continue to implement ADA transition plan and monitor compliance

### **Objective 4.2: Increase connectivity to promote resident use and increase physical activity**

- **4.2.a** Coordinate trails with other planning efforts
- **4.2.b** Develop a Trails Master Plan with other departments that includes an Integrated Transportation Plan
- **4.2.c** Explore ways to connect residents to parks and trails through continued development of park identification and wayfinding signage, apps, maps, and policies

### **Objective 4.3: Repair, re-purpose, or upgrade existing components**

- **4.3.a** Address Low-Scoring Components
- **4.3.b** Address Low Energy Expenditure Components

### **Objective 4.4: Add components to existing parks, open space and trails**

- **4.4.a** Consider booster components to increase level of service or activity levels on existing lands
- **4.4.b** Consider high demand components to increase level of service or activity levels in existing lands
- **4.4.c** Consider booster and/or high demand components infrastructure needs to support programming needs
- **4.4.d** Consider trends in parks and recreation when adding components to increase level of service or activity levels

### **Objective 4.5: Standardization of park amenities and components**

- **4.5.a** Develop and/or adhere to existing City standards in park comfort and convenience amenities

### **Goal 5: Address Level of Service and Identified Gap Areas through Additional Land Acquisition and Preservation**

Golden is fortunate to have Jefferson County Open Space lands that surround the community and are easily accessible to residents. Level of Service maps reveal areas to focus on in consideration of additional land acquisition for parks or connections to benefit residents as well as visitors.

### **Objective 5.1 Preserve lands for parks, open space, trails, and parkways**

- **5.1.a** Identify park, open space, and trail opportunities through land acquisition and easement

This plan is intended to guide Golden in provision of parks and recreation services for the next seven to ten years.

## II. Purpose, Background, and Planning Process

### A. Purpose of this Plan

The City of Golden has experienced growth and transition in the 30 years since its first Parks and Recreation Master Plan was developed. Once a sleepy suburb of Denver, it now is an active and vital part of the metropolitan framework, connected by significant transportation alternatives including interstate and state highways, light rail, and commuter trails. The Parks and Recreation Department adopted a Master Plan in 2008 that set out a vision to become the best parks and recreation department in the country.<sup>2</sup> This current plan update furthers that thought by celebrating the accomplishment of certain goals outlined in the 2008 plan, and building a roadmap for success as the Department looks to the future. Of special significance in this update is exploring and documenting the community's connection of parks and recreation to overall health and well-being.

### B. Golden's Path to Success

In creating a long-term vision for the role of parks and recreation in Golden, the Department completed its first master plan in 1986. A second plan, considering community changes and challenges was adopted in 2008. Golden's Park and Recreation Department became accredited through the Commission of Accreditation of Park and Recreation Agencies (CAPRA) in October of 2009. The Department was also recognized in 2010 with a National Gold Medal Award for Excellence in Park and Recreation Management at the National Park and Recreation Association (NRPA) Congress and Exposition. The award is administered by the American Academy for Park and Recreation Administration in partnership with NRPA.<sup>3</sup> On a local level, specific programs and staff have been recognized for ingenuity and leadership through the Colorado Park and Recreation Association.

In 2016, the Department is updating its master plan, coordinating timing to help maintain CAPRA accreditation and award-winning status. The process includes determining the future of parks and recreation in the community by inviting public and stakeholder input. Updating master plan goals will help Golden remain an award winning and accredited agency.

### C. Defining Parks and Recreation

The City of Golden is strategically located in an area with access to a variety of natural resources, including the Clear Creek corridor, North and South Table Mountains, open space and the front range of the Colorado Rockies. Access to award winning parks and recreation amenities provided by the City are valued by the community. The Parks and Recreation Department oversees 565 acres of parks and open space over 25 different sites, and 24 miles of trails, in addition to a broad variety of recreation programs and numerous facilities including the Cemetery, Golden Community Center, Splash Aquatic Park, Clear Creek RV Park, Clear Creek White Water Park, Fossil Trace Golf Club, and Golden History Museums. The adopted mission statement reflects these efforts.

*The mission of the Golden Parks and Recreation Department is to promote and provide safe and comprehensive community facilities, programs, and services to enrich the quality of life for all residents and visitors.*

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<sup>2</sup> City of Golden Parks and Recreation Master Plan 2008, by EDAW; page 1-2

<sup>3</sup> <http://www.cityofgolden.net/government/departments-divisions/parks-and-recreation/awards/>

## D. Department Organization and Overview

Golden's Parks and Recreation Department oversees a variety of functions in several divisions consisting of:

- Recreation
- Parks, Cemetery, Forestry
- Golf Maintenance and Pro Shop
- Facilities Maintenance
- Museums

Each of these divisions is led by a Division Manager or Superintendent who reports to the Department Director along with a head Golf Professional and an Analyst. Utilizing a traditional structure, the Director reports to the City Manager, who in turn reports to the City Council, elected by citizens. A Parks and Recreation Advisory Board serves to advise City Council and staff on how best to provide safe and comprehensive parks and recreation facilities, programs, and services on behalf of all current and future residents of the City of Golden.



## E. Related Planning Efforts and Integration

A variety of documents help to provide a background and basis for parks and recreation in Golden. While these documents are not all specific to the Parks and Recreation Department, they speak to the value of such services and amenities in creating a quality of life that is attractive to Golden residents and visitors alike. This is not meant to be an all-inclusive list, but valuable information was derived from the following:

- **City of Golden Parks and Recreation Master Plan (2008)**  
This departmental master planning document, adopted by resolution, outlined broad goals relative to acquiring new park land, completing major park improvements, undertaking park enhancements, and consideration of Clear Creek Park District.
- **Golden Vision 2030 (2010)**  
Also adopted by resolution, the base of this document provides a strong statement of “who we are as a community” and “who we intend to be” by identifying guiding principles and community values around government processes, smart growth, sustainability, and community health.
- **Clear Creek Corridor Master Plan and Clear Creek Management Plan (2011)**  
This master plan identified goals for this natural corridor, including linear parks, connectivity, parking, community gathering spaces, land use, and improving facilities.
- **Golden Comprehensive Plan (2011)**  
Looking at the city in its entirety, this document addresses goals and strategies for decision-making, community themes, neighborhood planning, and tools for measurement.

- **Clear Creek Ecosystem Health Assessment Report (2013)**  
Details concern evaluation of the riparian environment and management strategies related to preservation, bank stabilization, infrastructure, and access.
- **Golden Wellbeing Report (2016)**  
This report explored the results of the Gallup-Healthways Well-being Survey and determined access to parks and open space were key aspects in residents' positive well-being, along with trails and pathways for recreation.
- **Parks and Recreation Advisory Board Work Plan and Priorities (2015)**  
This identifies areas of focus for the Parks and Recreation Advisory Board relative to supporting Golden's continued efforts in supporting community health while maintaining existing assets with limited funding resources.
- **National Citizen Survey Community Livability Report (2016)**  
This NCS report captures details about the livability of Golden, including community characteristics, governance, and participation. Regarding parks and recreation, 94 percent of respondents felt the quality of life in Golden was good or excellent. Recreation and Wellness ranked higher than the national benchmark. High scoring responses included mobility (walking, biking, and trails), the natural environment, and recreation and fitness opportunities.

These documents provide a strong citizen statement about the type of community they value and have come to know as their home town. Parks and Recreation are seen as community assets that afford a specific quality of life and contribute to community physical and economic health.

### F. Methodology – How Information was Obtained

The process utilized in developing this Master Plan included an integrated Project Team consisting of staff representing various divisions in the Department. This project team provided detailed input to the GreenPlay team consistent with the planning process. This allowed for a collaborative approach in creating a master plan that incorporates staff and consultant expertise, as well as local knowledge, institutional history and that only community engagement can provide. The development of this plan included the following tasks:

#### Community Profile Development

Review of a variety of documents and reports to gain an understanding of the community, the City, the Department and the amenities and services provided.

- Document Collection and Review
- Demographics Review
- Trends Review

## **Inventory**

Inventory of parks and facilities using existing mapping, staff interviews, and on-site visits to verify amenities and assess the condition of the facilities and surrounding areas.

- GRASP® Level of Service Analysis
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- Alternative Providers Analysis
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## **Community Engagement and Outreach**

Providing a variety of methods for the community to participate results in the richest data for analysis.

The following methods were utilized during this process:

- Statistically Valid Random Sample Community Interest and Opinion Survey
- Open Link Surveys
- Focus Groups
- Stakeholder Meetings
- SWOT (Strengths Weaknesses, Opportunities, and Threats) Analysis with staff
- Open Public Meetings
- Findings Presentation

## **Needs Assessment**

Includes consideration of a variety of tools, demographics, trends, and survey results, along with community and staff input, to complete analysis and research relative to organizational needs and financial considerations.

- Organizational Assessment
- Alternative Funding Opportunities
- Financial Assessment

## **Implementation Strategies and Action Plan**

Includes identification and categorization of recommendations into themes with goals and objectives.

An action plan outlines specific steps for implementation and capital improvements, including operational impacts, and timeframe to support implementation.

- Identification of Key Issues
- Visioning Session
- Development of Goals, Objectives, and Implementable Action Plan

## III. Community Profile, Outreach, and Identified Needs

### A. Demographic Profile

Understanding community demographics and needs is an important component of the City of Golden, Colorado, Parks and Recreation Master Plan. The data can help to project future needs in programming and facilities so that appropriate planning and budgeting can occur. The population data used in this demographic profile<sup>4</sup> comes from existing documents utilized by the City, including the Golden Vision 2030 Plan, and based on the 2000 and 2010 U.S. Census data. A summary of demographic highlights is followed by more detailed demographic analysis.

**Table 1: Summary Demographics**

Summary Demographics	
Population	20,201
Number of Households	7,581
Average Household Size	2.28
Median Age	31.7
Median Household Income	\$53,896

### Population and Demographic Trends

**Table 2: Population by Year**

Year	Population
2000	17,159
2010	18,867
2014	20,201

Golden averages about 1% growth per year.<sup>5</sup>

**Table 3: Population Make-up**

Age	Population
Under 5	897
5-14	1,622
15-19	2,133
20-24	2,444
25-34	2,601
35-44	2,571
45-54	2,621
55-59	1,164
Over 60	2,814

<sup>4</sup> <http://www.cityofgolden.net/work/economic-development/demographics/>

<sup>5</sup> CAPRA Self-Assessment Report by City of Golden, 2014; page 3

Golden citizens possess educational attainment higher than the Denver Metropolitan area, as show in Table 4.

**Table 4: Comparative Educational Attainment Levels**

Level	Golden	Metro Denver	Colorado <sup>6</sup>
High School Diploma	96%	90.2%	90.4%
Bachelor's Degree/Higher	51%	42.5%	37.5%

The average household in Golden consists of 2.28 individuals with a median income of \$53,896.

## B. Park and Recreation Influencing Trends

The following information highlights relevant regional and national outdoor recreation trends from various sources that may influence recreation planning and programming for the next several years. As the Golden population changes, understanding and addressing the recreation needs of various age groups will be important. While Golden is likely to experience an “aging in place” population like many cities, the access to outdoor recreation opportunities, unique cultural experiences, and higher education are likely to continue to attract a young demographic. Additionally, with a recent light rail station completed, Golden has become easily accessible from anywhere in the metro Denver area, potentially attracting more visitors.

### Demographic Trends

#### Adults – Baby Boomers

Baby Boomers are defined as individuals born between 1946 and 1964, as stated in “Leisure Programming for Baby Boomers.”<sup>7</sup> They are a generation that consists of nearly 76 million Americans. In 2011, this influential population began its transition out of the workforce. As Baby Boomers enter retirement, they are looking for opportunities in fitness, sports, outdoors, arts and cultural events, and other activities that suit their lifestyles. In an article in the July 2012 issue of Parks and Recreation magazine, published by NRPA, Emilyn Sheffield, Professor of Recreation and Parks Management at the California State University, at Chico, contributed an article titled “Five Trends Shaping Tomorrow Today.” In it, she indicated that Baby Boomers are driving the aging of America, with Boomers and seniors over 65 composing about 39 percent of the nation’s population.<sup>8</sup> Boomers are second only to Gen Y/Millennials (born between 1980 and 1999) in participation in fitness and outdoor sports.<sup>9</sup> Jeffrey Ziegler, a past president of the Arizona Parks and Recreation Association identified “Boomer Basics” in his article, “Recreating Retirement: How Will Baby Boomers Reshape Leisure in their 60s?”<sup>10</sup> Highlights are summarized below.

- Boomers are known to work hard, play hard, and spend hard.
- They have always been fixated with all things youthful.
- Because Boomers in general have a high education level, they will likely continue to pursue education as adults and into retirement.

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<sup>6</sup> <http://www.census.gov/quickfacts/table/PST045215/08>

<sup>7</sup> Linda Cochran, Anne Roshchadl, and Jodi Rudick, “Leisure Programming For Baby Boomers,” Human Kinetics, 2009.

<sup>8</sup> Emilyn Sheffield, “Five Trends Shaping Tomorrow Today,” *Parks and Recreation*, July 2012, p. 16-17.

<sup>9</sup> 2012 Participation Report, Physical Activity Council, 2012.

<sup>10</sup> Jeffrey Ziegler, “Recreating Retirement: How Will Baby Boomers Reshape Leisure in Their 60s?,” *Parks and Recreation*, October 2002.

- Boomers will look to park and recreation professionals to give them opportunities to enjoy many life-long hobbies and sports.
- Boomers will reinvent what being a 65-year-old means.

### **Adult – Generation X**

Residents born between approximately 1965 and 1979 are commonly referred to as Generation X. This generation is smaller than the Baby Boomer and the Millennial Generations, perhaps because of the 14-year age spread vs. 20, or perhaps as a spin-off of limited family sizes. According to the Pew Research Center, Gen Xers “are a low-slung, straight-line bridge between two noisy behemoths,” sharing similar traits to both generations.<sup>11</sup> They are often referred to as America’s neglected middle child because of their lack of distinctive traits and general self-reliance. For example:

- They are less demographically diverse than Millennials.
- They tend to be less traditional/conservative than Baby Boomers.
- They use technology at a less frequent rate than Millennials.

According to the 2015 Participation Report by the Physical Activity Council,<sup>12</sup> recreational activities to consider with this group, and of particular interest in Golden, include:

- Individual Sports
- Outdoor Sports
- Fitness Activities

According to the article “How Generation X is Shaping Government,”<sup>13</sup> this age demographic is starting to settle into their communities, and is becoming more involved on a regular basis. Once thought to be the generation that would not have much impact, Gen Xers are starting to become a vital part of communities and public engagement. Golden should look for opportunities to engage with these individuals, and invite their feedback of meeting some of the needs identified with individual sports, outdoor sports, and partnerships.

### **Adult – The Millennial Generation**

The Millennial Generation is generally considered to represent those born between about 1980 and 1999. In their book, Millennials Rising, the Next Great Generation, authors William Strauss and Neil Howe identify seven Millennials characteristics.<sup>14</sup> These characteristics were discussed in a 2010 California State Parks article entitled “Here come the ‘Millennials’: What You Need to Know to Connect with this New Generation”:

1. Special: Used to receiving rewards just for participating, Millennials are raised to feel special.
2. Sheltered: Millennials lead structured lives filled with rules and regulations. Less accustomed to unstructured play and apprehensive of the outdoors, they spend most of their time indoors.
3. Team Oriented: This group has a “powerful instinct for community” and “places a high value on teamwork and belonging.”
4. Technically savvy: Upbeat and with a can-do attitude, this generation is “more optimistic and tech-savvy than its elders.”
5. Pressured: Millennials feel “pressured to achieve and pressured to behave.” They have been “pushed to study hard and avoid personal risk.”

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<sup>11</sup> Paul Taylor and George Gao, “Generation X: America’s Neglected ‘Middle Child,’” <http://www.pewresearch.org/fact-tank/2014/06/05/generation-x-americas-neglected-middle-child/>

<sup>12</sup> “2015 Participation Report”, Physical Activity Council, 2015.

<sup>13</sup> Rob Gurwitt, “How Generation X is Shaping Government,” *Governing – The State and Localities*, <http://www.governing.com/topics/mgmt/gov-how-generation-x-shaping-government.html>

<sup>14</sup> Neil Howe and William Strauss, *Millennials Rising, the Next Great Generation*, Vintage: New York, New York, 2000.

6. Achieving: Expected to do great things, they may be the next “great” generation.
7. Conventional (and diverse): Millennials are respectful of authority and civic minded.”

The California State Parks article provides a broad range of ideas for engaging Millennials in parks and recreation.<sup>15</sup>

In a 2011 study of the Millennial Generation,<sup>16</sup> Barkley Advertising Agency made the following observations about Millennials and health/fitness:

- Sixty percent (60%) of Millennials say they try to work out on a regular basis.
- Much of this focus on health is really due to vanity and/or the desire to impress others — 73 percent exercise to enhance their physical appearance.
- Millennials are also fans of relaxation and rejuvenation.
- Millennials stray from their healthy diets on weekends.

### Youth – Generation Z

Emilyn Sheffield also identified as one of the five trends shaping tomorrow today that the proportion of youth is smaller than in the past, but still essential to our future. As of the 2010 Census, the age group under age 18 forms about a quarter of the U.S. population.

Characteristics cited for Generation Z, the youth of today,<sup>17</sup> include:

- The most obvious characteristic is the pervasive use of technology.<sup>18</sup>
- Generation Z members live their lives online and love sharing both intimate and mundane details of life.
- They tend to be acutely aware that they live in a pluralistic society and to embrace diversity.
- Generation Zers tend to be independent. They do not wait for their parents to teach them things or tell them how to make decisions.<sup>19</sup>

With regard to physical activity, a 2013 article published by academics at Georgia Southern University<sup>20</sup> notes that the prevalence of obesity in Generation Z (which they describe as individuals born since the year 2000) is triple that of Generation Xers (born between 1965 and 1979). It suggests that due to increased use of technology, Generation Z spends more time indoors, is less physically active, and is more obese compared to previous generations.

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<sup>15</sup> California State Parks, “Here come the ‘Millennials’: What You Need to Know to Connect with this New Generation,” *Recreation Opportunities*. (2010), p. 4-6, [http://www.parks.ca.gov/pages/795/files/millennials%20final\\_03\\_08\\_10.pdf](http://www.parks.ca.gov/pages/795/files/millennials%20final_03_08_10.pdf), accessed January 12, 2015.

<sup>16</sup> American Millennials: Deciphering the Enigma Generation, <https://www.barkleyus.com/AmericanMillennials.pdf>, accessed May 2015.

<sup>17</sup> Note: There does not appear to be a general consensus about the transition from Millennials to Generation Z. The range cited in various <sup>articles</sup> puts the transition year anywhere from about 1994 to 2000.

<sup>18</sup> La Monica Everett-Haynes, “Trending Now: Generation Z,” Arizona University UA News Blog, <http://uanews.org/blog/trending-now-generation-z>, accessed July 30, 2015.

<sup>19</sup> Alexander Levit, “Make Way for Generation Z,” *The New York Times*, March 28, 2015, [http://www.nytimes.com/2015/03/29/jobs/make-way-for-generation-z.html?\\_r=0](http://www.nytimes.com/2015/03/29/jobs/make-way-for-generation-z.html?_r=0).

<sup>20</sup> David D. Biber, Daniel R. Czech, Brandon S. Harris, and Bridget F. Melton, “Attraction to physical activity of generation Z: A mixed methodological approach,” *Open Journal of Preventive Medicine*, Vol.3, No.3., 310 – 319 (2013), <http://dx.doi.org/10.4236/ojpm.2013.33042>.

### Facilities

The current national trend is toward “one-stop” indoor recreation facilities to serve all ages. Large, multipurpose regional centers help increase cost recovery, promote retention, and encourage cross-use. Agencies across the United States are increasing revenue production and cost recovery. Providing multiuse and flexibility in facilities versus specialized space is a trend, offering programming opportunities as well as free-play opportunities. “One-stop” facilities attract young families, teens, and adults of all ages. The Golden Community Center offers such a “one-stop” opportunity.



### Aquatics/Water Recreation Trends

According to the National Sporting Goods Association (NSGA), swimming ranked third nationwide in terms of participation in 2014.<sup>21</sup> Outdoor swimming pools are not typically heated and open year round. Swimming for fitness is the top aspirational activity for “inactives” in six of eight age categories in the Sports & Fitness Industry Association (SFIA) 2013 “Sports, Fitness, and Leisure Activities Topline Participation Report,” representing a significant opportunity to engage inactive populations.

Additional indoor and outdoor amenities like “spray pads” are becoming increasingly popular as well. Interactive fountains are a popular alternative, ADA-compliant and low maintenance. Trends in architectural design for splash parks or spray pads can be found in *Recreation Management* magazine articles in 2014 and 2015.<sup>22</sup>

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<sup>21</sup> “2014 Participation – Ranked by Total,” National Sporting Goods Association, 2015.

<sup>22</sup> Dawn Klingensmith “Make a splash: Spray grounds Get (Even More) Creative,” *Recreation Management*, April 2014 (and April 2015 updates). ([http://recmanagement.com/feature\\_print.php?fid=201404fe01](http://recmanagement.com/feature_print.php?fid=201404fe01)).

The Outdoor Foundation’s 2015 “Outdoor Recreation Participation Topline Report” provided nationwide trends for various outdoor activities, including the following water recreation activities – board sailing/windsurfing, canoeing, fishing, kayaking, rafting, sailing, stand-up paddle boarding, and wakeboarding. Among water recreation activities, stand-up paddling had the largest increase in participation from 2012 to 2014 (30.5% increase) followed by several varieties of the kayaking experience: kayak fishing (20.1% increase), and whitewater kayaking (15.1% increase). Fly fishing participation went up while other fishing activities went down in the same time period. Sailing participation increased somewhat, while rafting and wakeboarding participation went down.<sup>23</sup>

Golden offers a diversity of water based recreation, although residents desire more. Finding the balance between demand, space, and capital constraints will be challenging.

### Dog Parks

Dog parks continue to see high popularity and have remained among the top planned addition to parks and recreational facilities over the past three years. In 2014, the National Dog Park Association was founded, dedicated to providing informational resources for starting and maintaining dog parks. *Recreation Management* magazine<sup>24</sup> suggests that dog parks can represent a relatively low-cost way to provide an oft-visited a popular community amenity. Dog parks are also places for people to meet new friends and enjoy the outdoors. The best dog parks cater to people with design features for their comfort and pleasure, but also with creative programming.<sup>25</sup>

### Programming

#### Fitness

There have been many changes in fitness programs in the last 15 years. The American College of Sports Medicine (ACSM) *Health and Fitness Journal*<sup>26</sup> has conducted a survey annually since 2007 to determine trends that would help create a standard for health and fitness programming. **Table 5** shows survey results that focus on trends in the commercial, corporate, clinical, and community health and fitness industry. Some trends first identified in 2007 have stayed near the top of the list year after year while others came and went in popularity. Fitness programs for older adults will remain strong in 2015.

**Table 5: Top 10 Worldwide Fitness Trends for 2007 and Predicted Trends for 2015**

2007	Trends for 2015
1.Children and obesity	1. Body weight training
2.Special fitness programs for older adults	2. High-intensity interval training
3.Educated and experienced fitness professionals	3. Educated and experienced fitness professionals
4. Functional fitness	4. Strength training
5. Core training	5. Personal training
6. Strength training	6. Exercise and weight loss
7. Personal training	7. Yoga
8. Mind/body exercise	8. Fitness programs for older adults
9. Exercise and weight loss	9. Functional fitness
10. Outcome measurements	10. Group personal training

Source: American College of Sports Medicine

<sup>23</sup> *Outdoor Recreation Participation Topline Report 2015*, Outdoor Foundation, 2015.

<sup>24</sup> Emily Tipping, “2014 State of the Industry Report, Trends in Parks and Recreation,” *Recreation Management*, June 2014.

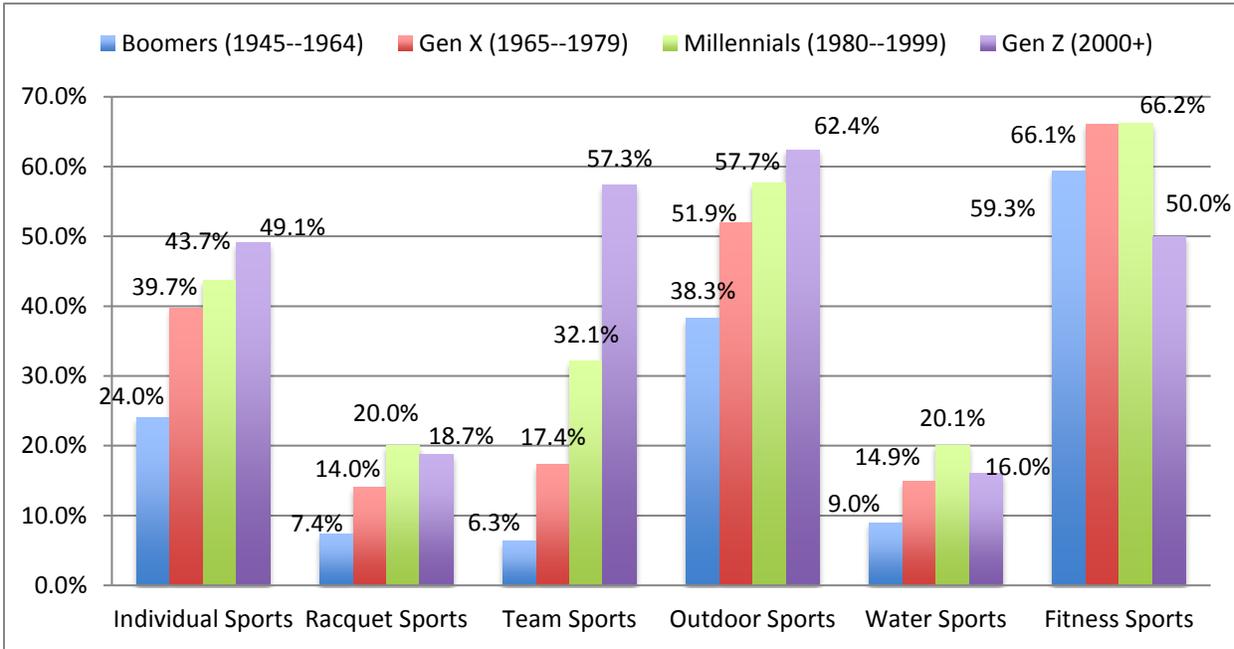
<sup>25</sup> Dawn Klingensmith “Gone to the Dogs: Design and Manage an Effective Off-Leash Area,” *Recreation Management*, March 2014. ([http://recmanagement.com/feature\\_print.php?fid=201403fe02](http://recmanagement.com/feature_print.php?fid=201403fe02)).

<sup>26</sup> Walter R. Thompson, “Worldwide Survey of Fitness Trends for 2012,” *Health & Fitness Journal*, American College of Sports Medicine, 2011.

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The Golden Community Center offers a diversity of fitness opportunities, and changing programs or equipment to meet these trends will be important to provide appropriate level of service. According to the 2015 “Participation Report” by the Physical Activity Council,<sup>27</sup> over half of each generation participates in fitness sports, and team sports are more of a Generation Z activity, while water and racquet sports are dominated by Millennials. **Figure 1** illustrates participation rates by generation.

**Figure 1: A Breakdown of Fitness Sports Participation Rates by Generation**



Source: 2015 Participation Report, Physical Activity Council.

## General Programming

One of the most common concerns in the recreation industry is creating innovative programming to draw participants into facilities and services. Once in, participants recognize that the benefits are endless. According to *Recreation Management* magazine’s “2015 State of the Industry Report,”<sup>28</sup> the most common programs offered by parks and recreation survey respondents include: holiday events and other special events (79.6%); youth sports teams (68.9%); day camps and summer camps (64.2%); educational programs (63.8%); adult sports teams (63.4%); arts and crafts (61.6%); programs for active older adults (56.2%); fitness programs (55%); sports tournaments and races (55%); and sports training such as golf or tennis instruction (53.8%).

## Older Adults and Senior Programming

The American Academy of Sports Medicine issues a yearly survey of the top 20 fitness trends.<sup>29</sup> It ranks senior fitness programs eighth among most popular fitness trends for 2015. Whether it is SilverSneakers, a freestyle low-impact cardio class, or water aerobics, more and more people are realizing the many benefits of staying active throughout life.

<sup>27</sup> 2015 Participation Report,” Physical Activity Council, 2015.

<sup>28</sup> Emily Tipping, “2015 State of the Industry Report, Trends in Parks and Recreation,” *Recreation Management*, June 2015.

<sup>29</sup> “Survey Predicts Top 20 Fitness Trends for 2015,” American College of Sports Medicine, <http://www.acsm.org/about-acsm/media-room/news-releases/2014/10/24/survey-predicts-top-20-fitness-trends-for-2015>, accessed January 2015.

### Active Living and Healthy Lifestyles

Golden residents recognize the value that parks and recreation amenities and programs add to their life, especially when it comes to creating a physically healthier community. Providing trails and connections to get to the various places and programs using a diversity of transportation options will be important to residents.



### Active Transportation

Bicycle-friendly cities have been emerging over the last 10 years. Cycling has become a popular mode of transportation as people consider the rising cost of fuel, desire for better health, and concern for the environment.

The Alliance for Biking and Walking published its “Bicycling and Walking in the United States: 2014 Benchmarking Report,”<sup>30</sup> updating its 2012 Benchmarking Report. The report shows that increasing bicycling and walking are goals that are clearly in the public interest. Where bicycling and walking levels are higher, obesity, high blood pressure, and diabetes levels are lower.

Design of a community’s infrastructure is directly linked to physical activity – where environments are built with bicyclists and pedestrians in mind, more people bike and walk. Increasing bicycling and walking make a big impact on improving public health and life expectancy. The following trends as well as health and economic indicators are pulled from the 2012 and 2014 Benchmarking Reports:

#### Public health trends related to bicycling and walking include:

- Quantified health benefits of active transportation can outweigh any risks associated with the activities by as much as 77 to 1, and add more years to our lives than are lost from inhaled air pollution and traffic injuries.

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<sup>30</sup> 2014 *Benchmarking Report*, Alliance for Biking and Walking, <http://www.bikewalkalliance.org/download-the-2014-benchmarking-report>, accessed January 23, 2015.

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- Between 1966 and 2009, the number of children who bicycled or walked to school fell 75 percent, while the percentage of obese children rose 276 percent.
- Bicycling to work significantly reduces absenteeism due to illness. Regular bicyclists took 7.4 sick days per year, while non-bicyclists took 8.7 sick days per year.

### The economic benefits of bicycling and walking include:

- Bicycling and walking projects create 8–12 jobs per \$1 million spent, compared to just 7 jobs created per \$1 million spent on highway projects.
- Cost benefit analyses show that up to \$11.80 in benefits can be gained for every \$1 invested in bicycling and walking.

### National bicycling trends:

- There has been a gradual trend of increasing bicycling and walking to work since 2005.
- Infrastructure to support biking communities is becoming more commonly funded.
- Bike share systems have been sweeping the nation since 2010.

In November 2013, the Institute for Transportation & Development Policy published a Standard for Transportation Oriented Design, with accessible performance objectives and metrics, to help municipalities, developers, and local residents design land use and built environment, “to support, facilitate, and prioritize not only the use of public transport, but the most basic modes of transport, walking and cycling.” The TOD Standard, along with its performance objectives and scoring metrics, can be found at [www.itdp.org/documents/TOD\\_v2\\_FINAL.pdf](http://www.itdp.org/documents/TOD_v2_FINAL.pdf).<sup>31</sup>

### **Trails and Health**

That a connected system of trails increases the level of physical activity in a community has been scientifically demonstrated through the Trails for Health initiative of the (CDC).<sup>32</sup> Recognizing that active use of trails for positive health outcomes is an excellent way to encourage people to adopt healthy lifestyle changes, American Trails has launched a “Health and Trails” resource section in its website: [www.americantrails.org/resources/benefits/](http://www.americantrails.org/resources/benefits/).

The health benefits are equally as high for trails in urban neighborhoods as for those in state or national parks. A trail in the neighborhood, creating a “linear park,” makes it easier for people to incorporate exercise into their daily routines, whether for recreation or non-motorized transportation. Urban trails need to connect people to places they want to go, such as schools, transit centers, businesses, and neighborhoods.<sup>33</sup>

### **Health Ranking**

The United Health Foundation has ranked Colorado 8th in its “State Health Rankings” in 2015 unchanged from its 2014 ranking. The State’s biggest strengths include:

- Low prevalence of obesity
- Low prevalence of physical inactivity
- Low prevalence of diabetes

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<sup>31</sup>“TOD Standard, Version 2.0,” Institute for Transportation & Development Policy, November 2013, [http://www.itdp.org/documents/TOD\\_v2\\_FINAL.pdf](http://www.itdp.org/documents/TOD_v2_FINAL.pdf).

<sup>32</sup> “Guide to Community Preventive Services” Centers for Disease Control and Prevention (CDC), <http://www.thecommunityguide.org/index.html>

<sup>33</sup> “Health Community: What you should know about trail building,” National Trails Training Partnership: Health and Fitness, <http://www.americantrails.org/resources/health/healthcombuild.html>, accessed on May 24, 2013.

Some of the challenges the State faces include:

- High incidence of pertussis
- High prevalence of low birthweight
- Large disparity in health status by educational level

More recent trends indicate that efforts to educate the public about healthy lifestyle choices may be working. The Robert Wood Johnson Foundation indicates a decline in childhood obesity of 7.4 percent among children ages 2-4 in Colorado.<sup>34</sup>

### **Economic and Health Benefits of Parks**

Agencies across the nation recognize the connection between health and parks, including the National Recreation and Park Association, the National Park Service, the Trust for Public Lands, the Centers for Disease Control, and the American Planning association, among others. The numerous economic and health benefits include the following:

- Trails, parks, and playgrounds are among the five most important community amenities considered when selecting a home.
- Research from the University of Illinois shows that trees, parks, and green spaces have a profound impact on people's health and mental outlook.<sup>35</sup>
- U.S. Forest Service research indicates that when the economic benefits produced by trees are assessed, the total value can be two to six times the cost for tree planting and care.<sup>36</sup>
- Fifty percent (50%) of Americans regard outdoor activities as their main source of exercise.<sup>37</sup>

"The Benefits of Parks: Why America Needs More City Parks and Open Space," a report from the Trust for Public Land, makes the following observations about the health, economic, environmental, and social benefits of parks and open space:<sup>38</sup>

- Physical activity makes people healthier.
- Physical activity increases with access to parks.
- Contact with the natural world improves physical and physiological health.
- Residential and commercial property values increase.
- Value is added to community and economic development sustainability.
- Benefits of tourism are enhanced.
- Trees are effective in improving air quality and act as natural air conditioners.
- Trees assist with storm water control and erosion.
- Crime and juvenile delinquency are reduced.
- Recreational opportunities for all ages are provided.
- Stable neighborhoods and strong communities are created.

Researchers have long touted the benefits of outdoor exercise. According to a study published in the *Journal of Environmental Science and Technology* by the University of Essex in the United Kingdom, "as little as five minutes of green exercise improves both mood and self-esteem."<sup>39</sup>

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<sup>34</sup>Robert Wood Johnson Foundation, "Signs of Progress"; [http://www.rwjf.org/en/library/collections/signs-of-progress.html?rid=s88gyymtNUXn5ixXvMJm\\_-Z\\_g9XhCc5C3YwxNjrcJgl&et\\_cid=611613](http://www.rwjf.org/en/library/collections/signs-of-progress.html?rid=s88gyymtNUXn5ixXvMJm_-Z_g9XhCc5C3YwxNjrcJgl&et_cid=611613)

<sup>35</sup>F.E. Kuo, "Environment and Crime in the Inner City: Does Vegetation Reduce Crime?," *Environment and Behavior*, Volume 33, p. 343-367.

<sup>36</sup>Nowak, David J., "Benefits of Community Trees," (Brooklyn Trees, USDA Forest Service General Technical Report, in review).

<sup>37</sup>*Outdoor Recreation Participation Report 2010*, Outdoor Foundation, 2010.

<sup>38</sup>Paul M. Sherer, "The Benefits of Parks: Why America Needs More City Parks and Open Space," The Trust for Public Land, San Francisco, CA, 2006.

In the United States, many parks and recreation departments have begun installing “outdoor gyms.” Outdoor fitness equipment provides a new opportunity for parks and recreation departments to increase the health of their communities, while offering them the opportunity to exercise outdoors. Such equipment can increase the usage of parks, trails, and other outdoor amenities while helping to fight the obesity epidemic and increase the community’s interaction with nature.

### **Administration Trends for Recreation and Parks**

Golden is an award-winning park and recreation department. Such departments are constantly evaluating and refining operations and management. Municipal parks and recreation structures and delivery systems have changed, and more alternative methods of delivering services are emerging. Certain services are being contracted out and cooperative agreements with non-profit groups and other public institutions are being developed. Newer partners include the health system, social services, justice system, education, the corporate sector, and community service agencies. The relationship with health agencies is vital in promoting wellness.

Listed below are additional administrative national trends:

- Level of subsidy for programs is lessening and more “enterprise” activities are being developed, thereby allowing subsidy to be used where deemed appropriate.
- Information technology allows for better tracking and reporting.
- Pricing is often determined by peak, off-peak, and off-season rates.
- More agencies are partnering with private, public, and non-profit groups.

### **Americans with Disabilities Act (ADA) Compliance**

On September 14, 2010 the U.S. Department of Justice (DOJ) issued an amended regulation implementing the Americans with Disabilities Act (ADA 2010 Standards),<sup>40</sup> and for the first time, the regulations were expanded to include recreation environment design requirements. Covered entities were to be compliant with design and construction requirements and the development of three-year transition plan by March 15, 2012. The deadline for implementation of the three-year transition plan was March 15, 2015.

### **Trends in Marketing by Parks and Recreation Providers**

The concept of marketing is rapidly evolving with the changing of technology and social media outlets. Every successful business from start-ups to corporations uses some form of marketing to promote its products and services. For parks and recreation, it can be difficult to stay current with the trends when the “formula for success” has not yet been defined for non-profits and governments.

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<sup>39</sup> Cited in: Sally Russell, “Nature Break: Five Minutes of Green Nurture,” Green Nurture Blog, <http://blog.greennurture.com/tag/journal-of-environmental-science-and-technology>, accessed November 14, 2012.

<sup>40</sup> U.S. Department of Justice, Americans with Disabilities Act, ADA Home Page, <http://www.ada.gov/>, accessed November 15, 2012.

Municipalities can use marketing to increase awareness of an issue, promote an upcoming program, encourage community participation, or to gain advocacy for a public service. Active Network offers expertise in activity and participation management. Its mission is to make the world a more active place. In its blog, they offered the following marketing mix ideas, which came out of a meeting with park and recreational professionals in the Chicago area.<sup>41</sup>

- Updated booths and community event presence – Bring a tablet or laptop to show programs you offer and provide event participants the opportunity to register on the spot.
- Facebook redirect app – This application redirects people automatically to the link you provide. Add it to your Facebook page.
- Instagram challenge – Think about how you can use mobile and social tools at your next event. It could be an Instagram contest during an event set up as a scavenger hunt with participants taking pictures of clues and posting them on Instagram.
- Social media coupons – Research indicates that the top reason people follow an organization on a social network is to receive discounts or coupons. Consider posting an event discount on your social networks redeemable by accessing on phone or printing out.

Mobile marketing is a growing trend. Social websites and apps are among the most used features on mobile phones. Popular social media marketing tools include Facebook, SocialWhirled, Twitter, YouTube, Tagged, and LinkedIn. Private messaging apps such as Snapchat and WhatsApp are being used more and more for live media coverage.<sup>42</sup> Golden can use such applications to engage a diversity of ages and types of users to provide information and feedback, as well as to indirectly market for the Department.

### C. Community and Stakeholder Input

Focus Groups were conducted on July 14, 2016, with morning, afternoon and evening sessions. Various stakeholders were invited to participate. These groups represented:

- Local businesses
- Golden residents
- Users with children
- Government agencies (Jeffco Open Space, Jeffco School District, etc.)
- City of Golden departments
- Foundations
- Non-profit organizations
- Sports associations
- Special Interest and Advocacy groups

In total, 42 individuals gave roughly two hours each to listen to survey outcomes and provide feedback, including a small group exercise to prioritize amenities to be added, expanded, or improved as well as those that benefit the health and well-being of residents. This equates to 84 hours of public contact.

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<sup>41</sup> <http://www.activenetwork.com/blog/17-marketing-campaigns-parks-and-recreation-marketing/>, May 2013, accessed February 26, 2015.

<sup>42</sup> Jacqueline Woerner, "The 7 Social Media Trends Dominating 2015," Emarsys Blog, <http://www.emarsys.com/en/resources/blog/the-7-social-media-trends-dominating-2015/>, accessed February 26, 2015.

The input listed below is a summary of major themes of various perceptions identified and asked of the participants. The lists represent those responses from the participants and are not in order of importance. Participants in the focus groups and stakeholder meetings expressed general agreement with this input (Note: these topics were discussed in multiple sessions). A full summary is provided in **Appendix A**.

Strengths and perception of customer service:

- High level of community involvement to gather different viewpoints, promote collaboration, and provide diversity of programs
- High quality customer service
- Flexible, creative, and forward thinking
  - Department grows organically with the community
- High maintenance standards
- Strong programs, especially:
  - Aquatics
  - Youth/toddler
  - Access for outside users
- Variety of programming and facilities

Weaknesses:

- Congestion created by downtown special events
  - These could move into a designated park for special events
- Lack of connectivity amongst trails and/or signage to communicate to users
- Not enough bathroom facilities (ex. Clear Creek Whitewater Park)
  - Includes access to drinking water
- Aquatic access is limited, includes indoor and outdoor amenities
- Website/programming registration could be more interactive
  - Community wants to share resources with other users and more information on individual programs
- Registration fills up too fast
- History museum does not get equal support
- There does not seem to be a plan for pedestrian barriers
  - Lack of collaboration between Public Works and Parks and Rec and the development of bike trails or multi-modal transportation

Additional programs or activities the Department should offer:

- Middle school programming
- Age demographic gaps
- Higher investment in higher-volume user groups like biking

Key partners and stakeholders in the community:

- Non-profit organizations
- Community/ service groups
- Advocacy groups
- Historic Preservation Board
- Colorado School of Mines
- Jeffco Open Space
  - Mouth of the canyon trail connection

Consideration of the top priorities to be added, expanded, or improved as identified in the community survey:

- Public review of survey results indicated agreement with:
  - New or updated community/recreation center or aquatic facilities
  - Trails and pathways – needs to ensure safety, never use a roadway
  - Open space/natural areas – needs new open space
- “Improve existing” should be prioritized
  - Trails and pathways would be lower priority with a focus on connectivity and wayfinding
- Items missing include specialty activities (identified as “others” in the survey)

Consideration of the top priorities to benefit health and well-being as identified to benefit health in the community survey:

- Focus on partnerships
  - School of Mines – geology program
  - Outdoor education opportunities for youth
- Open Space/Trails and Pathways are equally important

The project team used this information to validate the survey results, which are summarized in the next section.

### **D. Invitation and Open Link Community Survey Summary**

A public survey was conducted during May 2016 using two primary methods: 1) a mail-back survey sent to a random sample of residents (the “invitation sample”) who could send their paper survey back or complete the survey online, and 2) an open-link online survey for members of the public who were not part of the invitation sample. A full report is compiled in a separate document. The following analysis summary focuses primarily on responses from the statistically-valid invitation sample.

The primary list source used for the mailing was a registered voter list purchased from Jefferson County. Use of the registered voter list includes renters in the sample who are frequently missed in other list sources such as utility billing lists.

A total of 4,000 surveys were mailed to a random sample of City of Golden residents in May 2016. The final sample size for this statistically valid survey was 363, resulting in a margin of error of approximately +/- 5.1 percentage points calculated for questions at 50 percent response. The open link survey received an additional 556 responses.

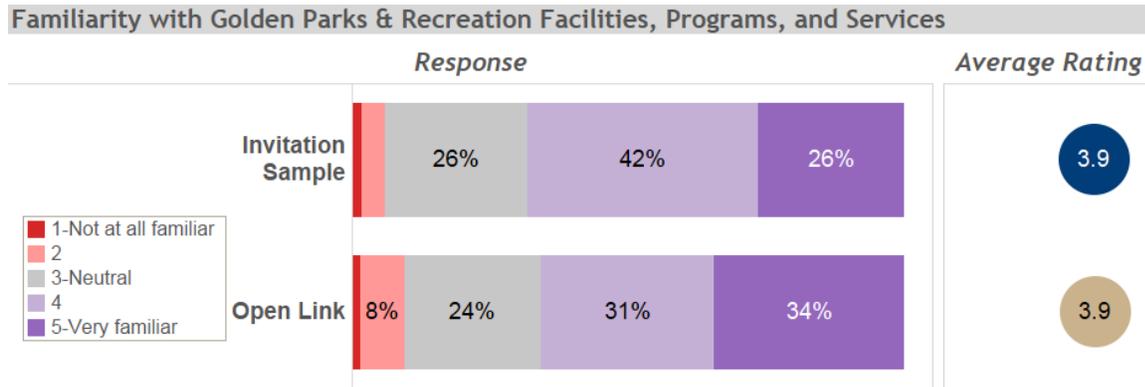
The underlying data were weighted by age to ensure appropriate representation of City of Golden residents across different demographic cohorts in the sample. Using the U.S. Census Bureau 2014 American Community Survey 5-year estimates, the age distribution within the invitation sample was matched to the 2014 demographic profile of the City of Golden.

Due to variable response rates by some segments of the population, the underlying results, while weighted to best match the overall demographics of residents, may not be completely representative of some sub-groups of the population.

**Summary of Selected Findings**

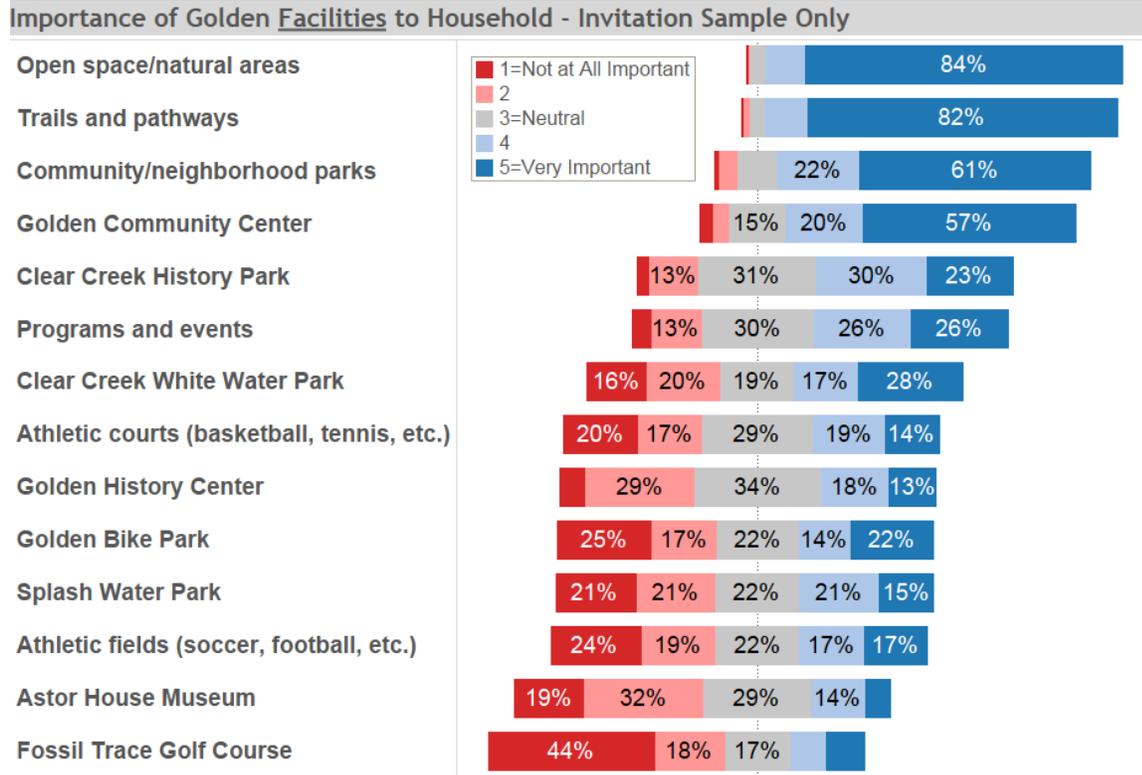
Familiarity with Current Facilities is Fairly Strong. Invitation sample respondents indicated relatively high familiarity with current Golden parks and recreation offerings, with 68 percent reporting that they are familiar, and rating nearly a 4 on a 5 point scale.

**Figure 2: Survey Responses: Familiarity with Facilities, Programs, and Services**



Open Space, Trails/Pathways, Parks, and the Community Center are Highly Important, Best Meet Needs, and are Most Frequently Used. Over three-quarters of invitation sample respondents identified trails and pathways, open space/natural areas, community/neighborhood parks, and the Golden Community Center as important. Similarly, at least 75 percent of respondents said these amenities are meeting the needs of Golden well. Perhaps unsurprising as these amenities are important to most households and are adequately meeting community needs, they are also the top four most frequently used facilities.

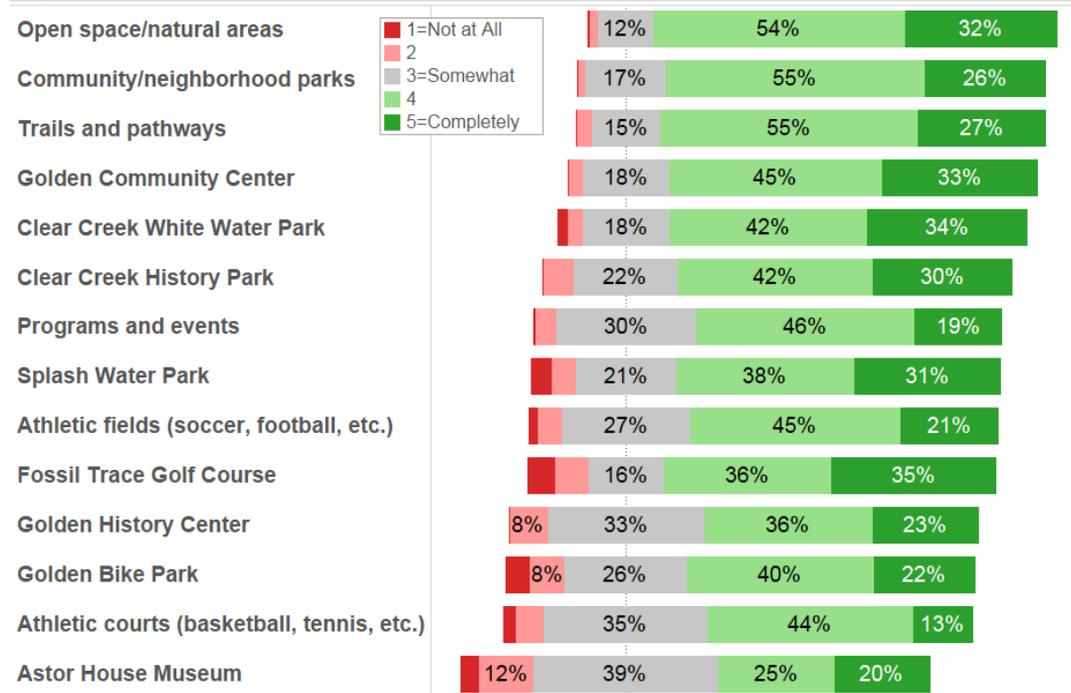
**Figure 3: Invitation Sample Importance of Facilities**



High Needs Met Ratings for All Amenities. All of the listed facilities were rated to be meeting the needs of the City of Golden quite well by invitation respondents, with average needs met ratings of 3.5 or higher on a scale from 1 to 5 where 1 is “not at all” and 5 is “completely.” This indicates strong satisfaction across the board with parks and recreation facilities operated by the City of Golden.

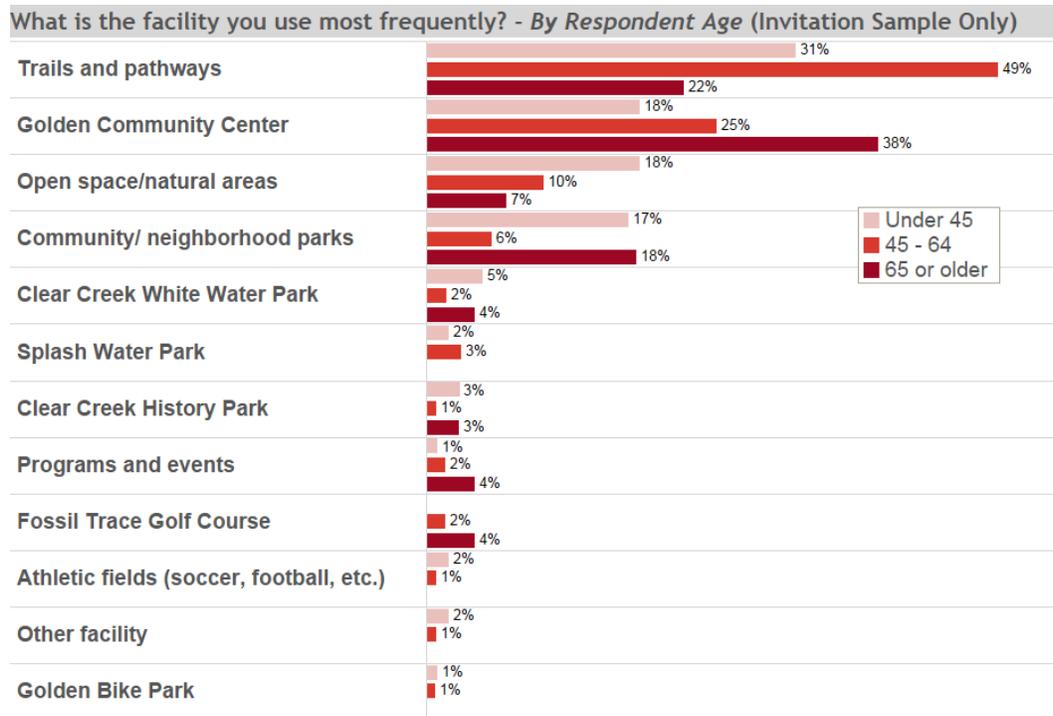
**Figure 4: Invitation Sample: Degree to Which Needs are being Met**

Degree to Which Golden Facilities Meet the Needs of the Community - Invitation Sample Only



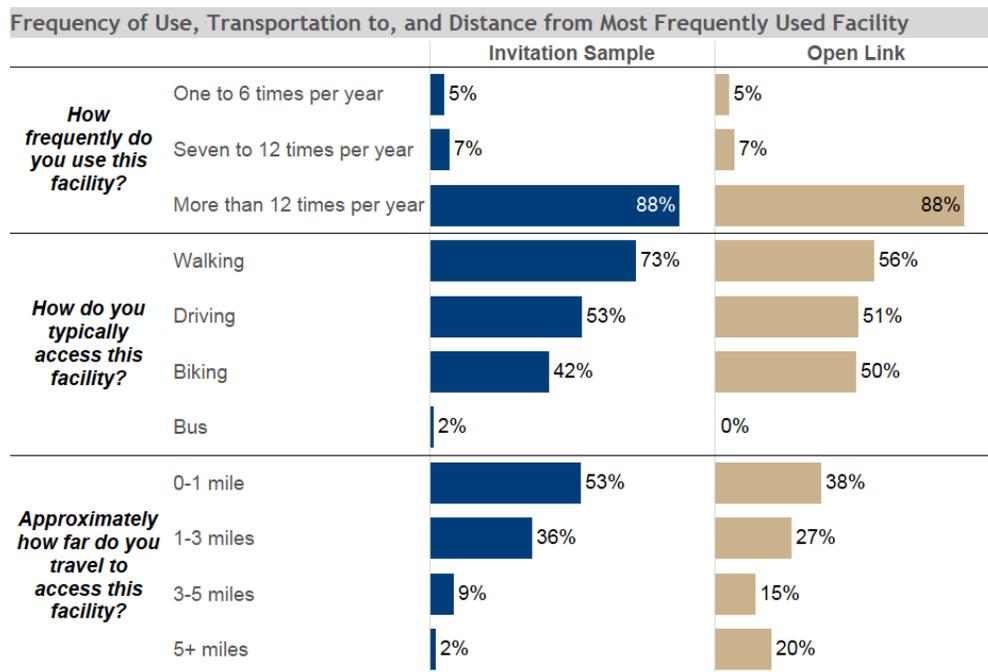
Most Frequently Used Facility Used More than Once per Month. When asked to identify the frequency with which respondents use the facility they use most, a strong majority (88%) said they use the facility more than 12 times per year.

**Figure 5: Frequently Used Facilities (Invitation Sample Only)**



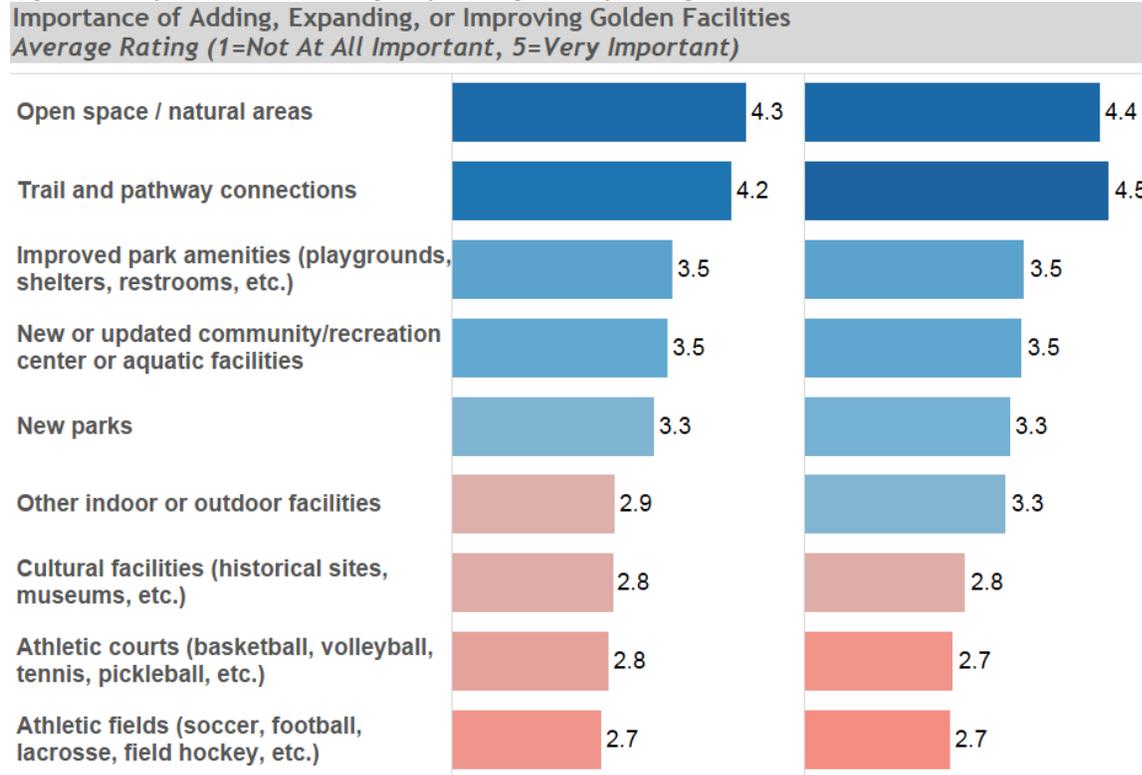
Facilities are Close By; Walking is Top Form of Transportation. A question asking respondents how they typically access the facility they use most frequently revealed that roughly three-quarters walk (73%), while 53 percent drive and 42 percent bike. Consistent with this finding, many respondents live close to the facility they use most, with over half (53%) a mile or less away and 89 percent within three miles.

**Figure 6: Frequency of Use and Methods of Transportation**



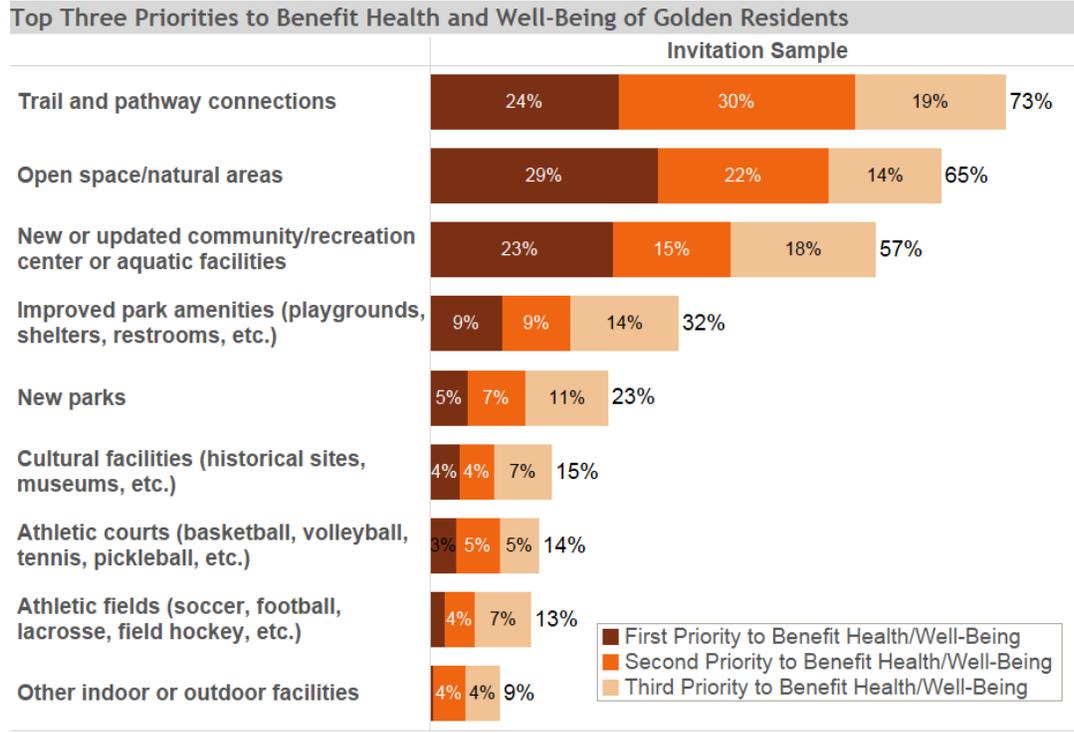
Open Space and Trails/Pathways Top List of Future Priorities. Despite the high level of needs being met for both trails/pathways and open space, invitation sample respondents want to focus on these areas in the future, with 82 percent and 77 percent respectively identifying these as important needs to improve in the future.

**Figure 7: Importance of Adding, Expanding, or Improving Facilities**



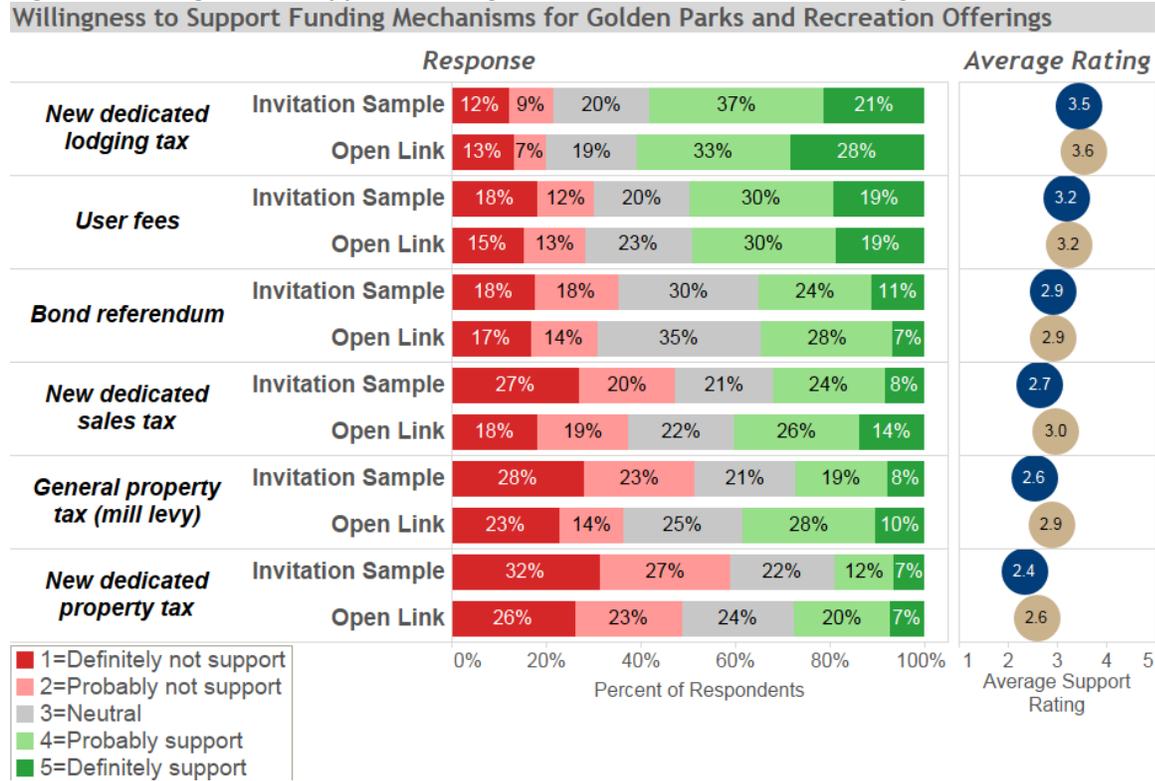
Future Facilities to Add/Expand/Improve and to Benefit Health and Well-Being Very Similar. Invitation respondents identified their top three priorities to add, expand, or improve in Golden as well as their top three priorities to benefit the health and well-being of Golden residents. The overall prioritization of the facilities was the same in both cases; interestingly, respondents were somewhat more likely to select new or updated community/recreation center or aquatic facilities as one of their top three priorities to benefit health and well-being of Golden residents (57%) than to be added, expanded, or improved in Golden (45%).

**Figure 8: Priorities to Improve Health and Wellbeing**



Support Varies for Funding Mechanisms. A new dedicated lodging tax received the most support from invitation respondents to fund the preservation of historical sites (58 percent in support). Respondents supported additional funding for the department in the form of user fees (50 percent). In contrast, a new dedicated property tax was supported by only a small share of respondents (19 percent).

**Figure 9: Willingness to Support Funding for Parks and Recreation Offerings**

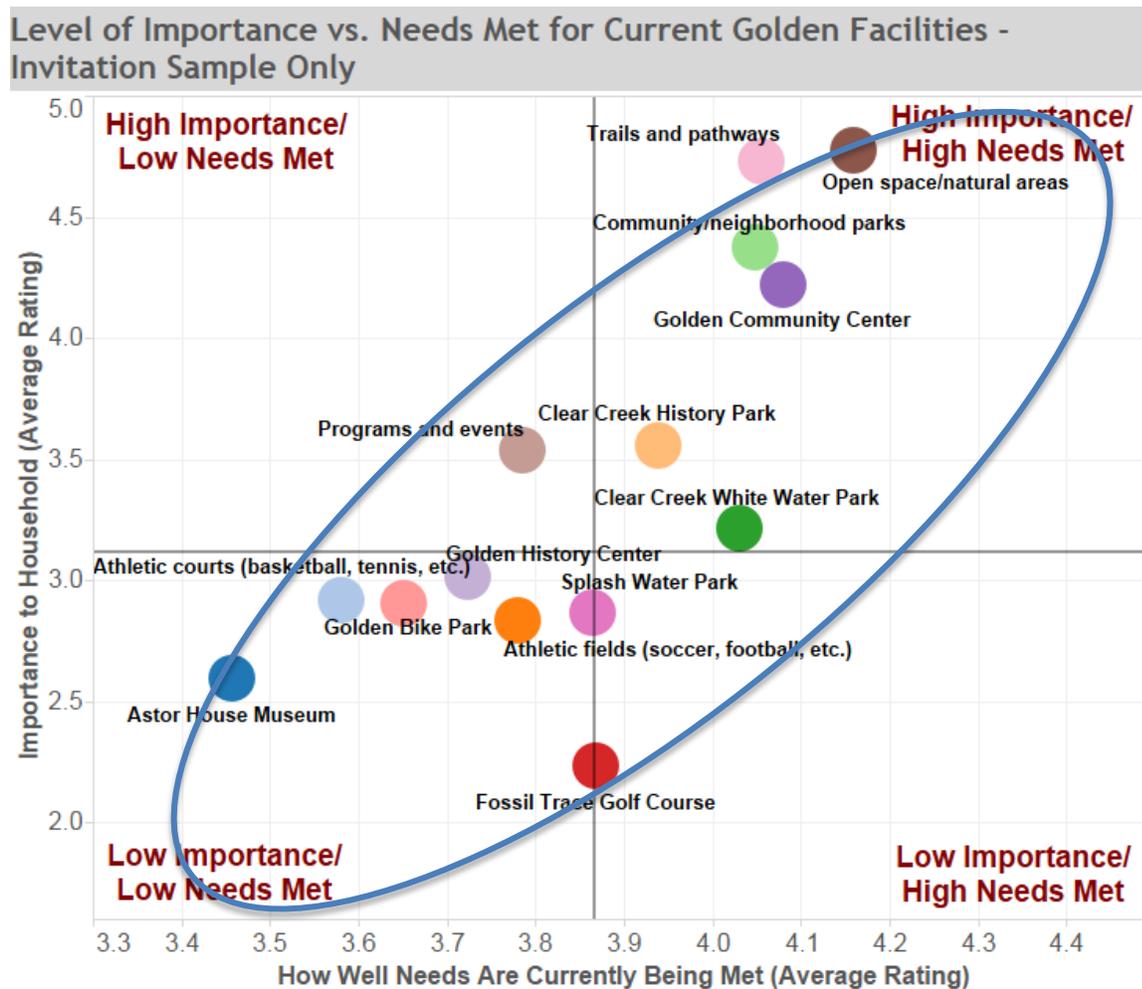


Open Link Sample Differs due to Presence of Interest Groups, Different Demographic Profile.

Throughout the results, the open link sample reveals a strong presence of interest groups, particularly users of the Bike Park – open link respondents had a much greater likelihood of rating the Bike Park as important (56 percent) compared to invitation respondents (36 percent), and were considerably more likely to identify it as their most frequently used facility (11 percent vs. 1 percent). Additionally, the open link sample was more representative of households with children, and respondents unsurprisingly rated child-friendly amenities like athletic fields and the Clear Creek Whitewater Park as more important.

When the stated importance of various programs and amenities is graphed with how well those same programs and amenities are meeting the needs of residents, a cluster graph forms that shows Golden’s overall performance as seen in **Figure 10**. Ideally, programs and amenities graphed should fall within the oval, which is the case with Golden. While there may still be room for improvement, this reflects the high service and value residents place upon parks and recreation in their community.

Figure 10: Importance vs Needs Met Graph



## F. Assessment of Current Organization

### Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis

A SWOT Analysis was conducted with staff on August 2, 2016. The presentation of full Outcomes can be found in **Appendix B**. Key areas requiring further review or action are summarized as follows:

#### Major Weakness/High Importance

- Aging infrastructure
- Missing trail connections
- Over-stretched staff

## **Highly Attractive Opportunities/High Probability of Success**

- Beer history museum
- Larger pool area (lap lanes)
- Pickle ball
- Stand up paddle boarding/other water sports
- Dog-centric opportunities
- Peak to Plains trail
- Disc golf
- Partnerships outside of Golden
- Clear Creek master plan
- Seasonal and PT staff training

## **Highly Serious Threats/High Probability of Occurrence**

- Alternative/outside service providers
- Tubing (unmanaged)
- General overuse of the system
- EAB/ecological threats
- Homeless/transient population
- Not enough parking
- Lawsuits
- Attracting and retaining quality staff
- Golden losing identity
- Enforceable rules and regulations

## **Organizational Assessment**

The City of Golden Parks and Recreation operates efficiently with a typical hierarchical organization structure. Recent staff transitions have actually created an opportunity for cross training as the Recreation Manager transitioned to the Parks Manager position, which was vacated. This creates a “cross-pollination” of understanding between the two divisions, something that will also prove helpful in staff development, general operations, and maintenance as well as project management.

Like many organizations, Fair Labor and Standards Act requirements, along with requirements associated with the Affordable Care Act, have made it challenging to attract and retain qualified part time labor due to hour and wage limitations.

Other departments are responsible for decision making that affects the Parks and Recreation Department. This includes Planning for Special Events and Public Works relative to on-street bike lanes that might also serve as connections for trails. It is imperative that the Parks and Recreation Department have an involvement in these decisions, and help set both criteria and goals for implementation.

## **Alternative Funding Opportunities and Financial Assessment**

Staff reviewed a variety of funding options, categorizing them into tiers based on the likelihood to consider such a source. Those efforts deemed feasible to consider follow and the full analysis with descriptions of each area are listed in **Appendix C**.

## **Tier 1**

These funding sources are currently being used or could be easily used by Golden to create existing budgets for capital and operational expenditures.

- **General Fund**
- **Sales Tax**
- **Property Tax**
- **Annual and Season Pass Sales**
- **Program Registration Fees**
- **Program Independent Contractor Fees**
- **Reservations**
- **Ticket Sales/Admissions**
- **Privatization – Outsourcing Management**
- **Camping Fees & Hook-Up Fees**
- **Capital Improvement Fees**
- **Equipment Rental**
- **Flexible Fee Strategies**
- **Solid Waste Fee**
- **Lottery Funds**
- **Cell Towers and Wi-Fi**
- **Hospitality Centers**
- **Merchandising Sales or Services**
- **Private Concessionaires**
- **Special Use Permits**
- **Surplus Sale of Equipment by Auction**
- **Rentals of Houses and Buildings by Private Citizens**
- **Enterprise Funds**
- **Partnership Opportunities**
- **Advertising Sales**
- **Positive Cash Flow**
- **Surplus Sale of Equipment by Auction**
- **Grants**

## **Tier 2**

These funding sources are potential funding opportunities that Golden would consider for additional funding of capital and operational expenditures.

- **Shared purchasing**
- **Product Sales**
- **Intermodal Surface Transportation Efficiency Act**
- **Seed Money or Start-up Grants**
- **Management or Technical Assistance Grants**
- **Private Grant and Philanthropic Agencies**
- **Philanthropic Support**
- **Gift Catalogs**
- **Gifts in Perpetuity**
- **Volunteer Programs**

### **Tier 3**

These funding sources are potential funding opportunities Golden could consider for additional funding of capital and operational expenditures. These funding sources may not be currently available in the State of Colorado or an intergovernmental agreement may be necessary for implementation. These funding sources may meet with some resistance and be more difficult to implement.

- **Development Impact Fees and Land Dedication**
- **Bond Referendum**
- **General Obligation Bonds**
- **Revenue Bonds**
- **Special Assessment Bonds**
- **Annual Appropriation/Leasehold Financing**
- **Inter-local Agreements**
- **Dog Park Fees**
- **Earnings Fee**
- **Lighting Fees**
- **Parking Fee**
- **Processing/Convenience Fees**
- **Recreation Service Fee**
- **Recreation Surcharge Fees on Sports and Entertainment Tickets, Classes, MasterCard, Visa**
- **Residency Cards**
- **Signage Fees**
- **Trail Fee**
- **Transaction Surcharge**
- **Entertainment Tax**
- **Hotel, Motel, and Restaurant Tax**
- **Concession Management**
- **Booth Lease Space**
- **Catering Permits and Services**
- **Community Gardens**
- **Film Rights**
- **Land Swaps**
- **Leasebacks on Recreational Facilities**
- **Licensing Rights**
- **Manufacturing Product Testing and Display**
- **Patron Cards**
- **Private Developers**
- **Sale of Development Rights**
- **Subordinate Easements – Recreation/Natural Area Easements**
- **Recycling Centers**
- **Corporate Sponsorships**
- **Naming Rights**
- **Fundraising/Friends Associations**
- **Gift Catalogs**
- **Land Trusts**
- **Maintenance Endowments**
- **Raffling**
- **Land and Water Conservation Fund**

The 2008 Master Plan identified the consideration of several funding mechanisms (some mentioned above) that have not been pursued, including:

- Park Development Fees
- Subdivision Ordinance Requirements
- Establishment of a Special Improvement District
- Lodging Tax
- Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFE-TEA-LU)

These should be evaluated along with the other funding strategies listed.

Lastly, lacking formal cost recovery guidelines, a formal policy invites citizen participation to guide cost recovery programs based on their alignment with the stated mission of the department. **Appendix K** offers an overview of a Cost Recovery Model.

### **Programs and Services Gaps**

Golden's mission statement embraces visitors as well as residents. To that end, Golden offers a diversity of programs in the following categories:

- Drop in activities at the Community Center
- Adult Activities/Education
- Adult Athletics
- Aquatics (all ages)
- Climbing Wall
- Creative Arts
- Dance and Movement
- Senior Active Adult
- Pre-school (Tykes)
- Wellness
- Youth Activities/Education
- Youth Athletics/inline hockey, tennis track, volleyball (soccer, baseball, football, basketball, softball, swim team, and wrestling offered in partnership with independent clubs)
- Special events
- History and Culture (Museums)
- Golf (Fossil Trace Golf Club)
- After School Programs

This wide range of programs offers opportunities for year round physical and educational programs, as well as expanding one's portfolio of activity and skill development. Some exceptions were noted through community outreach, and could be addressed. These include programming in the areas of:

- Middle school/Tween group (9-14)
- Special interest groups (biking, paragliding, pickle ball, etc.)
- Unstructured play opportunities including nature play
- Camps
- Adventure travel/excursion programming (referral to outside agencies)
- Longboarding
- Evening sessions
- Festivals and events (offered in partnership with others)

Additionally, opportunities exist to strengthen the relationship between parks and recreation and community health. The International City/County management Association (ICMA) Report on Improving Quality of Life notes:

- “Local government leaders are recognizing that healthy communities \have established a culture that is supportive of healthy choices. Public health...is a community value.
- The growing complexity of public health requires innovative service delivery approaches, collaboration and partnerships.
- Ensuring public health considerations are woven into all aspects of planning, programs and policy will enable local governments to best position their communities for the challenges and opportunities ahead.”<sup>43</sup>

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<sup>43</sup> ICMA Improving Quality of Life: The Effect of Aligning Local Service Delivery and Public Health Goals, 2016

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## IV. Inventory and Level of Service Analysis

### A. Existing Inventory Update

This update to the inventory and level of service assessment of the City of Golden Parks and Recreation Master Plan (2008) included a review of the 2008 plan as well as site visits to parks currently owned and maintained by the City of Golden Parks and Recreation Department. Information on facilities not owned by the City, but used regularly for recreational programming by the Recreation Division, was also included. Park classifications and definitions of each park type are still current and therefore are not addressed in this update.

Level of Service (LOS) evaluation has been updated from acres per 1,000 population assessment to the GRASP® component-based methodology as will be described in the following pages. Neighborhoods in Golden served by local parks are identified, and GRASP® *Active* Level of Service determined. This process identified potential gap areas that do not currently have adequate access to parks.

#### Inventory Methods and Process

In planning for the delivery of parks and recreation services, it is useful to think of parks, open space areas, trails, and other public spaces as parts of an infrastructure.

The infrastructure, made up of **components**, allows people to exercise, socialize, and maintain a healthy physical, mental, and social wellbeing. A **component** is a feature that people go to a park or facility to use, such as a tennis court to play a game of tennis. A complete list of components and their definitions can be found in **Appendix D**.

The inventory for this study focused on components at parks, open spaces, and trail sites available for use by the public. Each component was evaluated based on how well it performs its intended function within the system. Any components in need of refurbishment, replacement, or removal were noted. Site comfort and convenience amenities such as shade, drinking fountains, restrooms, etc., called **modifiers** were also recorded.

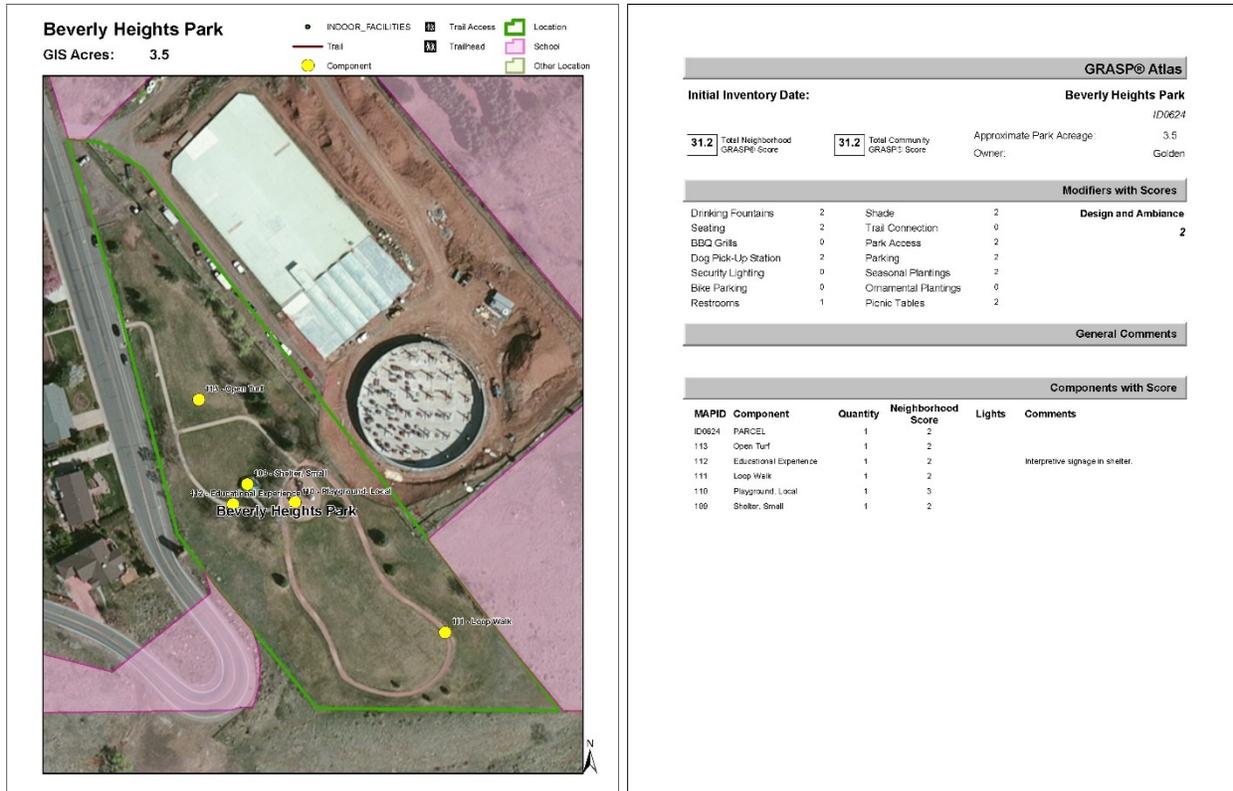
A detailed inventory and assessment was completed in a series of steps.

- 1) A preliminary list of existing park components was prepared using aerial photography and available GIS data. Components identified in aerial photos were located and labelled.
- 2) Field visits were conducted by the consulting team to confirm or revise preliminary data, make notes concerning sites or assets, and develop an understanding of the system as a whole.

Assessment scoring is based on condition, size, site capacity, and overall quality. A three tier rating system was used to evaluate park elements:

- 1 = Below Expectations
  - 2 = Meets Expectations
  - 3 = Exceeds Expectations
- 3) Information collected during the site visits was then compiled. The inventory was then reviewed by members of the project team. The review packet consisted of the most recent GIS data displayed by location on an aerial photo. These are accompanied by a data sheet for each site listing modifier and component scores, observations and general comments.

Figure 11: Example of Inventory Map and Data Sheet



The GIS asset inventory may serve Golden in a number of ways. It can be used for planning and operations tasks such as asset management, as well as for future strategic and master plans. The following information was collected during site visits:

- Component type and geo-location
- Component functionality
- Site modifiers
- Site design and ambience
- Site photos
- General comments

For the purposes of this study, the current city limit boundary was used as the study area. The Urban Growth Boundary is shown for reference on maps, as are several key parks, open spaces, and facilities. Schools and Jefferson County Open Space lands are also displayed for reference.

### Inventory Overview

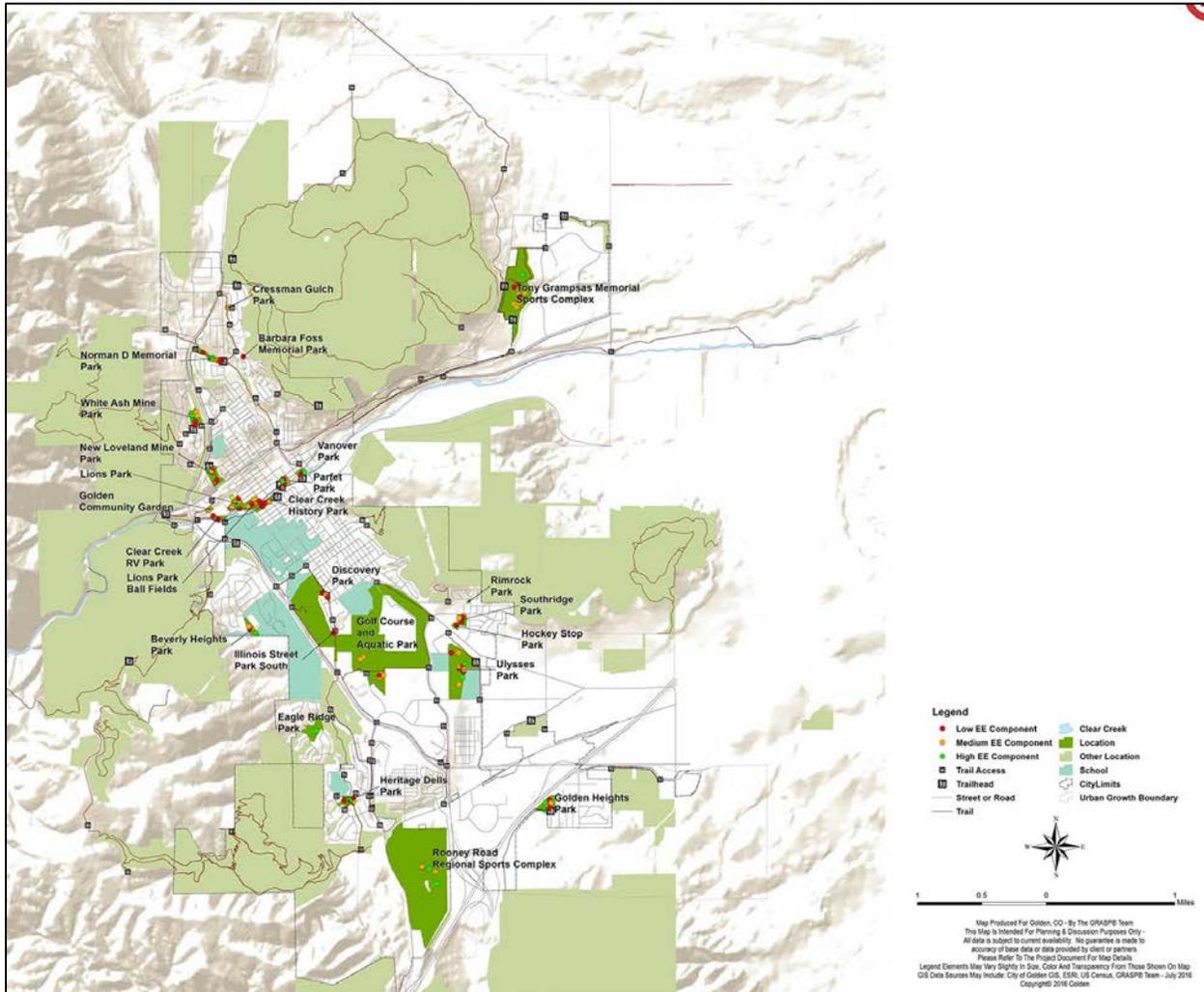
Site Visits and Assessments included:

- 10 Neighborhood Parks
- 3 Pocket Parks
- 1 Community Park
- 3 Sports Complexes
- 6 Special Purpose Parks
- 1 Open Space / Natural Area

# City of Golden Parks and Recreation Master Plan 2016

The following system map reveals good distribution of parks and greenspace throughout Golden.

**Map A:** System map of Golden Parks and Recreation. Larger scale maps may be found in **Appendix H**.



## Summary of Inventory Locations

Different types of parks in the City of Golden serve various needs of users. Based on the 2008 classifications, parks in Golden are classified into the following types and subtypes.

An updated inventory matrix is included in **Appendix G** and an Inventory Atlas based on GIS data gathered during the most recent site visits is included as a supplemental document to this plan. Further descriptions and definitions of the classifications can be found in the 2008 master plan document. The park inventory and descriptions in the 2008 plan are still relevant.

## Neighborhood Parks

- Neighborhood Parks
  - Beverly Heights Park
  - Discovery Park
  - Golden Heights Park
  - Heritage Dells Park
  - New Loveland Mine Park
  - Norman D Memorial Park
  - Parfet Park
  - Southridge Park
  - White Ash Mine Park
  - Vanover Park
  
- Pocket Parks
  - Cressman Gulch Park
  - Barbara Foss Memorial Park (formerly Neighborhood Park)
  - Rimrock Park



## Community Parks

- Community Parks
  - Lions Park and Ballfields (including Clear Creek Whitewater Park)
  
- Sports Complexes
  - Rooney Road Regional Sports Complex
  - Tony Grampsas Memorial Sports Complex
  - Ulysses Park

## Other Parks

- Special Purpose Parks
  - Clear Creek RV Park (Campground)
  - Clear Creek History Park
  - Fossil Trace Golf Club
  - Splash Water Park
  - Hockeystop Park
  - Golden Community Garden

## Open Space

- Natural Areas
  - Illinois Street Park South

## Other Providers

In addition to recreation opportunities offered by the City of Golden, more than 10,000 acres of alternative provider lands are located within one mile of Golden city limits. Much of this land is owned and maintained by Jefferson County Open Space and includes parks, regional open space, fairgrounds and trailheads.

Schools may provide recreational opportunities to Golden residents, but access is generally limited to non-school hours. Further, the quality of equipment and standards of maintenance are not always consistent with City standards. The following schools were located in mapping:

- Bell Middle School
- Connections Learning Center
- Golden Senior High School
- Mitchell Elementary School
- Shelton Elementary School

It should also be noted that Colorado School of Mines is located in central Golden and has significant lands and recreation opportunities for its students.

### **Trails**

Nearly 100 miles of off-street trails and paths within one mile of the Golden city limit were included in the inventory. These trails are primarily owned and maintained by Golden and Jefferson County Open Space.

## **B. Assessment**

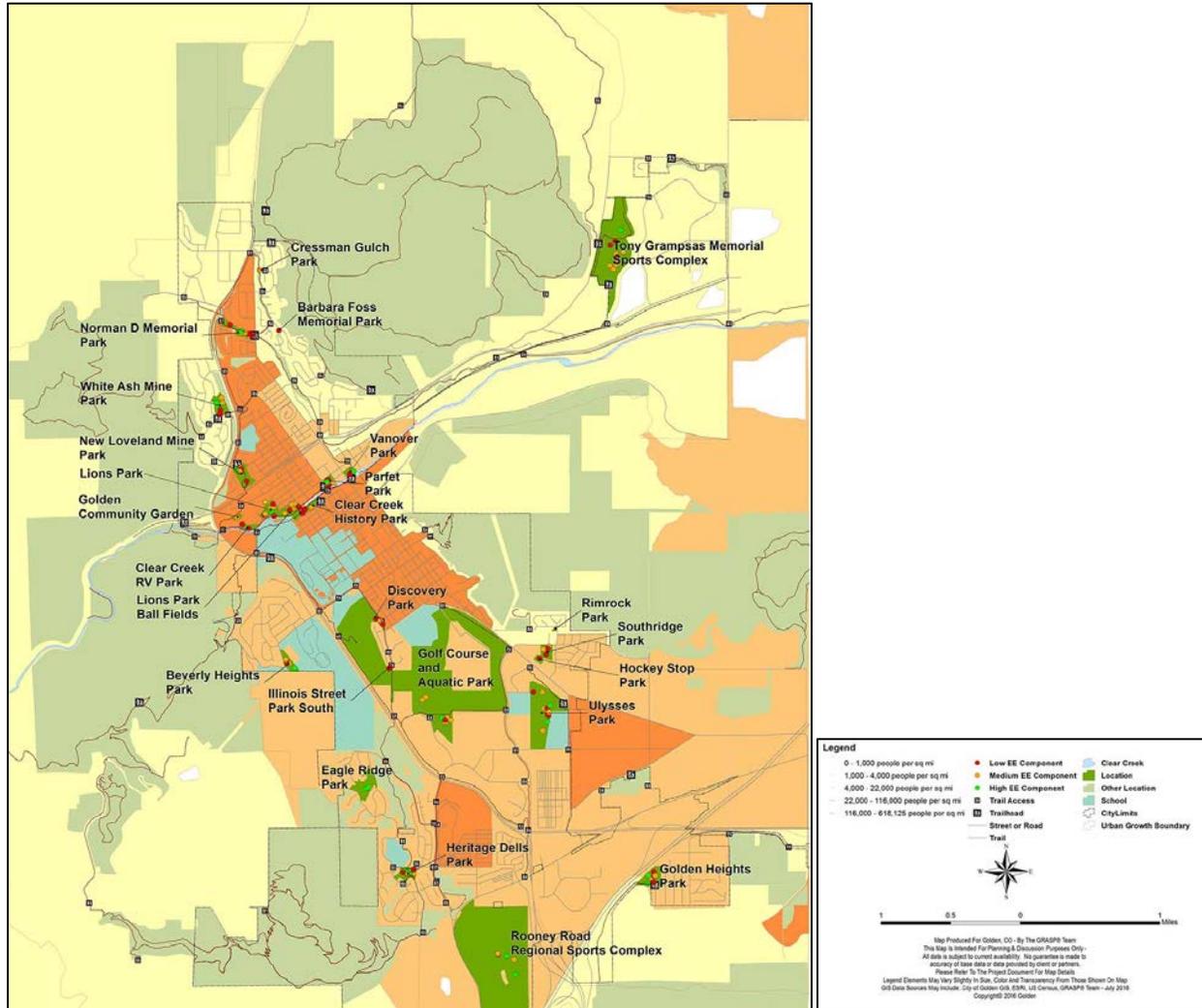
The following general assessments were concluded based on visits to each park and/or facility:

- Park maintenance is generally good, but infrastructure is aging.
- Good variety of park sizes and component offerings throughout the city.
- Good distribution of parks throughout the city overall.
- Some playgrounds have sand and pea gravel surfacing.
- Park identification signage is aging and poorly branded.
- Wayfinding for both parks and trails needs improvement.
- Park amenities such as trash cans, picnic tables, benches, etc., throughout the system is lack a standardized, uniform appearance.
- There are minimal components such as measure loops within parks that may help in increasing community health focus.

### **Population Distribution and Density**

To understand access to recreation, it is also helpful to understand population distribution and density. In Golden, areas of higher population density are shown in **Map B** as darker orange while areas that are less densely populated areas are lighter in color.

Map B: Golden Population Density



### C. Level of Service – Getting Active

Rather than simply update acres per 1,000 residents level of service analysis, the 2016 Golden Parks and Recreation Master Plan Update takes a different approach. In an effort to begin to equate parks and park access to physical activity and public health, a detailed analysis was completed that combines the component based GRASP® methodology with the latest research in performance metrics and public health indicators. This methodology and analysis builds upon an exploratory study conducted in Cary, North Carolina by Design Concepts Principal Robby Layton. Details of that research can be found in **Appendix F**.<sup>44</sup>

<sup>44</sup> Layton, R (2016). *Potential Public Health Performance Metrics for Parks and Greenspace Assessments*. Unpublished report for LAR 582 – Introduction to Landscape Performance + Metrics, North Carolina State University College of Design.

## Performance Metrics for Greenspace and Public Health

“The concept of parks and greenspace as policy elements with which governments promote the health and well-being of citizens emerged nearly 200 years ago. The importance of this function for parks has varied over the years, but recent concerns for public health has sparked heightened interest in the capacity of parks and other public greenspaces within the built environment to encourage and facilitate healthy lifestyles. While there is broad evidence correlating greenspace with five dimensions of health, a decision was made to focus on the single dimension of physical health, particularly in relation to physical activity.” Layton (2016)

Building on the exploratory study, analysis was conducted in Golden, which ultimately combines the GRASP® component-based level of service analysis with anticipated physical activity levels to evaluate the parks system for level of service based on the distribution, quality, and energy expenditure of park components. The overall goal of such analysis is to identify potential gaps in the current level of service based on equitable distribution across the system. Recent research has found evidence that “park proximity is associated with higher levels of park use and physical activity, particularly among youth.” (Active Living Research, 2010) Research also suggests that more parks and more park acreage correlate with higher physical activity levels.

## D. Level of Service Analysis

Level of Service Analysis evaluates how parks, open space and trails in Golden serve the community. It may be used as a tool to benchmark current Level of Service and to direct future planning efforts.

### Why Level of Service?

**Level of Service** may be defined as the extent to which a recreation system provides residents of a community access to recreational assets and amenities. It is indicative of the ability of people to pursue active lifestyles and connect with nature. It can have implications for health and wellness, the local economy, and quality of life. Further, Level of Service for a recreation system tends to reflect community values. It is often emblematic of the manner and extent to which people are able to connect with their communities and live lifestyles focused on outdoor recreation and healthy living.

### GRASP® and GRASP® Active Analysis

Developed by GreenPlay, LLC, and Design Concepts CLA, **GRASP® (Geo-referenced Amenities Standards Process)** is a proprietary approach that has been utilized in over 100 communities across the country. The GRASP® Methodology is used to inventory and analyze recreation system assets.

An analytical technique known as **GRASP® (Geo-Referenced Amenities Standard Process)** was used to analyze Level of Service of recreation assets in Golden. This proprietary process, used exclusively by GreenPlay and Design Concepts, yields analytical maps and data that may be used to examine access to recreation across a study area. A detailed history and description of GRASP® Methodology may be found in the **Appendix F**.

### Asset Scoring

All components were scored based on condition, size, site capacity, and overall quality as they reflect the expected quality of recreational features in Golden. The following three tier rating system was used to evaluate these:

- 1 = Below Expectations
- 2 = Meets Expectations
- 3 = Exceeds Expectations

Beyond quality and functionality of components, however, GRASP® Level of Service analysis also takes into account important aspects of a park or recreation site that are easily overlooked. Not all parks are created equal, and the quality of a user's experience may be determined by their surroundings. For example, the GRASP® system acknowledges the important differences between these identical playground structures depicted in the following photos. Note: these photos are not intended to represent conditions encountered in Golden during inventory site visits. They are meant to provide examples of the importance of site amenities in level of service.



In addition to scoring components, each park site is assessed for its comfort, convenience, and ambient qualities. This includes the availability of amenities such as restrooms, drinking water, shade, scenery, etc. These *modifier* values then serve to enhance or amplify component scores at any given location.

### **Park Components, Physical Activity, and Average Energy Expenditure Rankings**

Energy expenditure (EE) can be defined as the amount of energy or calories a person exerts for a given activity. The contribution of individual components towards physical activity varies. Cohen, et al. (2010)<sup>45</sup> found that gymnasiums and baseball fields were the busiest areas, while areas most frequently used were dog parks, walking paths, water features, and multipurpose fields. The North Carolina State Cooperative Extension Service (Floyd, et al., 2016)<sup>46</sup> provides a listing of features commonly found in parks and a rating of the average energy expenditure within each feature by all participants. Floyd, et al., 2016 studied users in parks and classified behaviors of users based on three activity levels: “sedentary (such as standing, sitting, lying down), moderate activity (such as walking and other moderate intensity activities), and vigorous activity (such as running, climbing, jumping).” The list of features in this study can be approximately equated to the set of GRASP® components described earlier. Using the feature list and a simplified low, medium and high rating for energy expenditure, each GRASP® component “has a relative value in terms of its effectiveness at generating physical activity within the population” (Layton, 2016).

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<sup>45</sup> Cohen, D.A., Marsh, T., Williamson, S., Deroose, K.P., Martinez, H., Setodji, C., McKenzie, T. (2010). Parks and physical activity: Why are some parks used more than others? *Preventive Medicine* (50). S9-S12.

<sup>46</sup> Floyd, M., Suau, L.J., Layton, R., Maddock, J.E., Bitsura-Meszaros, K. (2015). *Cost analysis for improving park facilities to promote park-based physical activity*. North Carolina Cooperative Extension.

Like the exploratory study, the metric applied in Golden was derived by combining the GRASP® inventory with energy expenditure ratings. By assigning an energy expenditure rating to each component in the inventory and “applying the modifiers found at the site, it is possible to determine a total physical activity value for that site.” (Layton, 2016) A complete list of component definitions and their energy expenditure rating can be found in **Appendix F**. The images to the right represent a few of the components and values as examples and are not necessarily examples of exact conditions users may encounter in Golden.

This value for each component and each site can then be used for a “variety of purposes, including comparing the performance of one site to another in terms of its contribution to physical health. It might also be used in assessing the total value of all sites within a community or park system, and to look at the distribution of assets across a jurisdiction. This is an important environmental justice consideration, especially if equitable allocation of assets or the targeting of assets to populations of highest need or risk is a goal.” (Layton, 2016) Combining of GRASP® inventory scoring and the energy expenditure ratings will be referenced as GRASP® *Active* for the remainder of this document.

### Perspectives

Maps and data quantifications produced using the GRASP® and GRASP® *Active* methodology are known as ***perspectives***. Each perspective is a model of how service is being provided across the study area. The model can be further analyzed to derive statistical information about service in a variety of ways. Maps are utilized along with tables and charts to provide benchmarks or insights a community may use to determine its success in providing services.

Perspective maps and charts were produced by applying the GRASP® *Active* process to the Golden inventory. Further discussion on Perspectives, GRASP® *Active* Score, and Catchment areas can be found in **Appendix G**.



## Types of Perspectives

People use a variety of transit modes to reach a recreation destination: on foot, on a bike, in a car, via public transportation, or utilizing any combination of these or other alternatives. The travel mode is often determined, at least in part, by the distance to be travelled and the ultimate destination. This variability may be accounted for by applying more than one **catchment area** distance to determine Level of Service. The GRASP® methodology typically applies two different catchment area distances to calculate scoring totals, yielding two distinct types of **perspectives** used to examine a recreation system:

1. Neighborhood Access
2. Walkable Access

A Neighborhood Access perspective applies a catchment distance of one mile to the inventory, a suitable distance for a bike ride or a short drive in a car. A one-mile catchment is intended to capture users travelling from home or elsewhere to a park or facility by way of bike, bus, or automobile.

A Walkability perspective uses a shorter catchment distance intended to capture users within a fifteen-minute walk. This distance can range from as short as 1/4 mile to as far as 1/2 mile depending on the study area. **For Golden, a 1/2 mile walkability catchment area was used.** See **Appendix F** for further discussion on walkability standards.

GRASP® Level of Service perspectives overlap catchment areas to yield a picture of total service for any place within a study area. Modifiers at each park or recreation site influence overall scoring. Barriers are used to define walkable zones. Red shades display cumulative scoring for a given area.



## Assumptions

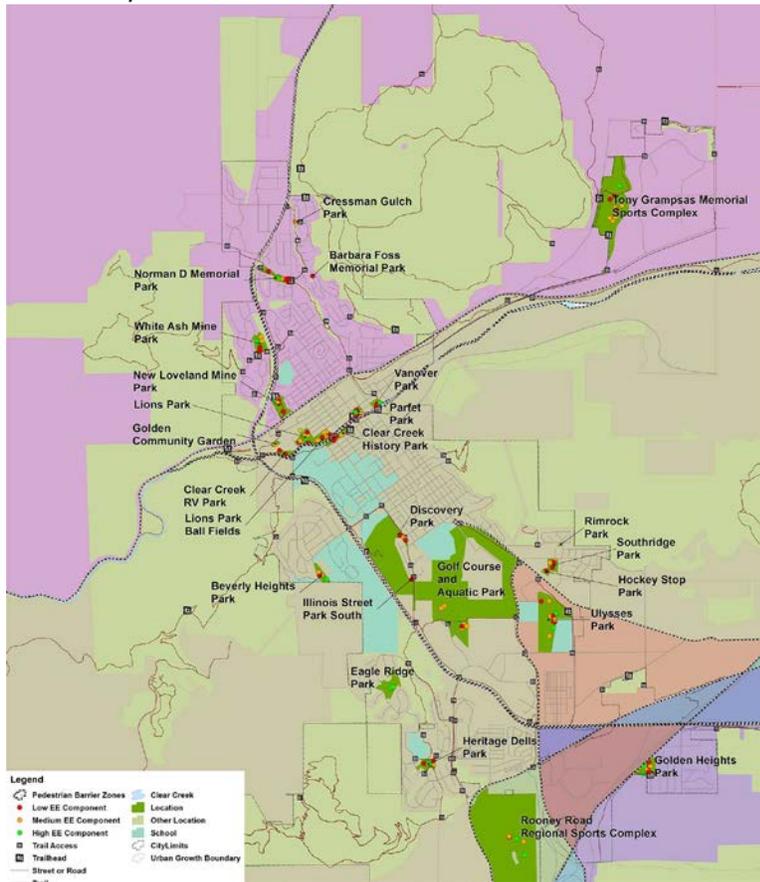
1. Proximity relates to access. This means that the presence of a park or facility within a specified distance indicates that a site is “accessible.” “Access” in this analysis does not refer to access as defined in the Americans with Disabilities Act (ADA).
2. Neighborhood Access relates to proximity of 1 mile, a reasonable distance for a drive in a car or bicycle ride.
3. Walkable Access relates to proximity of 1/2 mile, a reasonable distance attainable in a fifteen-minute walk.
4. Walkability access to recreation is affected by barriers, obstacles to free and easy travel on foot.

5. A minimum standard for service, also called a **threshold**, relates to a “typical” neighborhood park. Based on the average values for all nine neighborhood parks in Golden, this corresponds to Southridge Park and access to an off-street trail. Actual park components may vary. See **Appendix F** for further discussion on threshold

## Pedestrian Barriers

Walkability can often be limited by environmental barriers. Several such disruptions to walkable access are created by highways, major roads, and railroads within Golden. To account for this, walkability service areas in the Level of Service analysis have been “cut-off” by identified barriers where applicable. Zones defined by identified barriers serve as discrete areas of Golden within which any facilities are accessible without the need to cross a barrier.

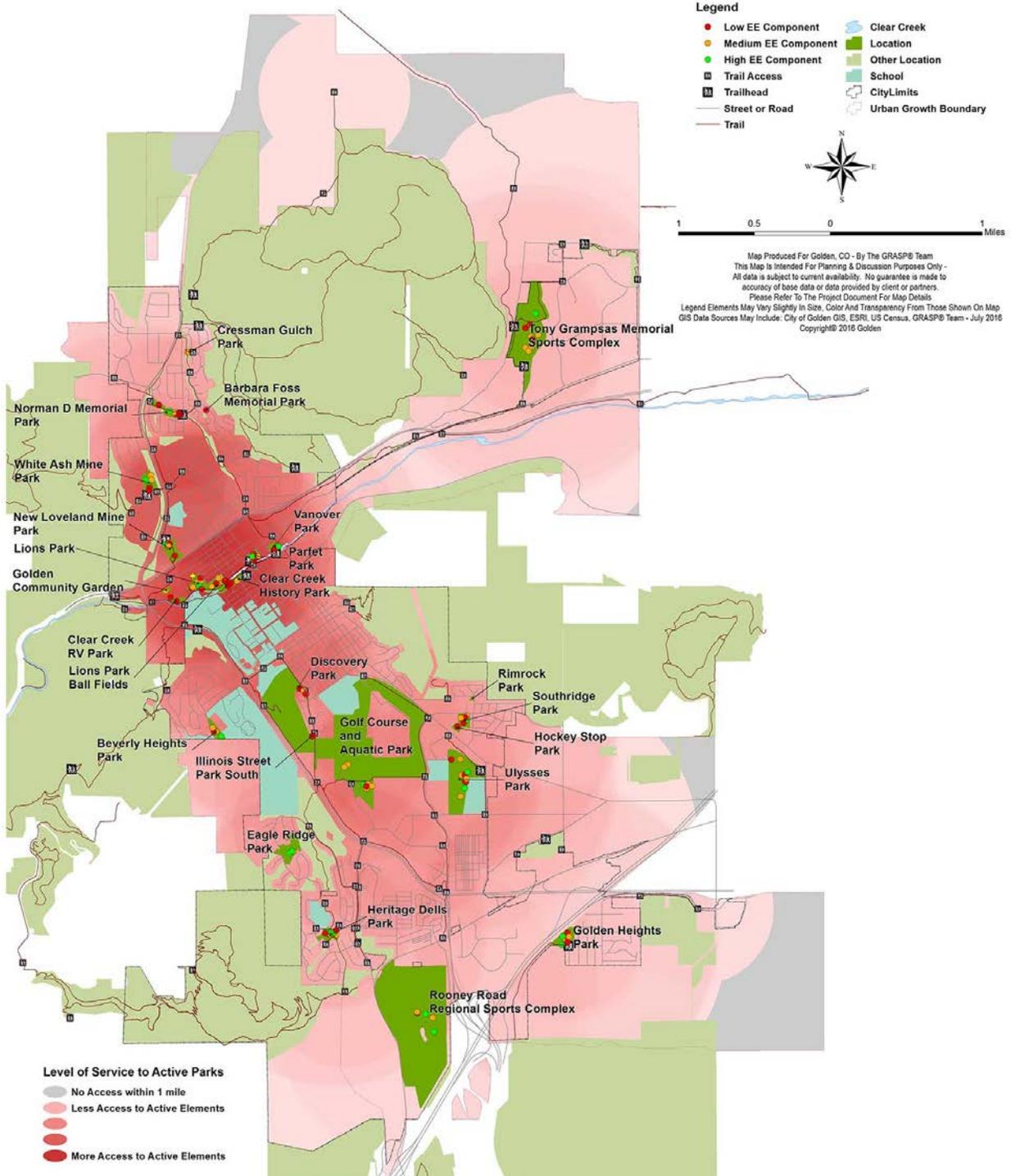
Walkability barriers were used to “cut-off” service areas where applicable.



## Neighborhood Proximity to Active Parks

A “heat map” was created to examine neighborhood level access to recreation. This type of map shows areas of greater quantity or quality of “more active” (higher energy expenditure) components available in a one mile service area. In general, this map also shows that Golden has good distribution of parks and outdoor facilities. Access to active recreation is more limited at the edges of Golden and in future growth areas.

**Map C:** Neighborhood Proximity to Active Parks heat map.



Areas of higher concentration are notable in the central part of the city, near Lions Park, where numerous developed parks and facilities exist.

### **GRASP® Comparative Data**

The following table provides comparative data from other communities similar in population size to Golden. Because every community is unique, there are no standards or “correct” statistics. There are, however, several interesting similarities and differences when making these comparisons. It is useful to note that two of the study areas were significantly larger than the Golden study area while the other three were very similar in size. Golden has a relatively low total number of parks or facilities in the system although both Lafayette and Louisville included open space parcels in the total number of sites. Golden compares consistently with other communities in number of total components except for Lafayette and Louisville.

One interesting comparison is in the average number of components per site and average score per site. Golden ranks highest in average components per site and second in average score per site. These high numbers would indicate a system that tends to be more oriented toward providing larger parks with more amenities but sacrifices walkable access from all neighborhoods as compared to other cities and may provide a reason why there are fewer parks in Golden. The 99 percent threshold access would indicate that parks are well distributed throughout the Golden study area.

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Table 6: GRASP® Comparative Data

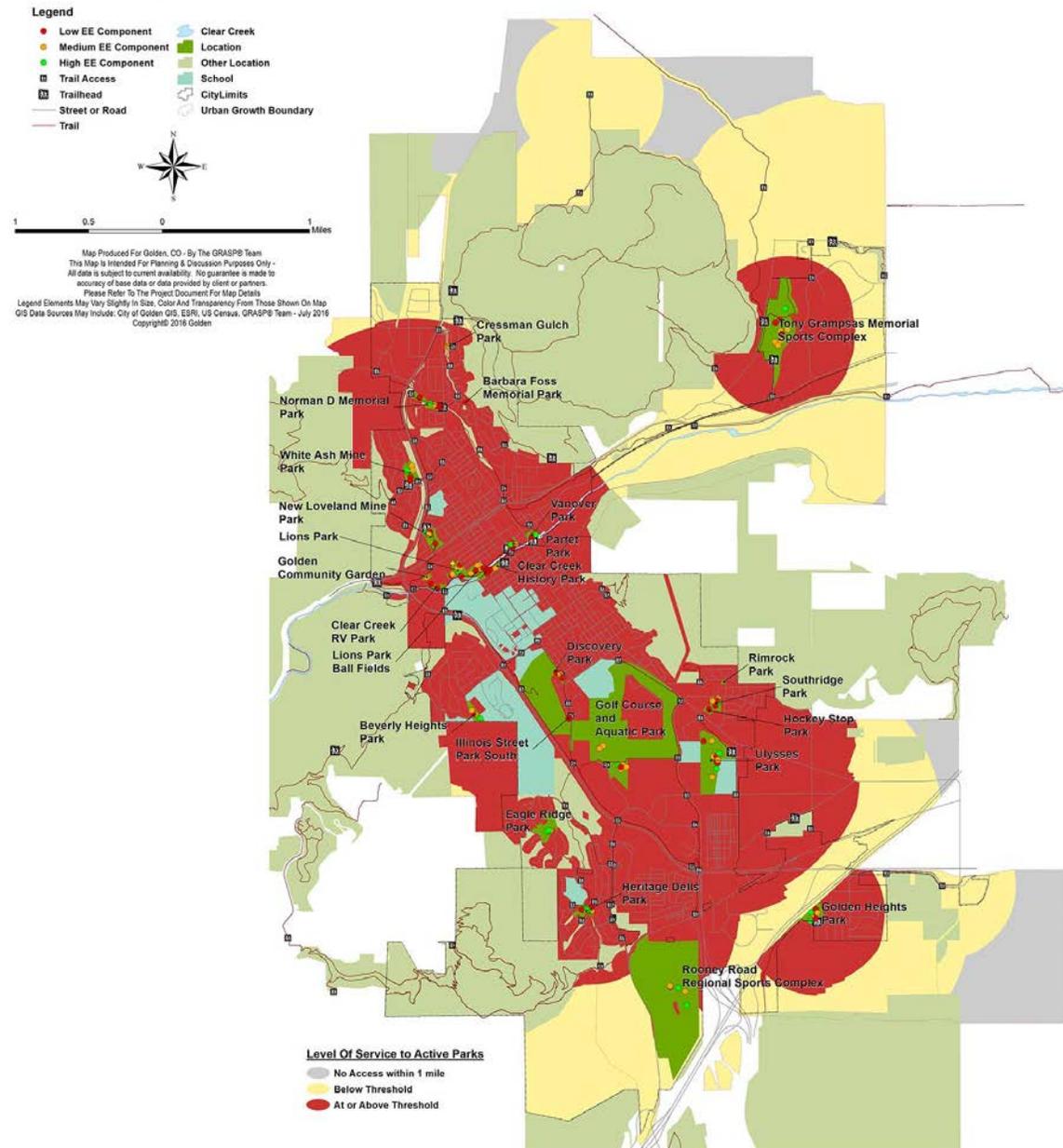
STATE	CITY	YEAR	POPULATION	STUDY AREA SIZE (Acres)	# OF SITES (Parks, Facilities, etc.)	TOTAL # OF COMPONENTS	AVG. # COMPONENTS per SITE	TOTAL GRASP® VALUE (Entire System)	GRASP® INDEX	AVG. SCORE/SITE	% of TOTAL AREA w/LOS >0	AVG. LOS PER ACRE SERVED	NUMBER OF COMPONENTS PER POPULATION (in 1,000's)	AVERAGE LOS/POP DEN PER ACRE	Population Density (per acre)	% of Population with Threshold Access	Population with Walkable Threshold Access	GRASP® Active VALUE (Entire System)	GRASP® Active INDEX (Log10)	GRASP® Active Project
ND	Williston	2011	17,300	5,089	19	104	5.5	446	26	23.5	93%	129	6	38	3.4	NA	NA	NA	NA	NA
CO	Louisville	2011	19,656	5,089	145	453	3.1	3229	164	22.3	100%	903	23	234	3.9	NA	NA	NA	NA	NA
<b>CO</b>	<b>Golden</b>	<b>2016</b>	<b>20,201</b>	<b>6,221</b>	<b>25</b>	<b>183</b>	<b>7.3</b>	<b>778</b>	<b>39</b>	<b>31.1</b>	<b>NA</b>	<b>NA</b>	<b>9</b>	<b>NA</b>	<b>3.2</b>	<b>99%</b>	<b>70%</b>	<b>135.5</b>	<b>6.7</b>	<b>Yes</b>
CO	Evergreen PRD	2011	22,736	48,154	28	170	6.1	902	40	32.2	100%	540	7	1143	0.5	NA	NA	NA	NA	NA
NH	Keene	2011	23,409	23,868	42	193	4.6	1000	43	23.8	89%	125	8	127	1.0	NA	NA	NA	NA	NA
CO	Lafayette	2012	24,453	5,979	74	201	2.7	1300	53	17.6	83%	175	8	43	4.1	NA	NA	NA	NA	NA



# City of Golden Parks and Recreation Master Plan 2016

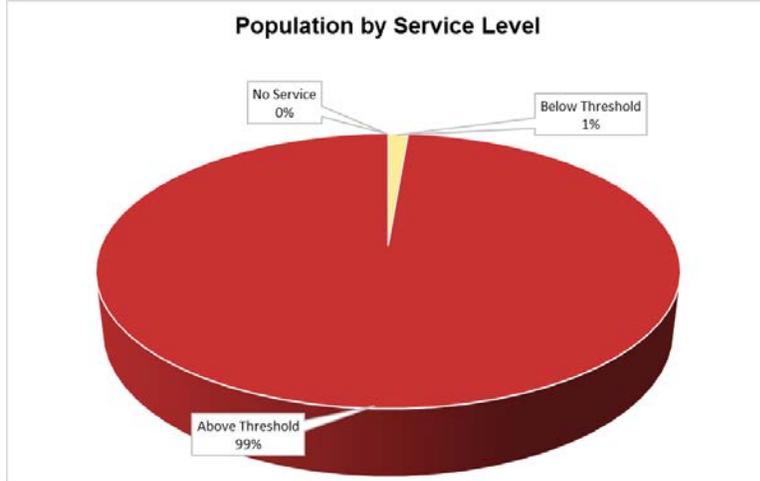
The differences in the red gradient in the previous heat maps can be difficult to recognize, especially with such a wide range of GRASP® Active values. It is often helpful to apply a local standard or what constitutes an adequate level of service in Golden. This is known as **threshold** analysis. GRASP® Active values are displayed to show where LOS is above or below a threshold value. The map reveals parts of the study area that fall below this threshold value, or exceed this threshold. On **Map C-1**, areas shown in red have LOS that exceeds the threshold value, while yellow is below the threshold, and gray has no access within one mile. The threshold value represents access to of an average neighborhood park in Golden, such as Southridge Park and access to a trail. The various shades of green on this map indicate park locations, schools and other locations such as Jefferson County open spaces as indicated by the legend. Further discussion on this threshold calculation can be found in **Appendix F**.

**Map C-1:** Neighborhood Proximity to Active Parks threshold analysis



The threshold analysis indicates that residents have exceptional one-mile access to recreation opportunities, as most developed areas of Golden meet or exceed the threshold value. Overlaying this analysis on census data confirms that neighborhood access to active recreation in Golden well serves the population. The chart below shows that 99 percent of Golden residents live in a “red” area, while very few people live in a “yellow” area.

Percent of population with access for each service level: Above threshold (red) and below threshold (yellow)



### Walkable Access to Recreation

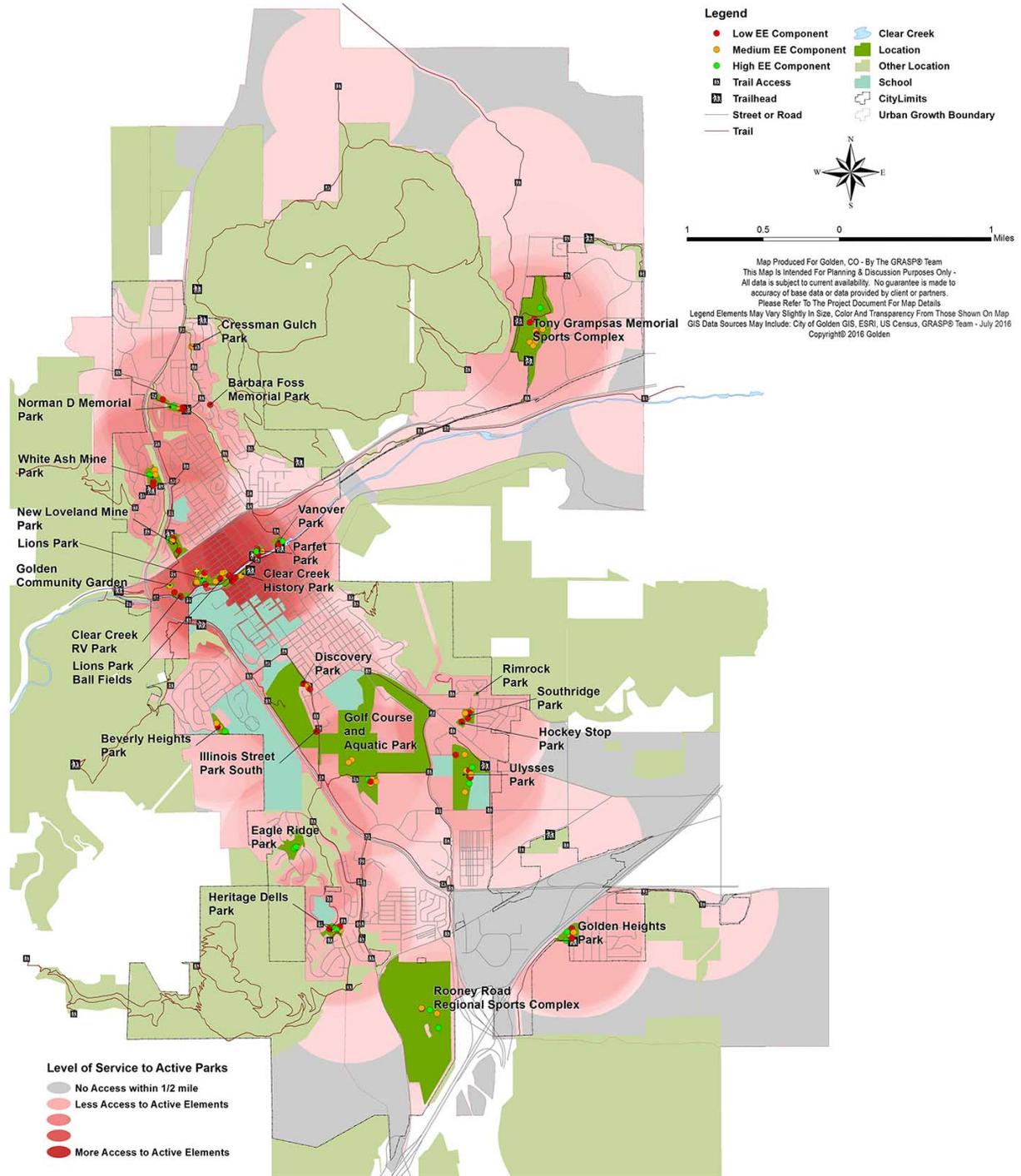
In Golden’s walkable proximity analysis, **pedestrian barriers** such as major streets or highways and railroad tracks that limit pedestrian access are very evident.

**Map D** models access to recreation components by walking. One-half mile catchment areas are shaded relative to the component’s GRASP® Active value, and relate to walkable proximity.

Walkability is a measure of how user-friendly an area is to people travelling on foot. A walkable environment benefits a community in many ways related to public health, social equity, and the local economy. Many factors influence walkability and include the presence or absence and quality of footpaths, sidewalks or other pedestrian rights-of-way, traffic and road conditions, land use patterns, and public safety considerations among others. Walkability is an important aspect of **recreational connectivity**, the extent to which recreation opportunities in a community are physically linked to allow for easy and enjoyable travel between them.

# City of Golden Parks and Recreation Master Plan 2016

**Map D: Walkable Proximity to Active Parks heat map.**

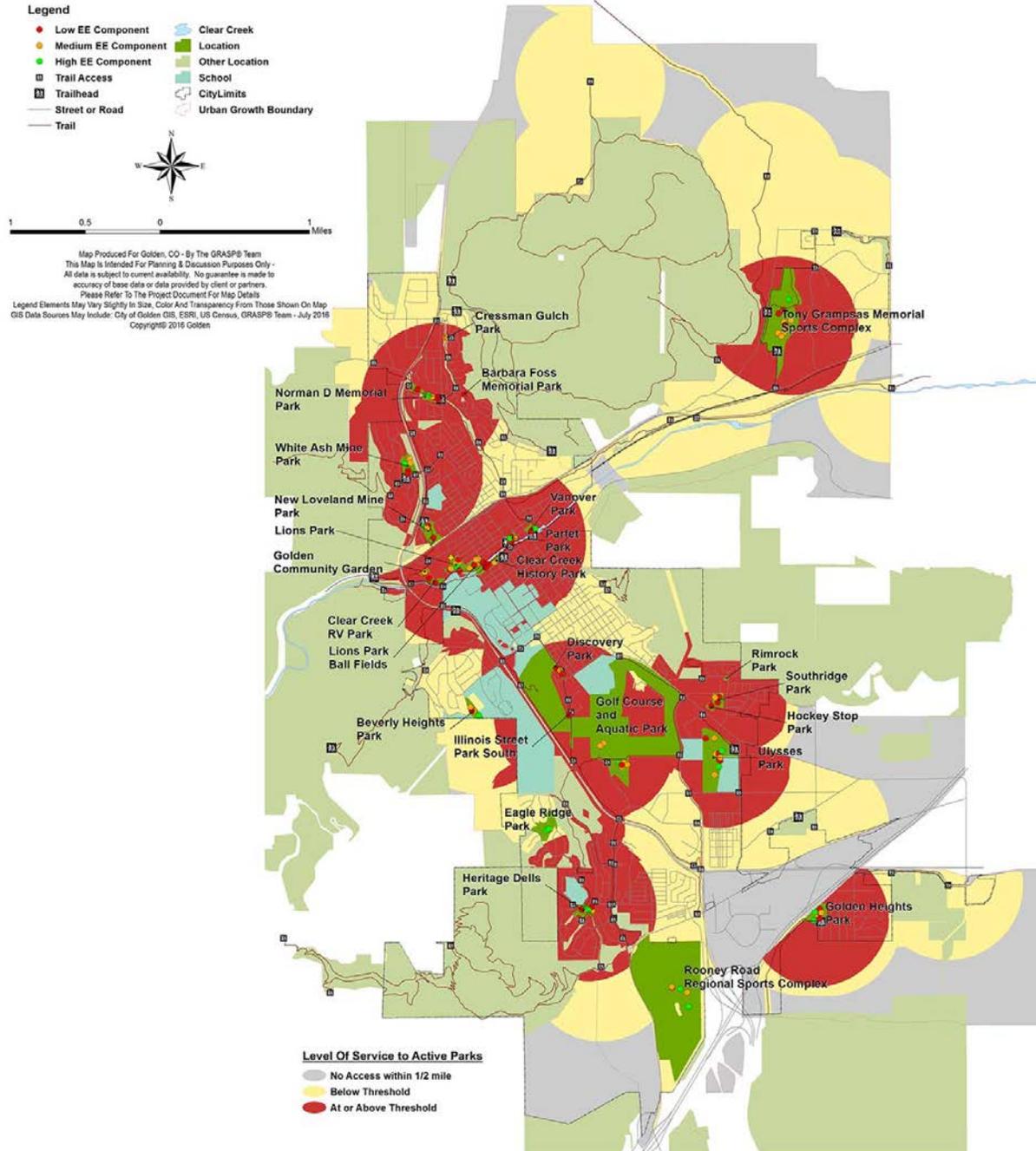


This analysis is intended to show the service levels available across Golden if walking is used to reach assets. As this walkability analysis accounts for pedestrian barriers, levels of service are notably truncated in many areas such as along I-70, Highway 58, or Highway 6. This map indicates that one of the greatest concentrations of access to recreation assets is in the northcentral part of the city near Lions Park.

# City of Golden Parks and Recreation Master Plan 2016

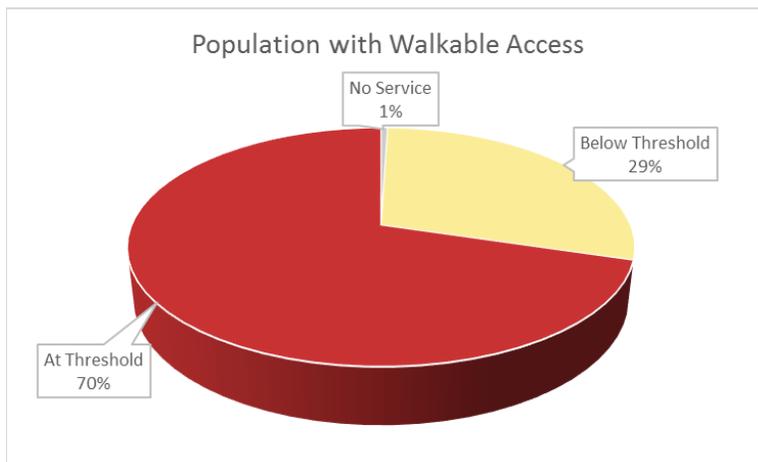
A resident in this high service area can walk to 37 different components in eight parks and the Golden Community Center, four trailheads, and eight trail access points plus two open space parcels, and Colorado School of Mines.

**Map D-1: Walkable Proximity to Active Parks threshold map.**



Areas shown in yellow on map **Map D-1** can be considered areas of opportunity to improve walkability. These are areas where land and assets are currently available but do not meet the minimum standard threshold value. There may be multiple options to address these areas. One solution may be to address pedestrian barriers in the immediate area. It may also be possible to improve the quantity and quality of assets to raise the LOS without the need for acquiring new lands. Red areas indicate walkable level of service that meets or exceeds the minimum standard. Yellow areas indicate level of service that is below the described threshold. Gray areas indicate no service within one-half mile. As before, various shades of green indicate existing parks, open space, and schools as shown in the map legend.

**Chart C:** Walkable access to assets based on population. This chart displays level of service based on where people actually live. It was produced using the walkable level of service data shown in **Map D-1**, overlaid on census data.



While 99 percent of the Golden population lives within walking distance of a recreation opportunity, the variety and quality of these opportunities tend to be limited for about 30 percent of the residents. However, of those residents with at least some walkable access to recreation, 70 percent of them score above threshold, with 29 percent below. Only one percent of Golden residents are not within an easy walk of a recreation opportunity.

### More on Utilizing GRASP® Perspectives

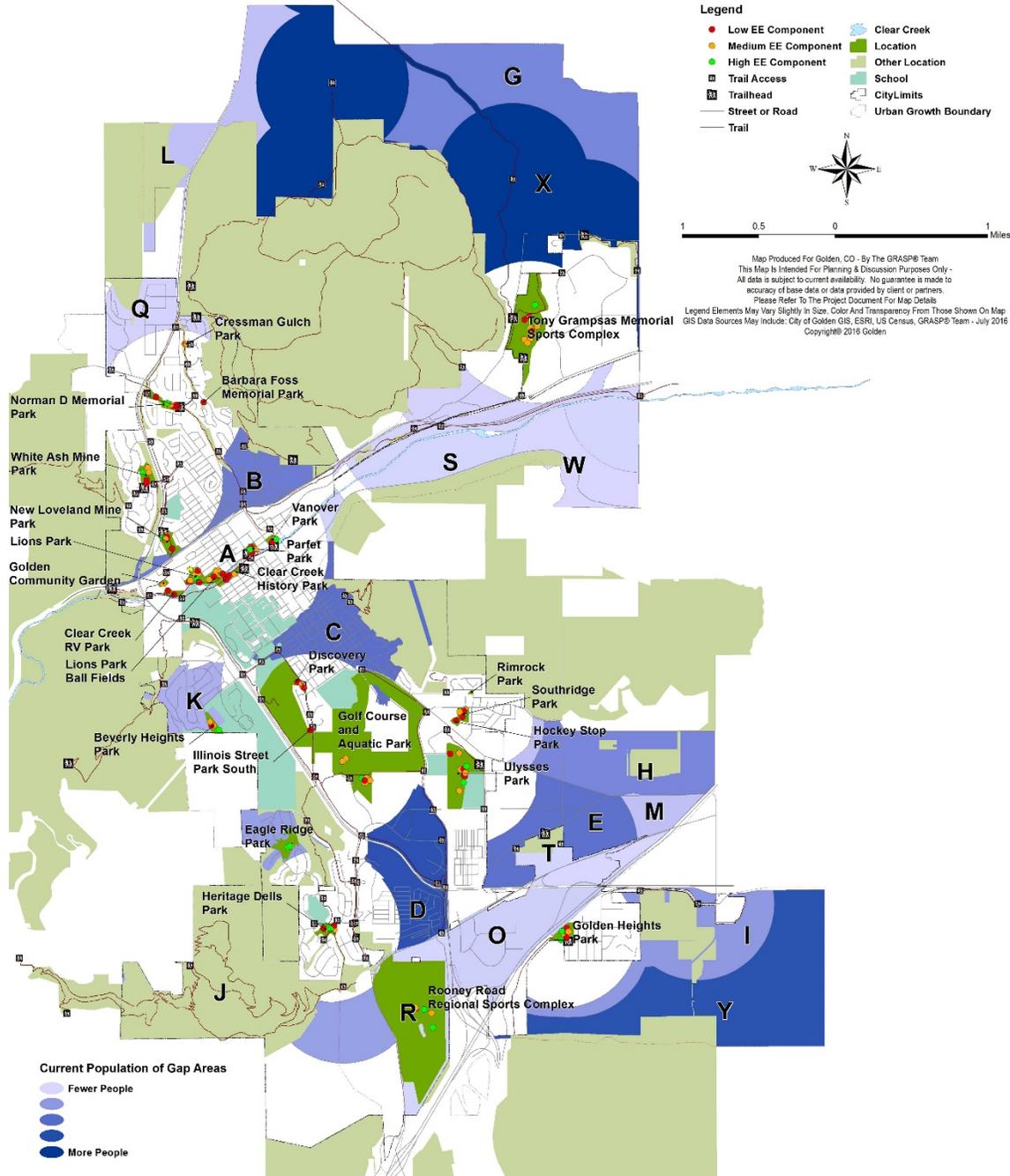
GRASP® perspectives are used to evaluate Level of Service throughout a community from various points of view. Their purpose is to reveal Level of Service gaps and provide a metric to use in understanding a recreation system. However, it is not necessarily beneficial for all parts of the community to score equally in the analyses. Desired Level of Service for a particular location should depend on the type of service being analyzed, the characteristics of the particular location, and other factors such as community need, population growth forecasts, and land use issues.

Used in conjunction with other assessment tools such as community needs surveys and a public input process, perspectives can be used to determine if current levels of service are appropriate in a given location. Plans can then be developed that provide similar levels of service to new, developing neighborhoods. Alternatively, it may be determined that different Levels of Service are adequate or suitable and therefore a new set of criteria may be utilized that differs from existing community patterns to reflect these distinctions.

Commercial, institutional, and industrial areas might reasonably be expected to have lower Levels of Service for parks and recreation opportunities than residential areas. Levels of Service in high density or low density areas may also vary appropriately.

GRASP® Level of Service analysis perspectives are intended to focus attention on gap areas for further scrutiny but must be considered with other such factors in mind. With an understanding of these dynamics, GRASP® Perspectives may also be used to help in prioritization of identified gap areas. For example, in the Walkability Analysis, **Map D-1**, it was shown that there are a number of areas throughout the city that have service below the threshold or without service. In **Map D-2**, below, the identified possible gap areas have been isolated and labeled, and shaded to indicate overall population of the specific area. Darker shades of blue have greater populations.

## Map D-2: Prioritization of Gap Areas



Demographic analysis was run on each independent area, which is shown in **Table 7**. Service level, total population, and average household incomes are shown. Only identified gap areas with an existing population have been included. The three areas within Golden City limits that have the greatest population total in the low service and no service areas are identified in the table in orange shading. Areas within the urban growth boundary about outside the current City of Golden limits are included but are not seen as a priority.

**Table 7: Demographics by Independent Area**

Area Label	Current Service	2016 Population	Average Household Income	City vs UGB
A	High Service	2661	77247	GOLDEN
B	Below Threshold	1171	127597	GOLDEN
C	Below Threshold	1431	78171	GOLDEN
D	Below Threshold	2124	54134	GOLDEN
E	Below Threshold	1422	48680	UGB
G	No Service	1099	136729	UGB
H	No Service	1054	76594	UGB
I	Below Threshold	795	119891	UGB
J	Below Threshold	697	169784	GOLDEN
K	Below Threshold	451	110909	GOLDEN
L	No Service	259	132736	UGB
M	No Service	239	55953	UGB
N	Below Threshold	232	62414	UGB
O	No Service	91	50456	GOLDEN
P	Below Threshold	59	138790	UGB
Q	Below Threshold	42	145890	GOLDEN
R	Below Threshold	40	50142	GOLDEN
S	Below Threshold	28	106443	UGB
T	Below Threshold	11	44826	GOLDEN
U	No Service	10	44827	GOLDEN
V	No Service	10	44826	UGB
W	No Service	2	99902	UGB
X	Below Threshold	3071	124556	UGB
Y	No Service	2195	123148	UGB

Prioritizing improvements in level of service based on impact to populations is helpful, but further information is often available to make even more informed decisions. For example, closer investigation of each of these areas using other available demographics is informative. Aerial photography, also offers additional insight. A map and aerial photo is displayed below for each area.

Area A: Area A represents a high service area and therefore is a good reference for comparison. The aerial photo shows numerous green spaces in addition to recreation and sports facilities associated with Colorado School of Mines. These all equate to a high service area as explained earlier.





Area D: This is the most populated gap area studied, with 2,124 residents and the lowest average household income of \$54,134. Aerial photography suggests a mobile home park with a few recreation amenities such as a swimming pool. Heritage Dells Park is the closest park but outside of a 15-minute walk for much of Area D.



## Other Types of Analysis

Traditional analyses used to evaluate recreational Level of Service may also be valuable. A few of these are discussed.

## Capacities Analysis

One of the traditional tools for evaluating service for parks and recreation is the capacity analysis. This analysis compares the quantity of assets to population. **Table 8** shows the current capacities for selected components in Golden. This table can be used in conjunction with other information, such as input from focus groups, staff, and the general public, to determine if the current capacities are adequate or not for specific components. It can also be compared to recent national statistics published by the National Recreation and Park Association in their “2016 Field Report.”

**Table 8: Golden Capacities**

		2015 GIS Acres #	Basketball Court	Basketball, Practice	Climbing, Designated	Diamond Field	Diamond Field, Practice	Dog Park	Horseshoe Court	Loop Walk	Natural Area	Open Turf	Passive Nodes	Picnic Ground	Playgrounds (All Sizes)	Public Art	Rectangular Field (All Sizes)	Shelter (All Sizes)	Skate Park	Tennis Court	Volleyball Court
<b>INVENTORY</b>																					
Golden		556	4	2	2	10	2	2	11	7	7	10	4	3	14	4	9	18	2	5	2
Total		556	4	2	2	10	2	2	11	7	7	10	4	3	14	4	9	18	2	5	2
<b>CURRENT RATIO PER POPULATION</b>																					
<i>CURRENT POPULATION 2014</i>	20,201																				
Current Ratio per 1000 Population		27.52	0.20	0.10	0.10	0.50	0.10	0.10	0.54	0.35	0.35	0.50	0.20	0.15	0.69	0.20	0.45	0.89	0.10	0.25	0.10
Population per acre or component		36	5,050	10,101	10,101	2,020	10,101	10,101	1,836	2,886	2,886	2,020	5,050	6,734	1,443	5,050	2,245	1,122	10,101	4,040	10,101
<i>PROJECTED POPULATION - 2020</i>	21,815																				
Total # needed to maintain current ratio of all existing facilities at projected population		600	4	2	2	11	2	2	12	8	8	11	4	3	15	4	10	19	2	5	2
<i>Number that should be added by all providers to achieve current ratio at projected population</i>		44	0	0	0	1	0	0	1	1	1	1	0	0	1	0	1	1	0	0	0

# does not include schools, private parks or regional open space

The capacity table is also useful in projecting future needs based on population growth to maintain the current level of service per capita. This type of analysis is most useful in study areas with a growing population. For example, Golden would need one additional diamond field, horseshoe court, loop walk, natural area, open turf playground, rectangle field, and shelter to be added to the system by 2020 to keep up with projected population growth. This also includes an additional 44 acres of park land.

The capacities table is based strictly on the quantity of assets without regard to distribution, quality, or functionality. Higher LOS is achieved only by adding assets, regardless of the location, condition, or quality of those assets. In theory, the LOS provided by assets should be based on their location and quality as well as their quantity.

Table 9: Outdoor Park and Recreation Facilities – Median Population Served per Facility

	Agencies Offering this Facility	All Agencies	Less than 20,000	20,000 to 49,999	50,000 to 99,999	100,000 to 250,000	Over 250,000
Basketball courts	85%	7,000	4,161	6,874	7,788	7,214	14,183
Community gardens	47%	32,376	8,500	27,236	39,555	74,500	233,120
Diamond fields: baseball - adult	39%	19,694	7,500	18,553	21,650	48,735	68,755
Diamond fields: baseball - youth	58%	6,599	3,167	6,502	8,317	8,562	26,240
Diamond fields: softball fields - adult	65%	12,463	5,139	10,345	14,263	22,162	35,875
Diamond fields: softball fields - youth	59%	9,687	4,319	9,348	14,978	18,720	34,342
Diamond fields: tee-ball	28%	12,771	6,345	13,500	20,000	28,930	108,168
Dog park	41%	43,183	9,126	27,000	57,535	88,353	156,989
Ice rink (outdoor only)	21%	16,572	7,930	21,500	17,298	63,346	339,848
Multipurpose synthetic field	5%	34,915	N/A	23,625	28,541	109,000	N/A
Multiuse courts -basketball, volleyball	25%	13,736	6,500	19,547	15,250	33,971	59,541
Overlay field	3%	7,257	N/A	20,375	N/A	N/A	N/A
Playgrounds	91%	3,560	2,220	2,833	3,493	4,562	11,207
Rectangular fields: cricket field	6%	199,199	N/A	29,000	N/A	121,496	505,382
Rectangular fields: field hockey field	3%	22,767	N/A	24,017	N/A	N/A	N/A
Rectangular fields: football field	38%	25,523	7,353	16,664	33,496	53,136	63,670
Rectangular fields: lacrosse field	7%	26,639	N/A	19,300	37,114	60,155	N/A
Rectangular fields: multi-purpose	50%	8,060	3,250	7,163	15,288	13,625	24,782
Rectangular fields: soccer field - adult	34%	12,365	7,800	12,000	15,195	15,997	55,093

[www.nrpa.org/2016-Field-Report](http://www.nrpa.org/2016-Field-Report)

\*Findings from the 2016 NRPA Field Report using data from PRORAGIS, NRPA's park and recreation agency performance benchmarking tool, from years 2013-2015.

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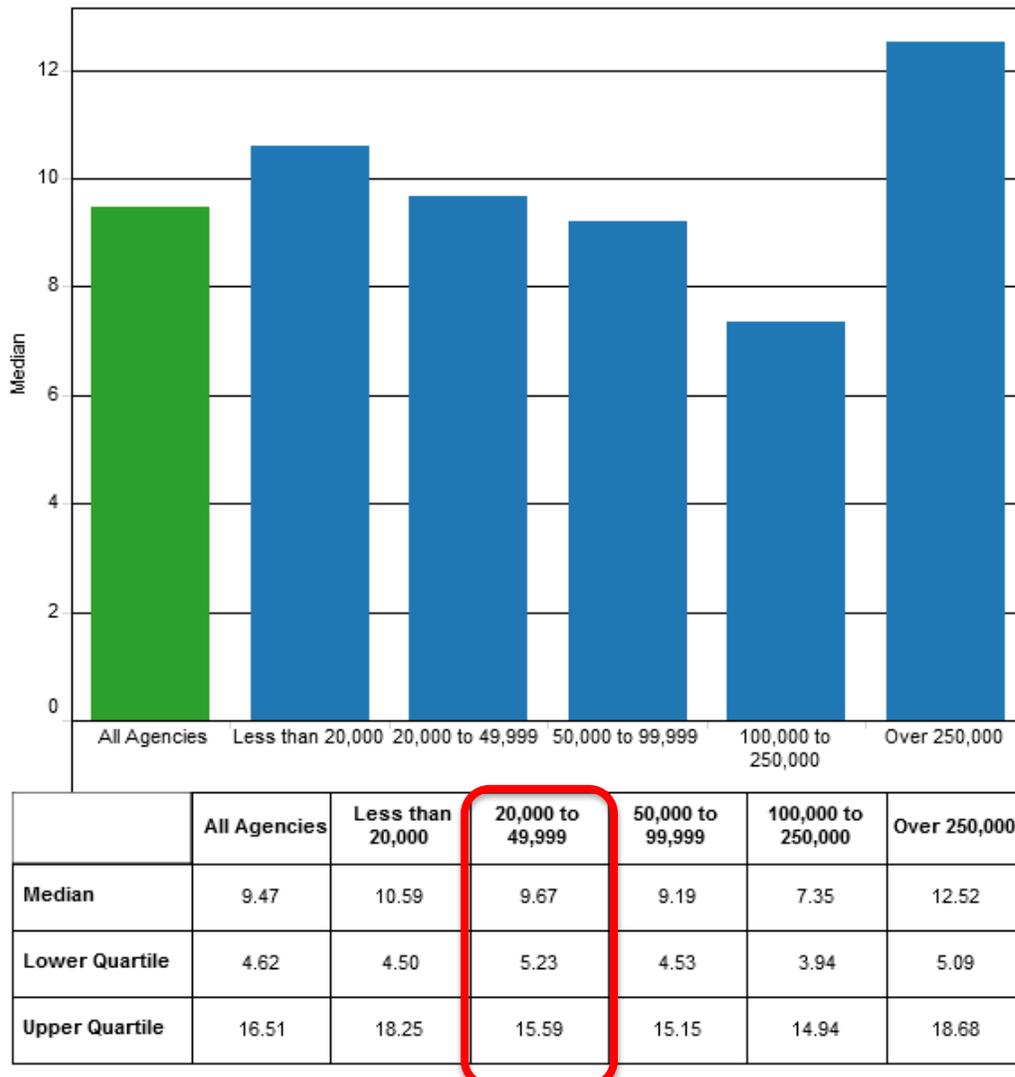


A comparison of like components from the capacity table and the National Recreation and Park Association (NRPA) 2016 Field Report shows that Golden is better than the national median ratio of residents per basketball courts, diamond ballfields, dog parks, playgrounds, and rectangle multi-purpose fields.

**Table 10: Comparison Table**

	Golden 2016 Population per Amenity Ratios	NRPA 2016 Field Report (Median Value for Population 20,000 to 49,999)
Basketball Courts	5,050	6,874
Diamond Fields	2,020	6,502 - 18,553
Dog Parks	10,101	27,000
Playgrounds	1,443	2,883
Rectangular Fields	2,245	7,163 - 29,000

Table 11: Acres of Park Land per 1,000 Residents



[www.nrpa.org/2016-Field-Report](http://www.nrpa.org/2016-Field-Report)

\*Findings from the 2016 NRPA Field Report using data from PRORAGIS, NRPA's park and recreation agency performance benchmarking tool, from years 2013-2015.

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The capacity table also indicates that Golden provides almost 27 acres per 1,000 people or 36 people per acre of “park.” This includes only Golden property and does factor in open space lands or schools. If compared to a recent publication by NRPA in the “2016 Field Report,” Golden is well within the upper quartile in acres of park land per 1,000 residents when compared to other similar sized cities.

## Participation and Demographic Analysis

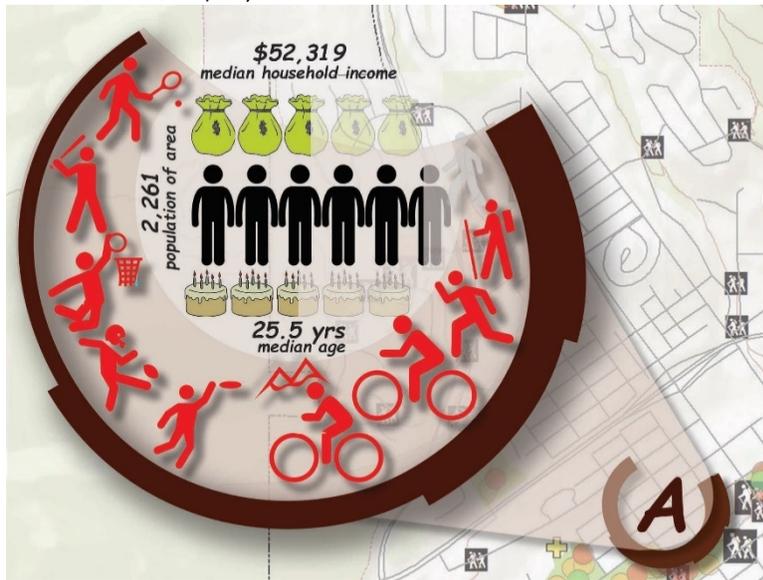
While the previous analysis and data concentrated on parks assets provided by City of Golden Parks and Recreation, it may also be informative to look at how citizens of Golden participate in activities associated with park and recreation assets. Using data enrichment made available by Esri, overall activity participation rates for 10 common activities often associated with parks can be determined. The following graphic represents overall participation rates by Golden citizens for each activity. Walking for exercise has the highest participation rate at almost 25 percent of Golden residents. Tennis has the lowest participation rate at about five percent of Golden residents.



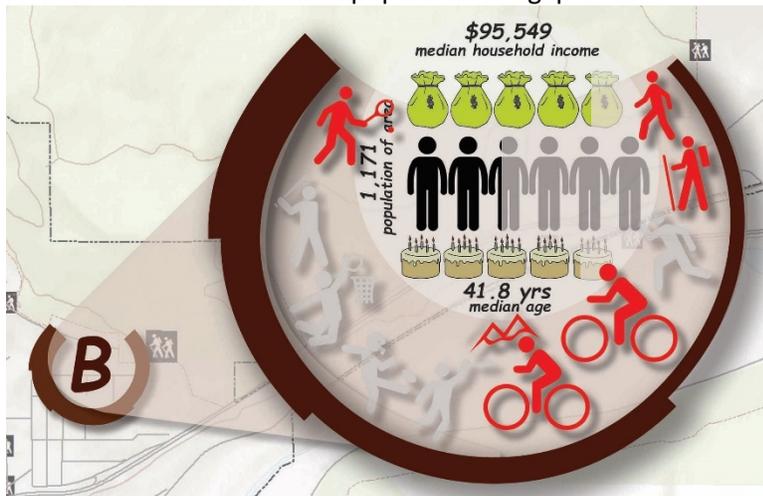
## City of Golden Parks and Recreation Master Plan 2016

Using the same identified gap areas as previous analysis (see **Map D-2**), it may be helpful to compare participation rates of each of these areas. In the case of the high service area A and the three gap areas, the following represents which activities in are most popular for each area. If an activity is more popular than the overall city average, the icon is displayed in red. Gray icons indicate lower participation rates than the city average. Median household income, total population, and median age are also displayed for each area.

Residents in Area A, the high service area, are more likely than an average city resident to participate in 9 of the 10 activity areas. Only “walking for exercise” falls below the city average participation rates. There are 2,261 residents in this area with a relatively young median age of 25.5. Median household income is about \$52,000.



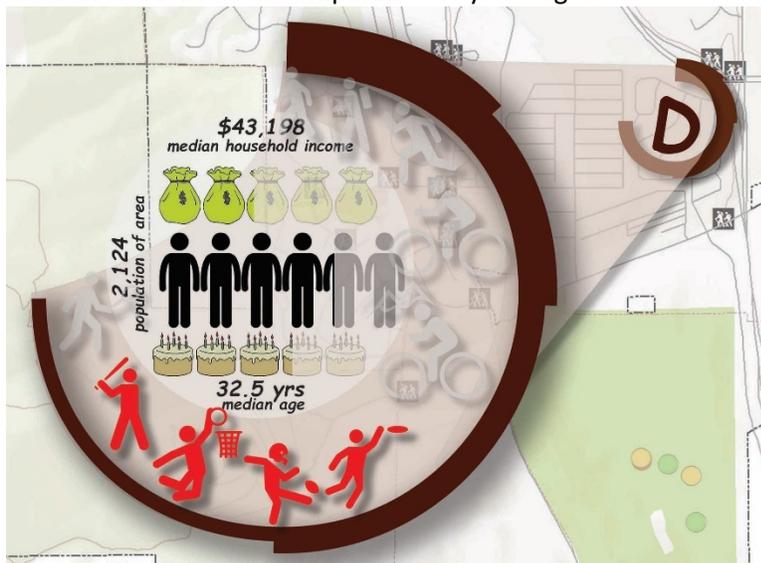
Area B has a much older population with a median age of 41.8. There are 1,171 residents in Area B, and they have the highest median household income of just over \$95,000. These residents appear to prefer individual type activities such as walking, hiking, and biking when compared to the average Golden resident. Tennis is also more popular in this gap area.



Area C is fairly similar to Area A. Activity participation is the same with “walking for exercise” being the only activity that falls below the city average. Median age and median household income are somewhat higher than area A at 32.1 and \$58,000 respectively. There are 1,431 residents in area C.



Area D has the lowest median household income of any of the identified areas at about \$43,000. There are 2,124 residents with a median age of 32.5 yrs. Residents in this gap area are less likely to participate in individual activities but more likely to participate in sports such as baseball/softball, basketball, football and Frisbee as compared to city averages.



### **Important Conclusions**

Proximity and transportation are relevant factors affecting level of service in Golden. The provision and distribution of assets is reasonably equitable across the city, especially given resident access to motorized transportation. Analysis would indicate that Golden is currently providing recreation opportunities in the form of larger, neighborhood based parks. Pedestrian barriers limit walkable access in some parts of Golden. Lack of developable park land in some sections of town also limits access.

Effective strategies to increase overall LOS might be to add assets in any area with lower service, acquire and develop additional park land, or develop partnerships in areas lacking current service. As compared to other similar cities in the GRASP® dataset, Golden ranks highest in average components per site and second in average score per site. This would indicate that while Golden may have fewer parks than comparable cities, it has larger, more developed, or active parks than other similar cities. When compared to national databases, Golden fares better than the national median ratio of residents per basketball courts, diamond ballfields, dog parks, playgrounds, and rectangle multi-purpose fields.

Additional analysis and a review of the input received from surveys, focus groups, and other sources, including staff knowledge, may be needed to further identify the best locations for future improvements.

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## V. Identifying Key Issues

The following Key Issues were identified through the process:

### **Award Winning Organization and Operations**

- Increase marketing and brand awareness
- Provide staff for growth and maintenance
- Promote Department as preventive health provider
- Maintain CAPRA accreditation
- Maintain Gold Medal status

### **Providing Diverse and Demanded Programs**

- Increase programming opportunities relative to nature play
- Increase opportunity for special events via partnerships and alternative locations
- Increase individual opportunities relative to unique sports or needs

### **Sustainable Financial Practices**

- Explore opportunities for financial sustainability including revenue sources, partnerships, sponsorships, and continued cost recovery assessment

### **Offering Quality Facilities and Amenities**

- Preserve open spaces, trails, and pathways
- Increase connectivity
- Add and re-purpose amenities

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## VI. Re-Creating Golden - Recommendations and Action Plan

### A. Recommendations

After a thorough analysis of the Key Issues Matrix, a summary of all research, the qualitative and quantitative data, inventory, Level of Service analysis, public sessions, and staff input assembled for this study, the Findings have resulted in the development of a variety of recommendations to provide guidance in consideration of how to continue to provide quality parks and recreation services and amenities in Golden, and how to plan for the future. This section describes ways to enhance the level of service and the quality of life with improvement through organizational efficiencies, improved programming and service delivery, maintenance and improvements to facilities and amenities, and financial opportunities. A key theme in this document is the interaction of parks and recreation and its related impact on public health. While any of the recommendations may serve to improve a program, site, or opportunity, the larger picture is the overall health of the community. As the provider of parks and recreation services for Golden and the surrounding area, large populations can be impacted with improved health through the programs, parks, open space, and trails that the City provides.

#### **Goal 1: Enhance Award Winning Organizational and Operational Efficiencies**

##### **Objective 1.1: Increase marketing efforts.**

Through the public process, it became apparent that Golden could take better advantage of “telling its story.” This could include utilizing social media, engaging the public in specific applications (Map my Walk/Run/Ride, Instagram, Facebook, SnapChat, etc.) and developing relationships with local media to have a strong presence in print. Some members of the public expressed difficulty with the website, specifically concerning registration. As such, evaluating the website performance from a user perspective is critical. Additionally, much like social media, the website can be utilized for interactive applications, such as maps and program “trailers.” Making the connection between parks and recreation and overall community health is the foundation of the story the Department can share as it moves forward.

##### **Objective 1.2: Appropriately staff to maintain Level of Service**

Recent changes to federal law (Affordable Care Act, Fair Standards, and Labor Act) have created a challenge in securing appropriate staff at the seasonal level, as was discovered during SWOT analysis and interaction with the project team. Comparisons to other organizations either locally or through the National Recreation and Park Association’s Field Report may assist in determining number of staff for desired level of service. Auditing jobs for pay scale placement and combining responsibilities where necessary may result in additional full time positions, but take pressure off seasonal recruitment.

##### **Objective 1.3: Maintain award winning status**

Having achieved Gold Medal and CAPRA Accreditation status is to be commended. Continuing to meet the requirements for re-certification include public involvement and implementing master plan strategies.

## **Objective 1.4: Focus on planning for Museums**

The 2008 Master Plan did not address Golden’s Museums. While a strong emphasis on Museums was not a focus of this exercise, Museum operations could benefit from a strategic direction, and as such, a plan should be formulated. Additionally, future Master Plan efforts should include this important division.

## **Goal 2: Enhance Diverse and Demanded Programs**

### **Objective 2.1: Add programming for gap areas**

Through the public process, citizens expressed interest in more environmental and adventure programming, especially regarding youth. It was determined that numerous agencies exist in Golden already providing these services, but cross marketing and referral could be enhanced.

### **Objective 2.2: Develop additional special event opportunities**

Special events currently are processed through the Planning Department. While Parks and Recreation participates in the decision making process about events, most occur in the downtown area. It would be helpful to consider development of other sites to disperse the impact of large events.



*Credit: Chris Pagley Photography*

Events in parks, from a neighborhood “movie in the park” to large festivals in regional parks, are growing in popularity, and serve to build a sense of community and generate revenues. Providing spaces for these could become a trend in Golden, following national trends. It was also noted that there is a desire for new “community” events serving residents. Large existing events tend to cater to visitors while new events should cater to local residents. (See Objective 4.4 for further discussion.)

### **Objective 2.3: Seek opportunities for individual active recreation**

The survey (as well as public input sessions) brought out interest in some specialized sports such as cycling, pickle ball, longboarding, etc. Additionally, some unique regional sports interests emerged, such as paragliding and white water access. Golden is geographically positioned to attract such diversity and to utilize it to an economic advantage. Partnerships with local and regional entities may afford opportunities to address knowledge of and access to these sports.

## **Goal 3: Enhance Sustainable Financial Practices**

### **Objective 3.1: Consider pursuing additional revenue**

Completing a survey of registered voters afforded the opportunity to test support for various funding mechanisms. Support at 58 percent in the statistical sample and 61 percent in the open link was indicated for a lodging tax. This tax could support cultural amenities and programs. Increased user fees in key areas could also support parks and recreation amenities.

### **Objective 3.2: Adopt policies reflective of revenue enhancement opportunities**

Formalizing sponsorship policies and partnership policies provide opportunities for revenue enhancement. As collaborations are sought with health care providers or outside active recreation groups, these policies will protect the Department, and ensure compliance with the mission statement in providing additional services and amenities. Sample sponsorship and partnership policies are provided in **Appendices H and I**.

### **Objective 3.3: Formalize cost recovery methods**

While Golden currently holds to a cost recovery methodology, the process should be evaluated annually to ensure that targets are met, and to determine if the policy needs revision. An introduction to the Pyramid Methodology for cost recovery is provided in **Appendix K**.

## **Goal 4: Maintain or Improve Facilities and Amenities to Address Current Level of Service and Identified Gap Areas**

Findings of the GRASP® *Active* analyses provide guidance in consideration of how to improve parks and recreation in Golden. This section describes ways to enhance level of service through improvement of existing sites, future development of new facilities, and potential partnerships. Whether upgrading, replacing, or adding new components or modifiers to a site, it is ultimately about creating the right mix or blend of park amenities that create a unique experience and sense of place for a successful park or facility. The following considerations and guidelines can help focus discussions and offer ideas and considerations for many different situations.

*Note: Any reference to level of service scoring throughout this recommendation discussion relies on the walkable level of service analysis unless otherwise noted. Overall level of service scoring from a driving standpoint was high and thus offered minimal need for improvement. Despite that, walkable coverage provided is generally very good; an examination of walkable level of service does reveal areas on which to focus improvement efforts.*

### **Objective 4.1: Assess and monitor park inventory on a regular basis**

Maintaining and improving existing facilities ranked very high in public input. Developing a method or process for maintaining the current GIS dataset and for continued assessment of existing facilities is key to monitoring existing resources. The inventory and assessment process used for this plan involves scoring of all included assets. This scoring takes into account condition and functionality. Components with low-scores may be addressed individually and will serve to improve level of service.

Monitoring and upgrading existing parks and components should also include the ongoing assessment and compliance with ADA accessibility. According to the ADA.gov website, "Access to civic life by people with disabilities is a fundamental goal of the Americans with Disabilities Act (ADA). To ensure that this goal is met, Title II of the ADA requires state and local governments to make their programs and services accessible to persons with disabilities... One important way to ensure that Title II's requirements are being met in cities of all sizes is through self-evaluation, which is required by the ADA regulations. Self-evaluation enables local governments to pinpoint the facilities, programs, and services that must be modified or relocated to ensure that local governments are complying with the ADA." Transition plans are also required to implement needed changes identified during the self-evaluation process.

Ongoing self-evaluation and implementation of a comprehensive transition plan must be a high priority of the Parks and Recreation Department, especially in terms of access to park amenities and paths or routes to get to those amenities and components. It was noted that many of the playgrounds use pea gravel as safety surfacing. While typically there is also an accessible route via a poured in place surface, ideally, all surfacing would be ADA accessible.

### **Objective 4.2: Increase connectivity to promote resident use and increase physical activity**

The definition of recreation has evolved in recent years to include aspects of the built environment that are more important today than they were in the past. People are more inclined these days to integrate recreational opportunities within their daily lives. The infrastructure available to get people to and from destinations is of greater importance than ever before as more and more people have started to prefer a leisurely walk or bike ride to a trip in the car. People increasingly expect that parks, recreation centers, and other community resources be easy destinations to access for a variety of users employing different modes of travel to include walking and bicycling. This concept may be referred to as **recreational connectivity**.

Recreational connectivity may be defined as the extent to which Golden's recreational resources are transitionally linked to allow for easy and enjoyable travel between them. In addition to recreational trails, this may also include city sidewalks, bicycle paths, bicycle routes, and public transit infrastructure. The scope of creating and maintaining such a network is a substantial undertaking that involves many players both within the City and from outside agencies. Along with a community expectation for this type of user-friendly network infrastructure comes the expectation that stakeholders work together in the interest of the public good. At the municipal level, this might include public works, law enforcement, private land-owners, public transit operators, and user groups, as well as the local parks and recreation department.

This concept of recreational connectivity is important within the scope of parks and recreation planning but also has deeper implications for public health, transportation, public works and public safety, and the local economy, among other considerations. As more and more people look for non-automotive alternatives to get to and from local destinations, a complete network of various transportation options is in greater demand than ever to include walking trails, bicycle paths, bicycle routes, and public transit. Other elements of this infrastructure might include street/railroad crossings, sidewalk landscaping, lighting, drainage, and even bike-share and car-share availability. Coordination of trails and trail connections with other planning efforts is crucial to the system.

### **The Trail System**

Recreational connectivity in Golden starts with trails. A **trail** may be defined as any off-street or on-street connection dedicated to pedestrian or bicycle users. **Recreational trails**, as distinguished from transportation trails, typically pass through park lands or natural areas and can be soft or hard surface. Recreational trails are the only elements of an alternative transit network that traditionally fall to parks and recreation professionals. They are intended mostly for leisure and enjoyment of resources.

**Transportation trails**, the sidewalks or paved trails found in street right-of-ways in most municipalities, are intended more for utility in getting from one place to another. Yet these two types of city infrastructure must work together to create a well-connected community. The resulting **trail system** includes all trails that serve pedestrian and bicycle users in a community for purposes of both recreation and transportation.

As a trail system matures, the need emerges to address barriers such as roadways, rivers, and railroad crossings that separate distinct trail networks in order to create a truly connected trail system. A **trail network** is a part of a trail system within which major barrier crossings have been addressed and all trails are connected. Trail networks within a trail system are typically separated from each other by such barriers or by missing trail connections. Golden offers a number of pedestrian underpasses and bridges that can be used to help navigate barriers. Project proposals such as the May 2012 Golden Connector Trails offer a number of new trails that may be added to merge trail networks and improve overall connectivity. Most cities have several trail networks that connect users to common destinations such as schools, shops, restaurants, and civic and religious institutions, in addition to parks and recreation facilities. The more integrated these networks, the more connected a city or town.

Building a trail system involves many considerations beyond the control of park and recreation managers. Vacant lands, utility easements, street right-of-ways, and existing social trails may be worth investigating for trail feasibility and to determine how trail development in these areas might impact overall connectivity. The acquisition of these lands and easements was identified as a high priority in the most recent survey. However, other departments and agencies will need to be consulted and partnered to address issues such as land acquisition, street crossings, and utility maintenance. To complicate matters, the distinction between a recreational trail and a transportation trail can be hazy. Further, on-street connections via usable, comfortable bicycle lanes and routes are also critical to establishing good recreational connectivity. Though these connections can be invaluable to a city's infrastructure, as they supplement a trail system, they introduce another set of stakeholders and complications. The types of collaboration necessary to build a trail system are not without their challenges, yet can yield lasting partnerships that benefit the community.

Potential partners can include school districts, public works departments, county offices, state entities, federal agencies, and/or private land owners among others. Early engagement of stakeholders can help convince them that their cooperation is critical to the public good. It can be helpful to remind them of the economic boost that often results from investment in recreational infrastructure like a trail system. Of course, not all players stand to gain from trail development. It is essential that land managers and planners be aware of all possible implications inherent in their efforts.

While trails and the trail system is mentioned in a variety of city documents including the Golden Comprehensive Plan, the 2012 Parks and Recreation Master Plan, Golden Vision 2030 and North Neighborhoods Plan, there does not appear to be a formal trails master plan.

A **Trails and Alternative Modes of Transportation Master Plan** is highly recommended. This planning effort should include all relevant City departments and outside agencies in order to create a comprehensive and implementable plan. This plan should also address frequency and distribution of waysides, trailheads, access points, and interpretation.

Golden has an outstanding trail system. Here are a few general strategies to use in planning efforts as this system is established:

- Work with a variety of departments, offices, and agencies to obtain assistance and access in creating trail links.
- Look for ways to relieve cost burdens for property maintenance presently borne by other utilities by adapting these properties to create recreation opportunities.
- Create connections that blend recreation opportunities with restaurants and retail opportunities for greater economic impact.

- Create connections that allow safe, comfortable routes between homes, schools, and civic and religious institutions for user convenience.
- Look at existing utility areas such as power line easements, drainages, and detention ponds for options to improve connectivity.
- Use wide, under-utilized or non-used street corridors for best pedestrian and bike routes within developed parts of the city.

It is helpful to recognize that trails may be developed at a variety of scales. Many trails serve park users only while others are of citywide or regional extent. Also, people with a destination in mind tend to take the most direct route while recreationists tend to enjoy loop or circuit trails more than linear trails. An exemplary trail system will provide multiple opportunities for users to utilize trail segments to access different parts of the city directly or enjoy recreational circuits of various size. By employing park trails, city trails, and regional trails, users should ideally be able to pick and choose from several options to reach a destination or spend time recreating.

As the Golden trail system continues to develop, additional resources will be desirable to support users. Golden should consider signage and wayfinding strategies, trailheads and access points, public trail maps, and smartphone applications as strategies to connect people to trails and affect a positive user experience.

Park monument signage and wayfinding strategies should be employed to enhance the Golden park and trail system by promoting identification and branding, ease of use and improved access to recreational resources. An important aspect of effective signage and wayfinding markers is branding. An easily identifiable hierarchy of signage for different types of users assists residents and visitors as they navigate between recreation destinations. Further, a strong brand can imply investment and commitment to alternative transit, which can positively impact city identity and open up economic opportunities.

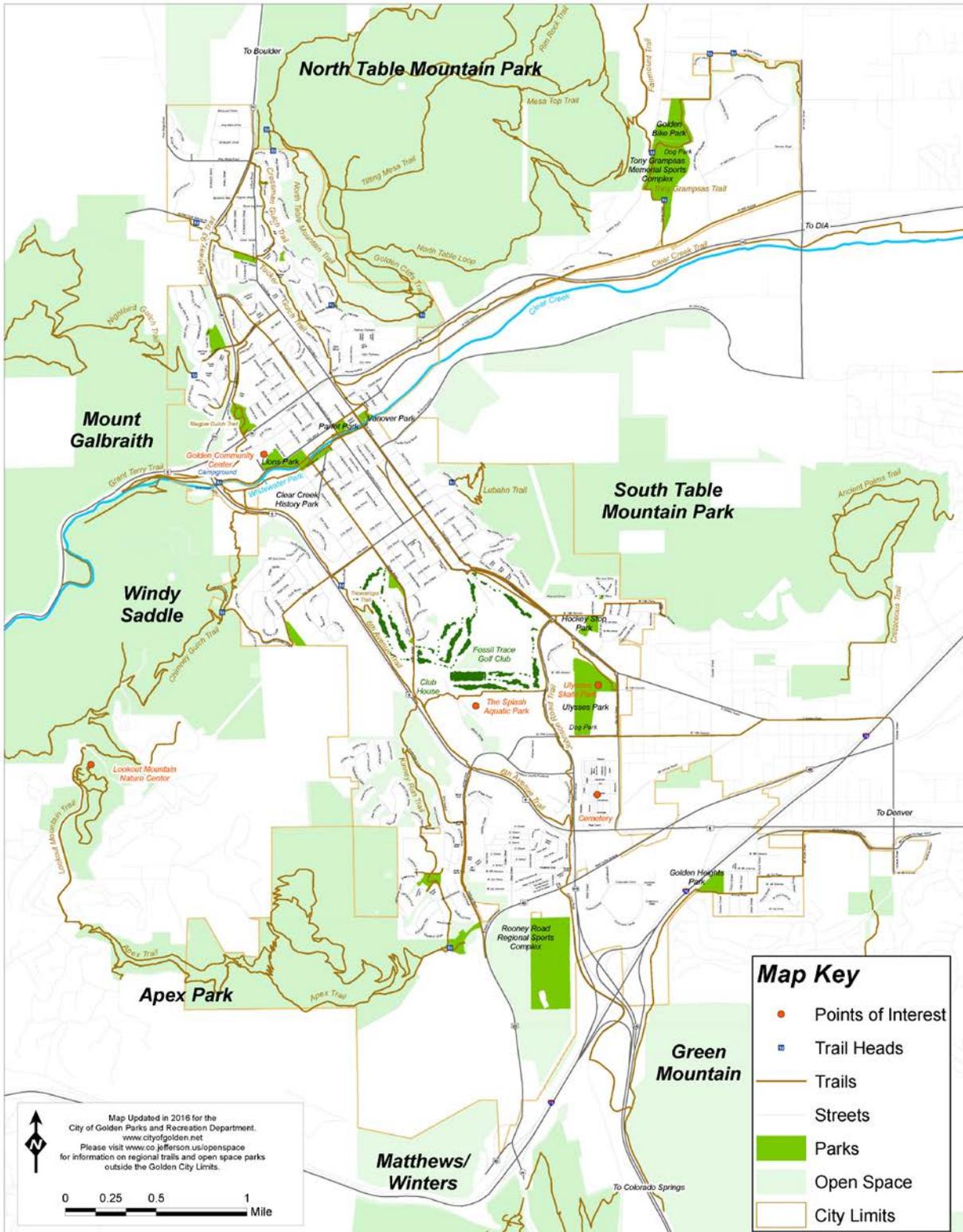
### **Trailheads, Access Points, and Barriers**

It is also important to provide users access to trails. There are two ways to approach this. First, formal trailheads may be developed to include parking, bike racks, signage, restrooms, drinking water, a trail map, and other amenities. A trailhead is most appropriate to provide access to trails that serve a higher volume of users at destinations reached by automobile. The second approach involves simply providing a trail access point, usually without the extensive amenities found at a trailhead. Trail access points such as this are more appropriate in residential or commercial areas where users are more likely to walk or ride a bicycle to reach the trail. Lastly, dealing with multiple pedestrian barriers in Golden is a key undertaking. There are already multiple examples of underpasses and overpasses throughout the community that exhibit a great effort on the part of the City to recognize and address these major pedestrian barriers. Ongoing communication and planning can help to further address remaining barriers.

### **Map & App Resources**

Golden currently has the following trails maps available on its website.





By making this and other trail maps available, users may enjoy Golden trails with greater confidence and with a better understanding of distances, access points, amenities, and the system as a whole. The current map does not include various trail types or surfaces. Additionally, there are many advantages to showing streets with bicycle lanes and safe on-street bike routes.

Another way to provide a trail map to users is through web based smartphone technologies. Maps made available on this type of platform are more dynamic for users, always on hand, and can be easily updated. Upfront investment needed for this type of resource may be cost prohibitive at the present time. However, it is likely that as technologies advance, these costs will become more manageable in the future. It may be worth considering development of web-based maps in long term planning decisions.

### **Public Transportation**

A final consideration about recreational connectivity is public transportation. Though this falls outside the realm of parks and recreation, many residents are limited to or enjoy the convenience that public transit affords. RTD, Regional Transportation District, serves the City of Golden with a number of bus and light rail routes and schedules. See <http://www.rtd-denver.com/> for details.



A basic proximity analysis indicates that nearly 80 percent of all components in the Golden park system are within one-half mile of a bus or light rail stop. Future coordination with RTD could include discussions on providing service to Golden Heights Park, Heritage Dells Park, Rooney Road Regional Sports Complex, Tony Grampsas Memorial Sports Complex, and private parks such as Eagle Ridge Park.

### **Objective 4.3: Repair, re-purpose, or upgrade existing components**

Components whose functionality ranks below expectations were identified and scored with a “one.” A list of these can easily be extracted from the inventory dataset. By raising the score of a component, the Level of Service is raised, but deciding how to do this may seem daunting. A strategy for addressing the repair/refurbishment/replacement or re-purposing of low-functioning components should begin with the following steps. This should be done for each individual component in the inventory that is not functioning up to expectations. (*Note: these low scoring components are based on the initial functional assessment prior to the assignment of the energy expenditure value. Further discussion on addressing low energy expenditure components can be found in Objective 4.3.b.)*)

- A. Determine why the component is functioning below expectations.
  - Was it poorly conceived in the first place?
  - Is it something that was not needed to begin with?
  - Is it the wrong size, type, or configuration?
  - Is it poorly placed, or located in a way that conflicts with other uses or detracts from its use?
  - Have the needs changed in a way that the component is now outdated, obsolete, or no longer needed?
  - Has it been damaged?
  - Alternatively, has the maintenance of the component simply been deferred or neglected to the point where it no longer functions as intended?

- Another possibility is that the component was scored low because it is not available to the public in a way that meets expectations. For example, a facility might be rated low because it is leased to a private group and access by the general public is limited. This may be a perfectly acceptable situation and appropriately scored - the service is at a lower value because of the limitations on access.
- Still another example would be when a component is old, outdated, or otherwise dysfunctional, but has historic or sentimental value. An example would be an old structure in a park such as a stone barbecue grill, or other artifact that cannot be restored to its original purpose, but which has historic value.

B. Depending on the answers from the first step, a strategy can be selected for addressing the low-functioning component:

- If the need for that type of component in its current location still exists, then the component should be repaired or replaced to match its original condition as much as possible.
  - Examples of this would be playgrounds with old, damaged, or outdated equipment or courts with poor surfacing or missing nets. The basketball court at Golden Heights Park, which is in need of surfacing repair and new striping, may fall into this category.
- If the need for that type of component has changed to the point where the original one is no longer suitable, then it should be replaced with a new one that fits the current needs.
  - For example, if a picnic shelter is too small for the amount of use currently demanded, it may be replaced with a new, larger one.
- If a component is poorly located, or was poorly designed to start with, consideration should be given to relocating, redesigning, or otherwise modifying it.
  - The ballfield complex at Tony Grampsas Memorial Sports Complex is a good example. While the fields themselves are functional, the overall functionality as a complex is limited by the design and layout of the fields.
- If a component is no longer needed because of changing demands, then it should be removed unless it can be maintained in good condition without excessive expense, or unless it has historic or sentimental value. Some inline hockey rinks may fall into this category. If a rink has been allowed to deteriorate because the community has no desire for inline hockey, then maybe it should be repurposed for some other use.
  - The removal of the batting cage at Ulysess Park, in favor of a new skate park, may fit into this category.

Components whose energy expenditure ranks low were identified and also scored with a “one.” A list of these can easily be extracted from the inventory dataset. The most common low energy expenditure components in the Golden system is 36 camp sites at Clear Creek RV Park followed by 11 small picnic shelters which are found at a number of parks throughout the system; quantities are shown below. A strategy for addressing the possible replacement or re-purposing of low energy expenditure components should begin with the following steps and could be done for each component in the inventory.

Aquatics, Complex	1
Camping, Defined	36
Concessions	1
Diamond Field, Complex	1
Dog Park	2

Educational Experience	4
Garden, Display	1
Horseshoe Court	4
Inline Hockey	1
Natural Area	7
Other	5
Passive Node	4
Playground, Destination	1
Public Art	4
Rectangular Field, Complex	1
Rectangular Field, Small	3
Shelter, Small	11
Water Access, Developed	2
Water Access, General	1
Water, Open	1

Step 1: Determine if a low energy expenditure component is a concern at this specific location.

- Are there other, higher energy expenditure components available at this location?
- Is the low energy expenditure used or popular despite its low energy expenditure value?
- Is it something that is historical or otherwise valued at this location?
- Is there a better or higher energy expenditure value component that could replace this component?
- Is this low energy expenditure component associated with higher energy expenditure components? For example, a sports field complex overall is low energy expenditure while each individual field is actually higher energy expenditure generally.

Step 2: Depending on the answers from the first step, a strategy can be selected for addressing the low-energy expenditure component:

- It may be ok to have low energy expenditure components if higher energy expenditure components are available on site.
- If the need for that type of component in its current location still exists, then the component should be maintained to its original condition as much as possible.
- If the need for that type of component has changed to the point where the original one is no longer suitable, then it should be replaced with a new one that fits the current needs and offers higher activity potential.
  - For example, if a picnic shelter is too small for the amount of use currently demanded, it may be replaced with a new, larger one.
- Replace with a more active component
- Consider multi-use spaces in re-design that allow for many different or adaptable uses and a variety of energy expenditures.

Step 3: It is possible that through ongoing public input, and as needs and trends evolve, new needs will be identified for existing parks. If there is no room in an existing park for new needs, the decision may be made to remove or re-purpose an existing component, even if it is quite functional.

- Adapting parks to increasing physical activity in parks may require new public input and research. Traditional components may be expected in parks but provide little to no physical activity.
- Low activity level parks may also benefit from new or additional programming to activate historically inactive spaces. For example, a passive node may have a low energy expenditure value but could be a great location to organize a park fitness class.

#### **Objective 4.4: Add components to existing parks, open space, and trails**

In parks or lands with abundant space for new components, consider immediate area users and higher energy expenditure components. These components are intended to increase activity levels within a park or walkable service area. Consider potential gap areas identified during the GRASP® level of service analysis as priority areas to increase potential activity opportunities.

One way to enhance existing assets is through the addition of **booster components**. A “booster component” is intended to “boost” or increase the level of service at specific existing park sites or recreation facilities through the addition of a new component. These are most effective in low-service or identified gap areas in which park sites already exist and have space for additional components. Based on the isolation and prioritization analysis in **Maps D-1** and **D-2**, there are several areas where booster components may be reasonable solutions to increasing activity opportunities. Low service areas, shown in yellow, indicate some current service is provided to the area. It may be a matter of adding additional components to increase the overall level of service of an area. The additional participation analysis for each identified area may also help indicate preferred activities of adjacent residents.

The statistically-valid survey asked respondents to rank facilities by importance based on those they felt the City needed to add or improve. These **high demand components** should be considered when new components are added to the system.

The highest priority for added, expanded, or improved outdoor activities listed by survey respondents are:

1. Continue to expand recreation opportunities through the acquisition, development, and preservation of parks, open spaces, natural areas, and trails
2. Continue to address trail connectivity and trail access
3. Improve park amenities and components
4. Consider additional amenities and updates for Community Center
5. Consider aquatic facility/splash pads to expand water based recreational opportunities

Many of these needs may be addressed within the existing system by upgrading facilities, retrofitting lesser used assets or lower activity components, and by establishing or strengthening partnerships:

- Connectivity between trails and pathways was indicated as an important consideration. Although the City currently has an extensive trail and bike route network, there are ways to enhance those existing assets and best practices for future development. Further discussion and solutions may be found in the following section on recreational connectivity.
- One way to address the desire for more aquatics amenities is to pilot a spray ground or two outside of the aquatic complex. This may curb the need for an expensive aquatic facility expansion.

- Implementation of the Clear Creek Corridor Master Plan would further enhance Lions Park as Golden’s premier or “signature park” and also reduce conflict and traffic issues in the already congested area near downtown. Further consideration of additional event spaces outside of the Lions Park area for community event programming in parks such as Tony Grampsas Memorial Sports Complex may require additional site-specific master plans as well (See Objective 2.2 for initial discussion).

Trends to consider while addressing low-functioning facilities, or determining how to make existing parks serve the needs of residents, include things like:

- Consider current trends in personal physical activity such as personal activity monitors (such as Fitbit) and augmented reality applications such as Pokémon Go.
  - Flexibility and adaptable ways of capitalizing on the ever-changing markets is likely to become more and more important in this realm of personal fitness.
- Dog parks continue to grow in popularity. This may have something to do with an aging demographic in America, with more “empty-nesters” transferring the attention they once gave to their children, who are now grown, to their pets. It is also an important form of socializing for people who may have once socialized with other parents in their child’s soccer league, and now that the kids are grown, they are enjoying the company of other dog owners at the dog park. In addition, for singles, a dog park is a good place to meet people. While dog parks score low in energy expenditure, adding components within a dog park such as a measured loop walk or trail may help increase human activity within this low energy expenditure component.
  - Currently, the City has two developed dog parks at Tony Grampsas Memorial Sports Complex and at Ulysses Park. These could feature programmatic components as well, such as a social or exhibit.
- Skateboarding and other wheel sports continue to grow in popularity. Making neighborhood parks skateable and distributing skating features throughout the community provides greater access to this activity for younger people who cannot drive to a larger centralized skate park.
  - A new skate park at Ulysses Park will join the skate park at Golden Heights Park as Golden’s formal wheeled sport opportunities.
- A desire for locally-grown food and concerns about health, sustainability, and other issues is leading to the development of community food gardens in parks and other public spaces. While community gardens also rank low in energy expenditure, ensuring walkable access to nearby neighborhood may increase the likelihood that gardeners walk or bike to their plot rather than use the automobile.
  - Golden has centrally located community gardens at the Golden Community Garden and a small garden at Clear Creek History Park.
- Providing appropriate spaces for different types of community events is important. Much discussion was heard around the desire for, and impact of, community events in Golden. While Lyons Park and the Clear Creek Corridor are popular with event holders, this places a great deal of stress on the park and residents in the area. Adding or shifting some events to other locations within the park system may alleviate some of these issues. Infrastructure or other improvements may be needed before events can be moved to new areas (See Objective 2.2 for initial discussion).

- Spray grounds are growing rapidly in popularity, even in cooler climates. A wide and growing selection of products for these is raising the bar on expectations and offering new possibilities for creative facilities. Aquatic opportunities also ranked high in public input.
  - Spray grounds may be a lower cost alternative that provides aquatic access to residents.
- New types of playgrounds are emerging, including discovery play, nature play, adventure play, and even inter-generational play. Some of these rely upon movable parts, supervised play areas, and other variations that are different from the standard fixed “post and platform” playgrounds found in the typical park across America. These types of nature based opportunities help connect children and families to the outdoors.
  - While playgrounds help increase physical activity and energy expenditure in children, the added health benefits of also connecting to nature through these types of play areas is also recognized.
  - Adding in multi-generational play, where caregivers not only monitor children’s play but actually participate in the activity may additionally increase the overall energy expenditure value of an individual playground
- Integrating nature into parks by creating natural areas is a trend for a number of reasons. These include a desire to make parks more sustainable and introduce people of all ages to the natural environment.
  - An educational aspect is an important part of these areas. The recent survey indicated a need for interpretative signage and educational experiences, especially along trails. Educational experiences may go beyond the nature or history of a place and could concentrate on the health benefits of physical activity, and could include heartrate stations, relative distance stations, etc.

### **Objective 4.5: Standardization of park amenities and components**

In scoring inventory locations, additional consideration was also given to basic site amenities, called **modifiers**. These are things that support users during their visit such as design and ambience, drinking fountains, seating, BBQ grills, security lighting, bike racks, restrooms, shade, access, and parking, among others. Amenities like these typically allow a user to stay at a park longer, make their stay more comfortable, and in the end, enjoy the park or facility more. Therefore, these comfort and convenience modifiers help inform overall GRASP® scoring. Adding new modifiers or upgrading and enhancing modifiers is one way to increase existing overall level of service. While park amenities in Golden are well maintained, it became evident throughout site visits that many of the common amenities differ from park to park and sometimes within the same park. For example, there are at least two different types of picnic tables used within Lions Park.



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There is also inconsistent use of manufactured waste receptacles and 50 gallon drums even within the same shelter (White Ash Mine Park) or at the same restroom (Norman D Memorial Park).



Consistent use of these types of amenities helps to develop a “brand” and fulfills expectation of users that frequent a park or number of different parks within a system. During site visits, modifiers that do not meet expectations or are in need of some attention such as repair, refurbishment, or replacement were scored low. Finally, while the Department or the City as a whole may develop a standard for metal park benches, for example, it may be acceptable to vary from that standard to create a unique experience for a specific park or setting.

### **Goal 5: Address Level of Service and Identified Gap Areas through Additional Land Acquisition and Preservation**

#### **Objective 5.1 Preserve lands for parks, open space, trails, and parkways**

One significant advantage to a component-based level of service analysis is the ability to impact or increase level of service through the improvement or addition of components at existing park lands as discussed above. It is recognized that due to space limitations or simple lack of proximity to current residents, the acquisition and development of new parks and facilities may be required to achieve adequate level of service for all residents. In addition, there may also be unique opportunities to acquire lands beyond those covered in this analysis and discussion.

Based on the most recent survey results as part of this Master Plan Update, Golden should continue to monitor and seek to preserve additional park, open space, and trail opportunities. Priority should be given to low or no service areas identified as part of the earlier analysis but other lands should also be considered. Development of these lands as parks, open spaces, and trail connections should follow established City of Golden protocols regarding public engagement and site planning.

## B. Action Plan, Financial Impact, and Prioritization

The following Goals, Objectives, and Actions support the recommendations. This Action Plan is intended to help Golden celebrate current award winning status and to continually re-create that opportunity as the department moves into the future. Most costs will be dependent on the extent of the enhancements and improvements determined at the time, and recommendations will need to be prioritized annually considering other projects and financial resources. Timeframe to complete is designated as:

- Short-Term (up to 3 years)
- Mid-Term (4-6 years)
- Long-Term (7-10 years)

### Goal 1: Enhance Organizational and Operational Efficiencies

Objective 1.1: Increase marketing efforts			
Actions	Capital Cost Impact	Operational Budget Impact	Timeframe to Complete
<b>1.1.a</b> Utilize trending and social media to promote Department and foster community engagement.	No	No	Short-Term
<b>1.1.b</b> Continually evaluate website for interactive opportunities.	No	No	Short-Term
<b>1.1.c</b> Develop relationships with outside agencies to tell GPR story or feature opportunities.	No	No	Short-Term
<b>1.1.d</b> Develop partnerships to create niche and market relative to public health and prevention.	No	Yes	Short-Term
Objective 1.2: Appropriately staff to maintain Level of Service			
Actions	Capital Cost Impact	Operational Budget Impact	Timeframe to Complete
<b>1.2.a</b> Utilize the NRPA Field Report or other benchmarking to evaluate staffing levels.	No	Yes, minor	Mid-Term
<b>1.2.b</b> Work with Human Resources Department to evaluate classifications and pay scale of non-full time staff.	No	Maybe	Short-Term
Objective 1.3: Maintain award winning status			
Actions	Capital Cost Impact	Operational Budget Impact	Timeframe to Complete
<b>1.3.a</b> Seek re-accreditation utilizing 2008 Goal Analysis and 2016 Action Plan.	No	No	Short-Term

<b>1.3.b</b> Review requirements for Gold medal status and incorporate standards to reflect level of service.	No	No	Mid-Term
<b>Objective 1.4: Focus on Planning for Museums</b>			
<b>Actions</b>	<b>Capital Cost Impact</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>1.4.a</b> Develop a Strategic Plan for Museums and Cultural properties.	Yes, plan development only	No	Short-Term
<b>1.4.b</b> Include division in future departmental master planning efforts.	No	No	Long-Term

**Goal 2: Enhance Programming Opportunities**

<b>Objective 2.1: Add programming for gap areas</b>			
<b>Actions</b>	<b>Capital Cost Impact</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>2.1.a</b> Note information and referral for environmental and adventure opportunities.	No	No	Short-Term
<b>2.1.b</b> Develop opportunities for unstructured nature play.	Yes	No	Long-Term
<b>Objective 2.2: Develop additional special event opportunities</b>			
<b>Actions</b>	<b>Capital Cost Impact</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>2.2.a</b> Emphasize local events and partnerships.	No	Yes	Mid-Term
<b>2.2.b</b> Develop alternative sites for special events and criteria for their use.	Yes	Yes	Long-Term
<b>Objective 2.3: Seek opportunities for individual active recreation</b>			
<b>Actions</b>	<b>Capital Cost Impact</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>2.3.a</b> Pursue partnerships to develop amenities for unique needs such as pickle ball and longboarding.	Yes	No	Long-Term
<b>2.3.b</b> Pursue opportunities to increase access for unique regional sports (paragliding, white water, etc.).	Yes	Yes	Long-Term

**Goal 3: Enhance Financial Sustainability**

<b>Objective 3.1: Pursue additional revenue</b>			
<b>Actions</b>	<b>Capital Cost Impact</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>3.1.a</b> Explore opportunity for dedicated revenue source, such as lodging tax.	Maybe	Yes	Short-Term
<b>Objective 3.2: Adopt policies reflective of revenue enhancement opportunities</b>			
<b>Actions</b>	<b>Capital Cost Impact</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>3.2.a</b> Review sample and adopt formal Sponsorship Policy.	Maybe	Yes	Short-Term
<b>3.2.b</b> Review sample and adopt formal Partnership Policy.	No	Yes	Short-Term
<b>Objective 3.3: Formalize cost recovery methods</b>			
<b>Actions</b>	<b>Capital Cost Estimate</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>3.3.a</b> Evaluate and assess cost recovery efforts.	No	Yes	Short-Term

**Goal 4: Address Level of Service and Identified Gap Areas by Maintaining or Improving Existing Facilities and Amenities**

<b>Objective 4.1: Assess and monitor park inventory on a regular basis</b>			
<b>Actions</b>	<b>Capital Cost Impact</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>4.1.a</b> Annually assess and update asset inventory.	No	Yes	Ongoing
<b>4.1.b</b> Continue to implement ADA transition plan and monitor compliance.	Yes	Yes	Ongoing
<b>Objective 4.2: Increase connectivity to promote resident use and increase physical activity</b>			
<b>Actions</b>	<b>Capital Cost Impact</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>4.2.a</b> Coordinate trails with other planning efforts	No	Yes	Ongoing
<b>4.2.b</b> Develop a Trails Master Plan with other departments that includes an Integrated Transportation Plan.	No	Yes	Short-Term

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<b>4.2.c</b> Explore ways to connect residents to parks and trails through continued development of park identification and wayfinding signage, apps, maps, and policies.	Yes	Yes	Short-Term
<b>Objective 4.3: Repair, re-purpose, or upgrade existing components</b>			
<b>Actions</b>	<b>Capital Cost Impact</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>4.3.a</b> Address Low-Scoring Components.	Yes	No	Ongoing
<b>4.3.b</b> Address Low Energy Expenditure Components.	Yes	No	Ongoing
<b>Objective 4.4: Add components to existing parks, open space, and trails</b>			
<b>Actions</b>	<b>Capital Cost Impact</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>4.4.a</b> Consider booster components to increase level of service or activity levels on existing lands.	Yes	No	Short-Term to Mid-Term
<b>4.4.b</b> Consider high demand components to increase level of service or activity levels in existing lands.	Yes	No	Short-Term to Mid-Term
<b>4.4.c</b> Consider booster and/or high demand components infrastructure needs to support programming needs.	Yes	No	Short-Term to Mid-Term
<b>4.4.d</b> Consider trends in parks and recreation when adding components to increase level of service or activity levels.	Yes	No	Mid-Term to Long-Term
<b>Objective 4.5: Standardization of park amenities and components</b>			
<b>Actions</b>	<b>Capital Cost Impact</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>4.5.a</b> Develop and/or adhere to existing City standards in park comfort and convenience amenities.	Yes	Yes	Ongoing

**Goal 5: Address Level of Service and Identified Gap Areas through Additional Land Acquisition and Preservation**

<b>Objective 5.1 Preserve lands for parks, open space, trails and parkways</b>			
<b>Actions</b>	<b>Capital Cost Impact</b>	<b>Operational Budget Impact</b>	<b>Timeframe to Complete</b>
<b>5.1.a</b> Identify park, open space and trail opportunities through land acquisition and easements	Yes	Yes	Ongoing

## Appendix A: Public Input/Focus Group Detail

Focus Groups were conducted on July 14, 2016, with a morning, afternoon and evening session. Various stakeholders were invited to participate. These groups represented:

- Local businesses
- Golden residents
- Users with children
- Government agencies (Jeffco Open Space, Jeffco School District, etc.)
- City of Golden departments
- Foundations
- Non-profit organizations
- Sports associations
- Special Interest and Advocacy groups

In total, 42 individuals gave roughly two hours each to listen to survey outcomes and provide feedback, including a small group exercise to prioritize amenities to be added, expanded or improved as well as those that benefit the health and well-being of residents. This equates to 84 hours of public contact.

The input listed below is a summary of major themes of various perceptions identified and asked of the participants. The lists represent those responses from the participants and are not in order of importance. Participants in the focus groups and stakeholder meetings expressed general agreement with this input. (Note: an “\*” denotes that topics were discussed in multiple sessions.)

Strengths and perception of customer service:

- High level of community involvement to gather different viewpoints, promote collaboration, and provide diversity of programs \*
- High quality customer service \*
- Flexible, creative, and forward thinking \*
  - Department grows organically with the community
- High maintenance standards \*
- Strong programs, especially: \*
  - Aquatics
  - Youth/toddler
  - Access for outside users
- Variety of programming and facilities \*
- Beautiful natural amenities and views
- Employees and the people relate to the users
- Responsive to the community
- Highly walkable
- Sustainability and conservation
- Community Center is highly supported

### Weaknesses:

- Congestion created by downtown special events \*
  - These could move into a designated park for special events
- Lack of connectivity amongst trails and/or signage to communicate to users \*
- Not enough bathroom facilities (ex. Clear Creek Whitewater Park) \*
  - Includes access to drinking water
- Water access is limited, includes indoor and outdoor amenities \*
- Website/programming registration could be more interactive \*
  - Community wants to share resources with other users and more information on individual programs
- Registration fills up too fast \*
- History museum does not get equal support \*
- High maintenance standards will cost more in the future
- Limited accessibility for parks (ADA)
- Trash removal or maintenance schedule after events may not be appropriate
- Youth/teens need to be engaged more
- Wildlife control – geese specifically
- Lack of family restrooms
- Have outside users and satellite residential users been considered?
  - How does that impact the walkability of parks?
- Missing opportunities for the Tween (9-14) groups
- There doesn't seem to be criteria to implement decisions (programming/CIP)
- Some amenities are too seasonal (e.g. golf course could be a cross-country course in the winter)
- Department should have a stronger social media presence
- There does not seem to be a plan for pedestrian barriers
  - Lack of collaboration between Public Works and Parks and Rec and the development of bike trails or multi-modal transportation
- Overcrowding at Clear Creek Park
- Department does not seem to accommodate visitors
- Needs to update parking or support systems/infrastructure

General satisfaction quality of current programs offered on '5 is Excellent – 4 is Very Good – 3 is Good – 2 is Fair – 1 is Poor' scale:

- Mostly between 3.5 and 4

Additional programs or activities the Department should offer:

- Middle school programming \*
- Age demographic gaps\*
- Higher investment in higher-volume user groups like biking \*
- Unstructured play opportunities
- Camps beyond the park/climbing wall
- Adventure travel/excursion programming
- Directory of resources provided by NPOs
- Longboarding park

- Evening programs
- Volunteer opportunities
- Cultivation of programming unique to Golden (e.g. Hang-gliding/Para-gliding capitol of the Front Range)
- Festivals, specifically global programming
- Additional yoga/Pilates

Satisfaction with the overall quality of the existing park and recreation facilities provided on “5 is Excellent – 4 is Very Good – 3 is Good – 2 is Fair – 1 is Poor” scale:

- About a 4, maybe higher, but there are a few exceptions within the system

Key partners and stakeholders in the community:

- Non-profit organizations \*
- Community/ service groups \*
- Advocacy groups \*
- Historic Preservation Board \*
- Colorado School of Mines \*
- Jeffco Open Space \*
  - Mouth of the canyon trail connection
- Planning/economic development departments
  - The department should influence recreation to retail transportation
- RTD and public transportation
- Event planners
- Corporate partners
- Denver Parks and Recreation
- City Council, Staff, Board
- School districts
- Visitors
- Civic Foundation
- Coors Brewery
- International Mountain Biking Association
- Clubs and associations (e.g. Paragliding Club)
  - Any club or associations
- Parent Teacher associations
- Home owners associations

Where are the gaps in communication OR what is the best way to communicate with users:

- The Informer is the most commonly used media \*
- Social media presence needs to grow (e.g. Instagram, Facebook, and SnapChat) \*
- Needs to communicate through the schools
  - Department could develop a student fair
- Trust Stewardship programs – work/internship opportunities for youth
  - Could partner to create projects
- Diversify channels/ network communication
- Go to where the people are
  - Boots on the ground/direct communication

- City of Golden newsletter
- Other city publications (e.g. Recycling bill/ mailing)
- Provide a list of partners, organizations, and alternate providers
- Online mapping functions could improve

Consideration of the top priorities to be added, expanded, or improved as identified in the community survey:

- Mostly appropriate \*
  - New or updated community/recreation center or aquatic facilities \*
  - Trails and pathways – needs to ensure safety, never use a roadway
  - Open space/natural areas – needs new open space
- “Improve existing” should be prioritized \*
  - Trails and pathways would be lower down with a focus on connectivity and wayfinding
- Items missing include specialty activities (identified as “others” in the survey) \*
- Should focus on the interface with the downtown and urban core
- Youth seems to be under-represented, athletics amenities should be elevated on the list

Consideration of the top priorities to benefit health and well-being as identified to benefit health in the community survey:

- Focus on partnerships \*
  - School of Mines – geology program
  - Outdoor education opportunities for youth
- Open Space/Trails and Pathways are equally important \*
- Cultural amenities may not belong in health and well-being category
- Indoor amenities should be prioritized

## **Appendix B: SWOT Analysis Report**

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# SWOT ANALYSIS RESULTS

AUGUST 2, 2016



# SWOT ANALYSIS

Internal Influences

**Strengths** →

Current condition  
positioned for preservation or advancement – core competencies

**Weaknesses** →

may provide negative impacts, or are detrimental or harmful

External or Environmental Influences

**Opportunities** →

opportunity for enhancement or development

**Threats** →

challenge provided by unfavorable trend, event, or development

### Major Strength/High Importance

- Fast response time on trails
- Community involvement
- High quality/maintenance standard
- Customer service driven
- Variety in the service profile
- Customer retention
- Skilled/dynamic workforce
- Natural amenities
- Location to Denver
- Walkable community
- Accredited agency (CAPRA)
- Small town, lives large
- Good reputation
- Consistency across services

### Major Weakness/High Importance

- Aging infrastructure
- Missing trail connections
- Over-stretched staff

## Performance Matrix

- Professional development opportunities
- Teamwork with other departments

- Lack of demographic diversity
- User conflicts on trails
- Parks and recreation marketing efforts
- Inter/intra-department communication
- Community entitlement from special interest groups
- Inconsistent funding in professional development

### Minor Strength/Medium Importance

### Minor Weakness/Medium Importance

## STRENGTHS

## WEAKNESSES

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**Opportunity Matrix**

**Highly Attractive/ Low Probability of Success**

- Para-gliding
- Transportation programs for tubers

**Highly Attractive/ High Probability of Success**

- Beer museum
- Larger pool area (lap lanes)
- Pickleball
- Stand up paddle boarding/ other water sports
- Dog-centric opportunities
- Peak to Plains trail
- Disc golf
- Partnerships outside of Golden
- Clear Creek master plan

- Outdoor shooting range
- Partnership with Mountaineering Center
- Partnerships with other adventure programming
- Continued awareness of city limits (annexation of URA)

- Seasonal and variable hour staff training
- Tube/ water recreation rentals
- Rock climbing
- Grampas Sports redesign

**Low Attractiveness/ Low Probability of Success**

**Low Attractiveness/ High Probability of Success**

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LOW SUCCESS PROBABILITY HIGH

**Highly Serious/ Low Probability of Occurrence**

No investment into aging infrastructure  
Available tax money

**Highly Serious/ High Probability of Occurrence**

Alternative/ outside service providers  
Tubing if it is unmanaged  
General overuse of the system  
EAB  
Homeless/ transient population  
No parking  
Lawsuits  
Attracting and retaining quality staff  
Golden losing its identity  
Enforceable rules and regulations

Private competition  
E 470 Beltway expansion

**Lower Seriousness/ Low Probability of Occurrence**

Groups using parks for profit/ unauthorized special interest groups  
System is built out – where do you go next?  
Playing under the influence  
Vandalism

**Lower Seriousness/ High Probability of Occurrence**

**Threat Matrix**

LOW

PROBABILITY OF OCCURRENCE

HIGH

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# Appendix C: Alternative Funding Opportunities

## Alternative Funding Opportunities and Financial Assessment

Staff reviewed a variety of funding options, categorizing them into tiers based on the likelihood to consider such a source. Those efforts follow:

### Tier 1

These funding sources are currently being used or could be easily used by Golden to create existing budgets for capital and operational expenditures.

#### General Fund

Parks and recreation services are typically funded by an agency's General Fund, which can be comprised of property tax, sales tax, and other compulsory charges levied by a government for the purpose of financing services performed for the common benefit of a community. These funds may also come from resources such as inter-government agreements, reimbursements, and interest and may include such revenue sources as franchise taxes, licenses and permits, fees, transfers in, reserves, interest income, and miscellaneous other incomes. Common sources of funding for the General Fund are:

#### Sales Tax

This revenue source often funds municipal park and recreation agencies either partially or fully. Sales tax revenue is very popular in high traffic tourism agencies and with cities. Special Districts cannot exact sales taxes, which often calls into question the issue of charging resident and non-resident fee differentials.

#### Property Tax

Property tax revenue often funds park and recreation special districts and may be used as a dedicated source for capital development. When used for operation funding, it often makes the argument for charging resident and non-resident fee differentials.

Park land dedication requirements typically state that all residential subdivisions of land, with some exemptions, are to provide for parks by either dedicating land, paying an in-lieu fee (the amounts may be adjusted annually), or a combination of the two.

#### Annual and Season Pass Sales

Agencies sell annual passes (also sometimes referred to as memberships) for specific types of amenities to offset operational costs. These fees can apply to recreational and fitness centers, regional park passes, tennis centers, splash parks, etc. There is movement away from the "membership" concept (because it implies exclusivity and every resident and business is a "member" qualifying for city services) in favor of bulk discount buying of daily admission fees marketed as monthly, seasonal, three-month, six-month, and/or annual passes.

#### Program Registration Fees

This revenue source comes from individuals or groups paying in advance for participation in a scheduled event or program usually involving an instructor, leader, or supervisor.

### **Program Independent Contractor Fees**

An agency may receive a percentage of gross contractor fees for contractor programs held in its facilities. The percentages depend on space, volume, and the amount of marketing the agency does for the contractor.

### **Reservations**

This revenue source comes from the right to reserve specific public property for a set amount of time. The reservation rates are usually set and apply to group picnic shelters, meeting rooms for weddings, reunions and outings or other type of facilities for a special activity.

### **Ticket Sales/Admissions**

This revenue source is for accessing facilities for self-directed or spectator activities such as recreation centers, splash parks, ballparks, and entertainment activities. Fees may also be assessed for tours, entrance or gate admission, and other activities, which may or may not be self-directed. These user fees help offset operational costs or apply to new projects.

### **Privatization – Outsourcing Management**

This is typically used for food and beverage management, golf course operations, ballfield, or sports complex operations by negotiated or bid contract.

### **Camping Fees & Hook-Up Fees**

These are permits for RV, tent, and primitive camping. Fees may range per site for primitive spaces, full hook-ups, and premium view or location sites. Additional fees may be added for water, electricity, sewer, and cable T.V. access, dump stations, showers, etc.

### **Capital Improvement Fees**

These fees are on top of the set user rate for accessing facilities such as sport and tournament venues and are used to support capital improvements that benefit the user of the facility.

### **Equipment Rental**

This revenue source is generated from the rental of agency equipment such as tables and chairs, tents, stages, bicycles, roller blades, boogie boards, etc. that are used for recreation purposes.

### **Flexible Fee Strategies**

This pricing strategy would allow an agency to maximize revenues during peak times and premium sites/areas with higher fees and fill in excess capacity during low use times with lower fees to maximize play.

### **Solid Waste Fee**

Cities are able to add cost for landfills and drop stations that are designated to provide space and facilities for both. Once these fees cover the cost of buildings and landfills, they can re-dedicate a percentage to other City services and several cities have opted to finance park improvements from solid waste fees.

### **Lottery Funds**

A percentage of the lottery funds gained by the state is made available for individual cities and county park systems to retain support efforts to develop programs and services targeted for youth to assist in skill development programs, after-school programs, summer camps, and other family type programs.

### **Cell Towers and Wi-Fi**

Payment for cell towers attached to existing or new light poles in game field complexes. Another type of revenue for a facility or complex can come from providing sites for supporting Wi-Fi technology. It may be possible to charge a connection fee, or to attract a Sponsorship for providing this service.

### **Hospitality Centers**

These types of recreation facilities are developed by cities and counties for use by the public for wedding, reunions, and special gatherings. The recreation facilities are not subsidized but operate at a profit. Some facilities are surprisingly managed by outside caterers or as a contract service.

### **Merchandising Sales or Services**

This revenue source comes from the public or private sector on resale items from gift shops, pro-shops, restaurants, concessions, and coffee shops for either all of the sales or a defined percentage of the gross sales.

### **Private Concessionaires**

Contracts with private sector concessionaires provide resources to operate desirable recreational activities. These services are typically financed, constructed, and operated by the private business or a non-profit organization with additional compensation paid to the entity.

### **Special Use Permits**

Special permits allow individuals to use specific park property for financial gain. The entity receives either a set amount of money or a percentage of the gross service provided.

### **Surplus Sale of Equipment by Auction**

Agencies often have annual surplus auctions to get rid of old and used equipment, generating additional income on a yearly basis.

### **Rentals of Houses and Buildings by Private Citizens**

Many agencies will rent out facilities such as homes to individual citizens for revenue purposes.

### **Enterprise Funds**

Some agencies establish business units that are self-sustaining through fees and charges. Debt service and all indirect costs should be allocated or attributed to enterprise funds. Any excess revenue generated is maintained by the fund for future needs and cannot be used by another fund or department. Examples include premier sports tournament complexes.

### **Partnership Opportunities**

Partnerships are joint development funding sources or operational funding sources between two separate agencies, such as two government entities, a non-profit and a government entity, or a private business and a government entity. Two partners jointly develop park and recreation facilities and share risk, operational costs, responsibilities, and asset management based on the strengths and weaknesses of each partner.

Creating synergy based on expanded program offerings and collaborative efforts can be beneficial to all providers as interest grows and people gravitate to the type of facility and programs that best suit their recreational needs and schedules. Potential strategic alliance partnerships where missions run parallel and mutually beneficial relationships can be fostered and may include the following:

- YMCA
- School District
- Medical Center or Hospital
- Boys and Girls Club
- Kiwanis, Breakfast Optimists, VFWs, Elks, Rotary, and other service and civic organizations
- Chamber of Commerce
- Convention and Visitor's Bureau
- Homeowner or Neighborhood Associations
- Youth Sports Associations
- Other counties, neighboring cities, and communities
- Private alternative providers
- Churches

### **Advertising Sales**

Advertising sales are a viable opportunity for revenue through the sale of tasteful and appropriate advertising on agency-related items such as program guides, scoreboards, dasher boards, and other visible products or services. Current sign codes should be reviewed for conflicts or appropriate revisions.

### **Positive Cash Flow**

Depending on how aggressively an agency incorporates marketing and management strategies, there may be a positive fund balance at the end of each year. The ending positive balance could be used, for example, to establish a maintenance endowment for recreation facilities, to set aside funds for capital replacement and/or repair, or to generate a fund balance for contingency or new programming opportunities.

### **Surplus Sale of Equipment by Auction**

Agencies have surplus auctions to get rid of old and used equipment that generates some income on a yearly basis.

### **Grants**

Grants often supplement or match funds that have already been received. For example, grants can be used for programs, planning, design, seed money, and construction.

### ***General Purpose or Operating Grants***

When a grant maker gives an agency an operating grant, it can be used to support the general expenses of operations. An operating grant means the fund provider supports the agency's overall mission and trusts that the money will be put to good use.

## ***Program or Support Grants***

A program or support grant is given to support a specific or connected set of activities that typically have a beginning and an end, specific objectives, and predetermined costs. Listed below are some of the most common types of program or support grants:

### ***Planning Grants***

When planning a major new program, an agency may need to spend a good deal of time and money conducting research. A planning grant supports this initial project development work, which may include investigating the needs of constituents, consulting with experts in the field, or conducting research and planning activities.

### ***Facilities and Equipment Grants***

These grants help agencies buy long-lasting physical assets, such as a building. The applicant organization must make the case that the new acquisition will help better serve its clients. Fund providers considering these requests will not only be interested in the applicant's current activities and financial health, but they will also inquire as to the financial and program plans for the next several years. Fund providers do not want allocate resources to an organization or program only to see it shut down in a few years because of poor management.

### ***Matching Grants***

Many grant-makers will provide funding only on the condition that the agency will raise an amount equal to the size of the grant from other sources. This type of grant is another means by which foundations can determine the viability of an organization or program.

### ***Foundation/Gifts***

These dollars are received from tax-exempt, non-profit organization. The funds are private donations in promotion of specific causes, activities, or issues. They offer a variety of means to fund capital projects, including capital campaigns, gifts catalogs, fundraisers, endowments, sales of items, etc.

## **Tier 2**

These funding sources are potential funding opportunities the Golden would consider for additional funding of capital and operational expenditures.

### **Shared purchasing**

Kent County, Mich. is using a 'reverse auction' process with its vendors and saving money in the process, both for the county and its local government partners in a shared services agreement. Using this process, the county saved more than \$1 million on the cost of various purchases in 2010 — from toner cartridges to reams of paper. The county sets the top price that it's willing to pay based on what was paid the last time. Vendors then vie to provide the product or service at a lower cost. The county expanded the auctions in 2011 and 2012 to include about 20 other local governments.

### **Product Sales**

This is where an agency sells specific products for purchases or consumption by the public. This would include food, clothing, activity related items or supplies, pro-shop, plants, etc.

### **Intermodal Surface Transportation Efficiency Act**

This funding program, commonly called ISTEA (pronounced Ice-Tea) Grants, was authorized by the Federal Government in 1991. It presented an overall intermodal approach to highway and transit funding with collaborative planning requirements. The law provided for significant enhancement revenues available for transportation related projects, including bicycle and pedestrian trails, rail depot rehabilitation, landscaping, and beautification projects. Funds are distributed through the state.

The current version of the law, Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) was enacted in 2012. Under MAP-21, funding for bicycle and pedestrian transportation is reduced and consolidated into a broader program called "Transportation Alternatives." A new "Find It, Fund It" chart (<http://bit.ly/157kRUt>) indicates potential eligibility for pedestrian and bicycle projects under federal highway and transit programs. In each case there are specific requirements that must be met within eligibility criteria and eligibility will be determined on a case-by-case basis.

### **Seed Money or Start-up Grants**

These grants help a new organization or program in its first few years. The idea is to give the new effort a strong push forward, so it can devote its energy early on to setting up programs without worrying constantly about raising money. Such grants are often for more than one year, and frequently decrease in amount each year.

### **Management or Technical Assistance Grants**

Unlike most project grants, a technical assistance grant does not directly support the mission-related activities of the agency. Instead, they support the agency's management or administration and its associated fundraising, marketing, and financial management needs.

### **Private Grant and Philanthropic Agencies**

Many resources are available which provide information on private grant and philanthropic agency opportunities. A thorough investigation and research on available grants is necessary to ensure mutually compatible interests and to confirm the current status of available funding. Examples of publicly accessible resources are summarized below.

- Information on current and archived Federal Register Grant Announcements can be accessed from The Grantsmanship Center (TGCI) on the Internet at: <http://www.tgci.com>.
- For information on government product news and procurement visit GovPro at [www.govpro.com](http://www.govpro.com).
- Another resource is the Foundation Center's RFP Bulletin Grants Page on Health at [www.fdncenter.org](http://www.fdncenter.org).
- Research [www.eCivis.com](http://www.eCivis.com) for a contract provider of a web-based Grants Locator system for government and foundation grants specifically designed for local government.

### **Community Resources**

The following subsections summarize research findings on potential funding sources that could enhance capital expenditures for capital repair, renovation, and new construction as well as agency operating budgets. These findings do not recommend any particular funding strategy over another. Economic conditions may vary with time and an agency should explore the best means of achieving its goals with regard to agency operations, programs, and facilities on an ongoing basis.

## **Philanthropic Support**

Philanthropy can be defined as the concept of voluntary giving by an individual or group to promote the common good and to improve the quality of life. Philanthropy generally takes the form of donor programs, capital campaigns, and volunteers/in-kind services.

The time commitment to initiate a philanthropic capital campaign can be significant. If this option is pursued by agency decision-makers, the agency may decide to outsource most of this task to a non-profit or private agency experienced in managing community-based capital fundraising campaigns.

## **Gift Catalogs**

Gift catalogs provide organizations the opportunity to let the community know of their needs on a yearly basis. The community purchases items from the gift catalog and donates them to the agency.

## **Gifts in Perpetuity**

### ***Maintenance Endowments***

Maintenance Endowments are set up for organizations and individuals to invest in ongoing maintenance improvements and infrastructure needs. Endowments retain money from user fees, individual gifts, impact fees, development rights, partnerships, conservation easements, and for wetland mitigations.

### ***Irrevocable Remainder Trusts***

These trusts are set up with individuals who typically have more than a million dollars in wealth. They will leave a portion of their wealth to an agency in a trust fund that allows the fund to grow over a period of time and then makes a portion of the interest available for agency use to support specific park and recreation facilities or programs that are designated by the trustee.

### ***Life Estates***

This revenue source is available when someone wants to leave their property in exchange for their continued residence on the property until their death. The agency can usually use a portion of the property for park and recreational purposes, and then use all of it after the person's death. This revenue source is very popular for individuals who have a lot of wealth and their estate will be highly taxed at their death. Their benefactors will have to sell their property because of probate costs. Life Estates allow individuals to receive a good yearly tax deduction on their property while leaving property for the community. Agencies benefit because they do not have to pay for the land.

## **Volunteer Programs**

### ***Volunteers/In-Kind Services***

This is an indirect revenue source in that persons donate time to assist an agency in providing a product or service on an hourly basis. This reduces the agency's cost in providing the service, plus it builds advocacy for the system. To manage a volunteer program, an agency typically dedicates a staff member to oversee the program for the entire agency. This staff member could then work closely with Human Resources as volunteers are another source of staffing a program, facility, or event.

### ***Adopt-a-Park/Adopt-a-Trail***

Programs such as adopt-a-park may be created with and supported by the residents, businesses, and/or organizations located in the park's vicinity. These programs allow volunteers to actively assist in improving and maintaining parks, related facilities, and the community in which they live.

## ***Neighborhood Park Watch***

As a way to reduce costs associated with vandalism and other crimes against property, an agency may develop a neighborhood park watch program. This program would develop a sense of community ownership of the agency's facilities.

## **Tier 3**

These funding sources are potential funding opportunities Golden could consider for additional funding of capital and operational expenditures. These funding sources may not be currently available in the State of Colorado or an intergovernmental agreement may be necessary for implementation. These funding sources may meet with some resistance and be more difficult to implement.

## **Development Impact Fees and Land Dedication**

Development impact fees are one-time charges imposed on development projects at the time of permit issue to recover capital costs for public facilities, including parks, needed to serve new developments and the additional residents, employees, and visitors they bring to the community. State laws, with a few minor exceptions, prohibit the use of impact fees for ongoing maintenance or operations costs.

## **Bond Referendum**

Bond Referenda are used to fund capital needs, renovations, and new facilities to meet the needs and demands of residents. A bond is a written promise to pay a specified sum of money at a specified future date, at a specified interest rate. These bonds are traditionally general obligation bonds, revenue bonds, or special assessment bonds initiated through agency approval and citizen vote.

## **General Obligation Bonds**

Bond used for indebtedness issued with the approval of the electorate for capital improvements and general public improvements.

## **Revenue Bonds**

Bonds used for capital projects that will generate revenue for debt service where fees can be set aside to support repayment of the bond. These are typically issued for water, sewer or drainage charges, and other enterprise type activities.

## **Special Assessment Bonds**

These bonds are payable from the proceeds of special assessments such as local improvement districts.

## **Annual Appropriation/Leasehold Financing**

This is a more complex financing structure that requires use of a third party to act as an issuer of the bonds who would construct the facility and retain title until the bonds are retired. An agency enters into a lease agreement with the third party with annual lease payments equal to the debt service requirements. The bonds issued by the third party are considered less secure than public agency general obligation bonds are therefore more costly. Since a separate corporation issues these bonds, they do not impact the agency's debt limitations and do not require a vote. However, they also do not entitle the agency to levy property taxes to service the debt. The annual lease payments must be appropriated from existing revenues.

## **Inter-local Agreements**

Contractual relationships established between two or more local units of government and/or between a local unit of government and a non-profit organization for the joint usage/development of sports fields, regional parks, or other facilities.

## **Dog Park Fees**

These fees are attached to kennel clubs who pay for the rights to have dog park facilities for their own exclusive use. Fees are on the dogs themselves and/or on the people who take care of other people's dogs.

## **Earnings Fee**

This fee has been applied in communities that have high population of workers who do not live in the City but work in the City. The employees pay ½ percent of their total salary earned to the City to cover safety forces, streets, public works, and park and open space services.

## **Lighting Fees**

Some agencies charge additional fees for lighting as it applies to leagues, special use sites, and special facilities that allow play after daylight hours. This fee may include utility demand charges.

## **Parking Fee**

This fee applies to parking at selected destination facilities such as sports complexes, stadiums, and other attractions to help offset capital and operational cost.

## **Processing/Convenience Fees**

This is a surcharge or premium placed on phone-in registration, electronic transfers of funds, automatic payments, or other conveniences.

## **Recreation Service Fee**

The Recreation Service Fee is a dedicated user fee that can be established by a local ordinance or other government procedure for the purpose of constructing and maintaining recreation facilities. The fee can apply to all organized activities that require a reservation of some type, or other purposes as defined by the agency. Examples of such generally accepted activities that are assigned a service fee include adult basketball, volleyball, and softball leagues, youth baseball, soccer, and softball leagues, and special interest classes. The fee, above and beyond the user fee, allows participants to contribute toward the construction and/or maintenance of the facilities being used.

## **Recreation Surcharge Fees on Sports and Entertainment Tickets, Classes, MasterCard, Visa**

This fee is a surcharge on top of the regular sports revenue fee or convenience fee for use of MasterCard and Visa. The fee usually is no more than \$5.00 and usually is \$3.00 on all exchanges. The money earned would be used to help pay off the costs of improvements or for agency operational purposes.

## **Residency Cards**

Non-city residents may purchase "residency" on an annual basis for the privilege of receiving the resident discounts on fees, charges, tours, shows, reservations, and other benefits typically afforded to residents only. The resident cards can range in price, but are often at least equivalent to what a resident pays in taxes annually to support the agency's operations, maintenance, and debt service.

### **Signage Fees**

Individuals and businesses pay for signage fees at key locations with high visibility for short-term events. Signage fees may range in price from \$25-\$100 per sign based on the size of the sign and location.

### **Trail Fee**

These fees are used for access to closed bike trails to support operational costs. Fees for bike trails are typically \$35 to \$50 a year. This arrangement works for bike trails if the conditions of dedicated use, fencing for control, and continuous patrolling/monitoring are in place. Multi-purpose trails that are totally open for public use without these conditions in place make it difficult to charge fees and are nearly impossible to monitor.

### **Transaction Surcharge**

Some agencies have added a surcharge on every transaction, admission, or registration to generate a self-insured liability fund or to generate an improvement or development fund.

### **Entertainment Tax**

This tax is on ticket sales for major entertainment venues, such as concert facilities, golf tournaments, car race, to help pay for traffic control and sports stars that come into the City, based on the earnings they receive from their winnings. This tax also applies to video game machines.

### **Hotel, Motel, and Restaurant Tax**

Tax based on gross receipts from charges and meals services, which may be used to build and operate sports fields, regional parks, golf courses, tennis courts, and other special park and recreation facilities.

### **Concession Management**

Concession management is the retail sale or rental of soft goods, hard goods, or consumable items. An agency can contract for the service and either receives a percentage of the gross sales or the net revenue dollars from the profits after expenses are paid. Net proceeds are generally more difficult to monitor.

### **Booth Lease Space**

Some agencies sell booth space to sidewalk vendors in parks or at special events for a flat rate or based on volume of product sold. The booth space can also be used for sporting events and tournaments.

### **Catering Permits and Services**

This is a license to allow caterers to work in the park system on a permit basis with a set fee or percentage of food sales returning to the agency. Also, many agencies have their own catering service or authorized provider list and receive a percentage of dollars from the sale of food.

### **Community Gardens**

Many agencies will permit out food plots for community gardens as a small source of income.

### **Film Rights**

Many agencies issue permits so that sites such as old ballparks or unique grounds may be used by film commissions. The film commission pays a daily fee for the site plus the loss of revenue the agency would incur during use of the community space.

### **Land Swaps**

An agency may trade property to improve access or protection of resources. This could include an action for non-payment of taxes resulting in an agency property gain or a situation where a developer needs a larger or smaller space to improve their profitability. The agency would typically gain more property for more recreation opportunities in exchange for the land swap.

### **Leasebacks on Recreational Facilities**

Many agencies do not have adequate capital dollars to build desired revenue-producing facilities. One option is to hire a private investor to build the facility according to the specifications requested with the investment company financing the project. The agency would then lease the property back from the investor over 20+ years. This can be reversed where by the agency builds the facility and leases to a private management company who then operates the property for a percentage of gross dollars to pay off the construction loans through a subordinate lease.

### **Licensing Rights**

This revenue source allows an entity to license its name on all resale items that private or public vendors sell clothing or other items with the entity's name on it. The normal licensing fee is 6 to 10% of the cost of the resale item.

### **Manufacturing Product Testing and Display**

An agency works with specific manufacturers to test their products in parks, recreation facility, or in a program or service. The agency tests the product under normal conditions and reports the results back to the manufacturer. Examples include lighting, playground equipment, tires on vehicles, mowers, irrigation systems, seed & fertilizers, etc. The agency may receive the product for free but must pay for the costs of installation and for tracking results.

### **Patron Cards**

This allows patrons of a specific recreational facility to purchase patron cards for a month or a year that allows them special privileges above the general public. These privileges include having rights to early tee times, reservations, and special tours, shows, or events. The patron cards can range in price from \$15.00 a month to \$150.00 a year.

### **Private Developers**

Developers may lease space on agency owned land through a subordinate lease that pays out a set dollar amount plus a percentage of gross dollars for recreation enhancements. These could include sports complexes and recreation centers.

### **Sale of Development Rights**

Some agencies sell their development rights below park ground or along trails to utility companies. The entity receives a yearly fee on a linear foot basis.

### **Subordinate Easements – Recreation/Natural Area Easements**

This revenue source is available when an entity allows utility companies, businesses, or individuals to develop some type of an improvement above ground or below ground on its property. Subordinate easements are typically arranged over a set period of time, with a set dollar amount that is paid to the entity on an annual basis.

## **Recycling Centers**

Some agencies and counties operate recycling centers for wood, mulch, and glass as revenue generators for their systems.

## **Corporate Sponsorships**

This revenue-funding source allows corporations to invest in the development or enhancement of new or existing facilities in park systems. Agencies can solicit this revenue-funding source themselves or work with other agencies that pursue and use this type of funding. Sponsorships are often used for programs and events.

## **Naming Rights**

Many agencies throughout the country have successfully sold the naming rights for newly constructed facilities or when renovating existing buildings. Additionally, newly developed and renovated parks have been successfully funded through the sale of naming rights. Generally, the cost for naming rights offsets the development costs associated with the improvement. People incorrectly assume that selling the naming rights for facilities is reserved for professional stadiums and other high profile team sport venues. This trend has expanded in recent years to include public recreation centers and facilities as viable naming rights sales opportunities.

Naming rights can be a one-time payment or amortized with a fixed payment schedule over a defined period of time. During this time, the sponsor retains the “rights” to have the park, facility, or amenity named for them. Also during this time, all publications, advertisements, events, and activities could have the sponsoring group’s name as the venue. Naming rights negotiations need to be developed by legal professionals to ensure that the contractual obligation is equitable to all agents and provides remedies to change or cancel the arrangements at any time during the agreement period.

## **Other Options**

Numerous federal and state taxation resources, programs, and grants may be available to park and recreation agencies.

## **Fundraising/Friends Associations**

Many park and recreation agencies have special fundraisers on an annual basis to help cover specific programs and capital projects. Agencies could sell pavers, bricks, tiles, for example, or consider staging a telethon. Sometimes this kind of fundraising is conducted by a friends group formed to raise money typically for a single focus purpose that could include a park facility or program that will better the community as a whole and their special interest.

## **Gift Catalogs**

Gift catalogs provide organizations the opportunity to let the community know on a yearly basis what their needs are. The community purchases items from the gift catalog and donates them to the agency.

## **Land Trusts**

Many agencies have developed land trusts to help secure and fund the cost of acquiring land that needs to be preserved and protected for greenway purposes. This may be a good source to look to for the acquisition of future park and open space lands.

## **Maintenance Endowments**

Maintenance Endowments are set up for organizations and individuals to invest in ongoing maintenance improvements and infrastructure needs. Endowments retain money from user fees, individual gifts, impact fees, development rights, partnerships, conservation easements, and for wetland mitigations.

## **Raffling**

Some agencies offer annual community raffles, such as purchasing an antique car that can be raffled off in contests.

## **Land and Water Conservation Fund**

These funds are awarded for acquisition and development of parks, recreation, and supporting facilities through the National Park Service and State Park System.

## **Program-Related Investments (PRIs)**

In addition to grants, the Internal Revenue Service allows foundations to make loans—called Program-Related Investments (PRIs)—to nonprofits. PRIs must be for projects that would be eligible for grant support. They are usually made at low or zero interest. PRIs must be paid back to the grant maker. PRIs are often made to organizations involved in building projects.

## **Tier 4**

These funding sources are potential opportunities Golden likely would not consider or additional funding of capital and operational expenditures for various reasons.

## **Parks and Recreation Independent Taxing District**

Independent park and recreation district or a city-wide assessment district serves just the residents of the independent taxing district or may encompass a larger service area. This option provides a stable source of funds, a separate administration, and an elected body that is accountable to the voters residing in the district. This type of special district is often funded through property taxes but could also receive pass-through funding from the City.

## **Special Improvement District/Benefit District**

Taxing districts established to provide funds for certain types of improvements that benefit a specific group of affected properties. Special Districts (or local improvement districts) are the beneficiaries of pass-through funding from cities or counties, which have responsibility for their interests. Special Districts cannot exact or collect the land dedication or the fee-in-lieu on their own. Improvements may include landscaping, the erection of fountains, and acquisition of art, and supplemental services for improvement and promotion, including recreation and cultural enhancements.

## **Industrial Development Bonds**

Specialized revenue bonds issued on behalf of publicly owned, self-supporting facilities.

## **Commercial Property Endowment Model – Operating Foundation**

John L. Crompton<sup>47</sup> discusses government using the Commercial Property Endowment Model citing two case studies in the United Kingdom and Mission Bay Park in San Diego, California as an alternative structure to deliver park and recreation services. A non-profit organization may be established and given park infrastructure and/or land assets to manage as public park and recreation services along with commercial properties as income-earning assets or commercial lease fees to provide for a sustainable funding source. This kind of social enterprise is charged with operating, maintaining, renovating, and enhancing the public park system and is not unlike a model to subsidize low-income housing with mixed-use developments.

## **Franchise Fee on Cable**

This would allow an agency to add a franchise fee on cable to be designated for parks and recreation. The normal fee is \$1.00 a month or \$12.00 a year per household. Fees usually go towards land acquisition or capital improvements.

## **Horsepower Fee**

In some county parks, they charge a horsepower fee to use public park reservoirs. The higher the horsepower, the more money the user pays. A basic fee is applied @ \$35.00 and horsepower rates are typically \$1.00 or \$2.00 per horsepower.

## **Room Overrides on Hotels for Sports Tournaments and Special Events**

Agencies have begun to keep a percentage of hotel rooms reservation fees that are booked when the agency hosts a major sports tournament or special event. The overrides are usually \$5.00 to \$10.00 depending on the type of room. Monies collected would help offset an agency's operational costs in hosting the events.

## **Utility Roundup Programs**

Some park and recreation agencies have worked with local utilities on a round up program whereby a consumer can pay the difference between their bill and the next highest even dollar amount as a donation to the agency. Ideally, these monies would be used to support agency utility improvements such as sports lighting, irrigation cost, and HVAC costs.

## **Water Utility Fee**

Cities have added a special assessment on to water utility fees paid by homeowners and businesses to cover the costs of water street trees, landscaping, fountains, and pools. The fee is usually a percentage of the bill (2 or 3%).

## **Alcohol Tax**

A percentage of alcohol tax gained by the state is made available for individual cities and county park systems to retain support efforts to develop programs and services targeted for youth to assist in skill development programs, after-school programs, summer camps, and other family type programs.

## **Boulevard Tax**

Property owners who live along scenic boulevards based on a lineal foot pay this tax. The City of Kansas City has this tax in place and covers the cost of improvements, fountains and turf and landscape care.

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<sup>47</sup> Spring 2010 *Journal of Park and Recreation Administration*, Volume 28, Number 1, pp 103-111

### **Business Excise Tax**

Park Districts in Illinois use a business excise tax as a revenue source, taxing new businesses in the community on products sold based on the wholesale cost.

### **Cigarette Tax**

In some states the sales tax gain by the state for cigarettes is redistributed to cities and counties for programs to teach and curb youth smoking through effective prevention recreation programs.

### **Food and Beverage Tax**

The tax is usually associated with convention and tourism bureaus. However, since parks and recreation agencies manage many of the tourism attractions, they receive a portion of this funding source for operational or capital expenses.

### **Gaming Tax**

This tax is very popular in the Midwest and Rocky Mountain states that have gambling. These dollars come in a form of a percentage of what the City and state receive. This is a very popular revenue source that is typically shared with schools, libraries, and parks.

### **Insurance Tax**

Cities can tax insurance payments as it applies to insurance premiums on homes, cars, inventory and equipment. Parks and Recreation Departments can receive a percentage of the city's tax collected on insurance premiums. This tax is for Parks and Recreation and is typically used for dedicated purposes to reduce liability in Parks and Recreation Facilities but some cities have used it for new capital improvements.

### **Local Option Income Tax**

Local option income tax allows cities to levy a quarter to a half cent as income taxes to support parks and recreation services, facilities, and land. This is usually not voted on by the community but within the home rule of the city charter.

### **Real Estate Transfer - Tax/Assessment/Fee**

As agencies expand, the need for infrastructure improvements continues to grow. Since parks and recreation facilities add value to neighborhoods and communities, some agencies have turned to real estate transfer tax/assessment/fee to help pay for acquisition and needed renovations. Usually transfer tax/assessment/fee amount is a percentage on the total sale of the property and is assessed each time the property transfers to a new owner. Some states have laws prohibiting or restricting the institution, increase, or application of this tax/assessment/fee.

### **Rental Car Tax**

This tax is designated for land acquisition purposes. Some cities and counties have used a percentage of rental car taxes to support agency land acquisition or improvements in parks.

### **Sporting Goods Tax**

In some states, the states collect a sales tax on sporting goods equipment as it applies to fishing and boating supplies and recreation equipment. This revenue is redistributed to cities and counties on a population basis and from licenses sold.

### **Wheel Tax on Cars/Vehicles**

Many cities have a city sticker tax on vehicles based on the type of vehicle. This allows for park agencies to receive a portion of this money to cover the costs of roads, hard surface paths and parking lots associated with parks.

### **Agricultural Leases**

In some agency parks, low land property along rivers, or excess land may be leased to farmers for crops.

### **Fishing License for City or County Lakes**

In some cities and counties, they have their own put and take fish operation and safe fishing laws for their own lakes for trout and specialty fish.

### **Marine Slips/Permits**

This revenue source is for a permit to store boats on public property for a set amount based on a lineal foot and service charges on an annual basis.

### **Sale of Mineral Rights**

Many agencies sell mineral rights under parks, including water, oil, natural gas, and other by products, for revenue purposes.

### **Reverse Sponsorships**

This revenue source allows agencies to receive indirect revenue from cross promoting their current sponsors with professional sporting events such as in racing with cars and drivers and significant sports heroes. Indirect sponsorships provide up to 15% of the sponsorship value back to the City for linking their parks and recreation sponsors with professional sports.

### **Designated License Plate for Parks**

Agency improvements or programs could be funded through a designated license plate.

### **Family Tree Program**

Many cities have worked with local hospitals to provide cash to the parks system to buy and plant a tree in honor of every new born in the City. The hospitals invest \$250.00 to \$300.00 and receive the credit from the parents of the newborns. The parks system gets new trees of ample size.

## Appendix D: GRASP® Methodology

### Brief History of Level of Service Analysis

In order to help standardize parks and recreation planning, universities, agencies and parks and recreation professionals have long been looking for ways to benchmark and provide “national standards” for how much acreage, how many ballfields, pools, playgrounds, etc., a community *should* have. In 1906 the fledgling “Playground Association of America” called for playground space equal to 30 square feet per child. In the 1970s and early 1980s, the first detailed published works on these topics began emerging (Gold, 1973, Lancaster, 1983). In time “rule of thumb” ratios emerged with 10 acres of parklands per thousand population becoming the most widely accepted norm. Other normative guides also have been cited as “traditional standards,” but have been less widely accepted. In 1983, Roger Lancaster compiled a book called, “Recreation, Park and Open Space Standards and Guidelines,” that was published by the National Park and Recreation Association (NRPA). In this publication, Mr. Lancaster centered on a recommendation “that a park system, at minimum, be composed of a core system of parklands, with a total of 6.25 to 10.5 acres of developed open space per 1,000 population (Lancaster, 1983, p. 56). The guidelines went further to make recommendations regarding an appropriate mix of park types, sizes, service areas, and acreages, and standards regarding the number of available recreational facilities per thousand population. While the book was published by NRPA and the table of standards became widely known as “the NRPA standards,” these standards were never formally adopted for use by NRPA.

Since that time, various publications have updated and expanded upon possible “standards,” several of which have been published by NRPA. Many of these publications did benchmarking and other normative research to try and determine what an “average LOS” should be. It is important to note that NRPA and the prestigious American Academy for Park and Recreation Administration, as organizations, have focused in recent years on accreditation standards for agencies, which are less directed towards outputs, outcomes and performance, and more on planning, organizational structure, and management processes. In essence, the popularly referred to “NRPA standards” for LOS, as such, do not exist. The following table gives some of the more commonly used capacity “standards” today.

Commonly Referenced LOS Capacity “Standards”

Activity/ Facility	Recommended Space Requirements	Service Radius and Location Notes	Number of Units per Population
<b>Baseball</b> Official	3.0 to 3.85 acre minimum	¼ to ½ mile Unlighted part of neighborhood complex; lighted fields part of community complex	1 per 5,000; lighted 1 per 30,000
Little League	1.2 acre minimum		
<b>Basketball</b> Youth	2,400 – 3,036 vs.	¼ to ½ mile Usually in school, recreation center or church facility; safe walking or bike access; outdoor courts in neighborhood and community parks, plus active recreation areas in other park settings	1 per 5,000
High school	5,040 – 7,280 s.f.		
<b>Football</b>	Minimum 1.5 acres	15 – 30 minute travel time Usually part of sports complex in community park or adjacent to school	1 per 20,000

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Activity/ Facility	Recommended Space Requirements	Service Radius and Location Notes	Number of Units per Population
<b>Soccer</b>	1.7 to 2.1 acres	1 to 2 miles Youth soccer on smaller fields adjacent to larger soccer fields or neighborhood parks	1 per 10,000
<b>Softball</b>	1.5 to 2.0 acres	¼ to ½ mile May also be used for youth baseball	1 per 5,000 (if also used for youth baseball)
<b>Swimming Pools</b>	Varies on size of pool & amenities; usually ½ to 2-acre site	15 – 30 minutes travel time  Pools for general community use should be planned for teaching, competitive & recreational purposes with enough depth (3.4m) to accommodate 1m to 3m diving boards; located in community park or school site	1 per 20,000 (pools should accommodate 3% to 5% of total population at a time)
<b>Tennis</b>	Minimum of 7,200 s.f. single court area (2 acres per complex)	¼ to ½ mile Best in groups of 2 to 4 courts; located in neighborhood community park or near school site	1 court per 2,000
<b>Volleyball</b>	Minimum 4,000 s.f.	½ to 1 mile Usually in school, recreation center or church facility; safe walking or bike access; outdoor courts in neighborhood and community parks, plus active recreation areas in other park settings	1 court per 5,000
<b>Total land Acreage</b>		Various types of parks - mini, neighborhood, community, regional, conservation, etc.	10 acres per 1,000

**Sources:**

David N. Ammons, *Municipal Benchmarks - Assessing Local Performance and Establishing Community Standards*, 2<sup>nd</sup> Ed., 2002

Roger A. Lancaster (Ed.), *Recreation, Park and Open Space Standards and Guidelines* (Alexandria, VA: National Recreation and Park Association, 1983), pp. 56-57.

James D. Mertes and James R. Hall, *Park, Recreation, Open Space and Greenways Guidelines*, (Alexandria, VA: National Recreation and Park Association, 1996), pp. 94-103.

In conducting planning work, it is key to realize that the above standards can be valuable when referenced as “norms” for capacity, but not necessarily as the target standards for which a community should strive. Each community is different and there are many varying factors which are not addressed by the standards above. For example:

- Does “developed acreage” include golf courses”? What about indoor and passive facilities?
- What are the standards for skateparks? Ice Arenas? Public Art? Etc.?
- What if it’s an urban land-locked community? What if it’s a small town surrounded by open Federal lands?
- What about quality and condition? What if there are numerous ballfields, but they haven’t been maintained in the last ten years?
- And many other questions....

## GRASP® Glossary

**Buffer:** see catchment area

**Catchment area:** a circular map overlay that radiates outward in all directions from an asset and represents a reasonable travel distance from the edge of the circle to the asset. Used to indicate access to an asset in a level of service assessment

**Component:** an amenity such as a playground, picnic shelter, basketball court, or athletic field that allows people to exercise, socialize, and maintain a healthy physical, mental, and social wellbeing

**Geo-Referenced Amenities Standards Process® (GRASP®):** a proprietary composite-values methodology that takes quality and functionality of assets and amenities into account in a level of service assessment

**GRASP® Level of service (LOS):** the extent to which a recreation system provides a community access to recreational assets and amenities

**Low-score component:** a component given a GRASP® score of “1” or “0” as it fails to meet expectations

**Lower-service area:** an area of a city that has some GRASP® level of service but falls below the minimum standard threshold for overall level of service

**Modifier:** a basic site amenity that supports users during a visit to a park or recreation site, to include elements such as restrooms, shade, parking, drinking fountains, seating, BBQ grills, security lighting, and bicycle racks among others

**No-service area:** an area of a city with no GRASP® level of service

**Perspective:** a map or data quantification, such as a table or chart, produced using the GRASP® methodology that helps illustrate how well a community is served by a given set of recreational assets

**Radius:** see catchment area

**Recreational connectivity:** the extent to which community recreational resources are transitionally linked to allow for easy and enjoyable travel between them.

**Recreational trail:** a soft or hard surface trail intended mostly for leisure and enjoyment of resources. Typically passes through park lands or natural areas and usually falls to parks and recreation professionals for planning and management.

**Service area:** all or part of a catchment area ascribed a particular GRASP® score that reflects level of service provided by a particular recreational asset, a set of assets, or an entire recreation system

**Threshold:** a minimum level of service standard typically determined based on community expectations

**Trail:** any off-street or on-street connection dedicated to pedestrian, bicycle, or other non-motorized users

**Trail network:** a part of a greater trail system within which major barrier crossings have been addressed and all trails are functionally connected by such things as crosswalks, pedestrian underpasses, and/or bridges. Typically separated from other trail networks by missing trail connections or by such barriers as roadways, rivers, or railroad tracks.

**Trail system:** all trails in a community that serve pedestrian, bicycle, and alternative transportation users for purposes of both recreation and transportation

**Transportation trail:** a hard surface trail, such as a city sidewalk, intended mostly for utility in traveling from one place to another in a community or region. Typically runs outside of park lands and is managed by Public Works or other city utility department.

**GRASP® Components, Definitions, and EE Values**

**GRASP® Outdoor Component List**

GRASP® Outdoor Component Type	Definition	EE Value
Adventure Course	An area designated for activities such as ropes courses, zip-lines, challenge courses, etc. Specify type in comments.	2
Amusement Ride	Carousel, train, go carts, bumper cars, or other ride upon features. Has an operator and controlled access.	1
Aquatics, Complex	A facility that has at least one immersion pool and other features intended for aquatic recreation.	1
Aquatics, Lap Pool	A man-made basin designed for people to immerse themselves in water and intended for swimming laps.	2
Aquatics, Leisure Pool	A man-made basin designed for people to immerse themselves in water and intended for leisure water activities. May include zero depth entry, slides, and spray features.	2
Aquatics, Spray Pad	A water play feature without immersion intended for the purpose of interaction with moving water.	2
Aquatics, Therapy Pool	A temperature controlled pool intended for rehabilitation and therapy.	2
Basketball Court	Describes a dedicated full sized outdoor court with two goals.	2
Basketball, Practice	Describes a basketball goal for half-court play or practice. Includes goals in spaces associated with other uses.	2
Batting Cage	A stand-alone facility that has pitching machines and restricted entry.	2
Bike Complex	A facility that accommodates various bike skills activities with multiple features or skill areas.	3
Bike Course	A designated area for non-motorized bicycle use. Can be constructed of concrete, wood, or compacted earth. May include a pump track, velodrome, skills course, etc.	3
Camping, Defined	<u>Defined</u> campsites that may include a variety of facilities such as restrooms, picnic tables, water supply, etc. Quantity based on official agency count. For use only if quantity of sites is available. Use "Camping, Undefined" for other instances.	1
Camping, Undefined	Indicates allowance for users to stay overnight in the outdoors in informal and/or <u>undefined</u> sites. Receives a quantity of one for each park or other location.	1
Climbing, Designated	A designated natural or man-made facility provided and/or managed by an agency for the purpose of recreation climbing not limited to child's play.	2
Climbing, General	Indicates allowance for users to participate in a climbing activity. Receives a quantity of one for each park or other location.	2
Concessions	A facility used for the selling, rental, or other provision of goods and services to the public.	1

## City of Golden Parks and Recreation Master Plan 2016

Diamond Field	Describes softball and baseball fields of all kinds suitable for organized diamond sport games. Not specific to size or age-appropriateness.	2
Diamond Field, Complex	Multiple ballfields at a single location suitable for tournaments.	1
Diamond Field, Practice	Describes any size of grassy area used for practice. Distinguished from ballfield in that it doesn't lend itself to organized diamond sport games. Distinguished from open turf by the presence of a backstop.	2
Disc Golf	Describes a designated area that is used for disc golf. Quantities: 18 hole course = 1; 9 hole course = .5	2
Dog Park	An area designated specifically as an off-leash area for dogs and their guardians.	1
Educational Experience	Signs, structures, or historic features that provide an educational, cultural, or historic experience. Receives a quantity of one for each contiguous site. Distinguished from public art by presence of interpretive signs or other information.	1
Equestrian Facility	Area designated for equestrian use. Typically applied to facilities other than trails.	2
Event Space	A designated area or facility for an outdoor class, performance, or special event including amphitheater, band shell, stage, etc.	3
Fitness Course	One or more features intended for personal fitness activities. Receives a quantity of one for each complete grouping.	3
Game Court	Outdoor court designed for a game other than tennis, basketball, volleyball, as distinguished from a multi-use pad including bocce, shuffleboard, lawn bowling, etc. Specify type in comments. Quantity counted per court.	3
Garden, Community	Describes any garden area that provides community members a place to have a personal vegetable or flower garden.	2
Garden, Display	Describes any garden area that is designed and maintained to provide a focal point or destination including a rose garden, fern garden, native plant garden, wildlife/habitat garden, arboretum, etc.	1
Golf	A course designed and intended for the sport of golf. Counted per 18 holes. Quantities: 18 hole course = 1; 9 hole course = .5	2
Golf, Miniature	A course designed and intended for use as a multi-hole golf putting game.	2
Golf, Practice	An area designated for golf practice or lessons including driving ranges and putting greens.	2
Horseshoe Court	A designated area for the game of horseshoes including permanent pits of regulation length. Quantity counted per court.	1
Horseshoes Complex	Several regulation horseshoe courts in single location suitable for tournaments.	1
Ice Hockey	Regulation size outdoor rink built specifically for ice hockey games and practice. General ice skating included in "Winter Sport".	1
Inline Hockey	Regulation size outdoor rink built specifically for in-line hockey games and practice.	1
Loop Walk	Opportunity to complete a circuit on foot or by non-motorized travel mode. Suitable for use as an exercise circuit or for leisure walking. Quantity of one for each park or other location unless more than one distinct circuit is present.	3

## City of Golden Parks and Recreation Master Plan 2016

Multi-Use Pad	A paved area that is painted with games such as hopscotch, 4 square, tetherball, etc. Often found in school yards. As distinguished from "Games Court " which is typically single use.	1
Natural Area	Describes an area in a park that contains plants and landforms that are remnants of or replicate undisturbed native areas of the local ecology. Can include grasslands, woodlands and wetlands.	1
Open Turf	A grassy area that is not suitable for programmed field sports due to size, slope, location or physical obstructions. May be used for games of catch, tag, or other informal play and uses that require an open grassy area.	2
Other	Active or passive component that does not fall under any other component definition. Specify in comments.	TBD
Passive Node	A place that is designed to create a pause or special focus within a park and includes seating areas, plazas, overlooks, etc. Not intended for programmed use.	1
Pickleball Court	A designated court designed primarily for pickleball play.	3
Picnic Ground	A designated area with a grouping of picnic tables suitable for organized picnic activities. Individual picnic tables are accounted for as Comfort and Convenience modifiers.	3
Playground, Destination	Playground that attracts families from the entire community. Typically has restrooms and parking on-site. May include special features like a climbing wall, spray feature, or adventure play.	1
Playground, Local	Playground that is intended to serve the needs of the surrounding neighborhood. Includes developed playgrounds and designated nature play areas. Park generally does not have restrooms or on-site parking.	2
Public Art	Any art installation on public property. Receives a quantity of one for each contiguous site.	1
Rectangular Field, Complex	Several rectangular fields in single location suitable for tournament use.	1
Rectangular Field, Large	Describes a specific field large enough to host one adult rectangular field sport game such as soccer, football, lacrosse, rugby, and field hockey. Approximate field size is 180' x 300' (60 x 100 yards). Field may have goals and lining specific to a certain sport that may change with permitted use.	3
Rectangular Field, Multiple	Describes an area large enough to host one adult rectangular field sport game and a minimum of one other event/game, but with an undetermined number of actual fields. This category describes a large open grassy area that can be arranged in any manner of configurations for any number of rectangular field sports. Sports may include, but are not limited to: soccer, football, lacrosse, rugby, and field hockey. Field may have goals and lining specific to a certain sport that may change with permitted use.	1
Rectangular Field, Small	Describes a specific field too small to host a regulation adult rectangular field sport game. Accommodates at least one youth field sport game. Sports may include, but are not limited to: soccer, football, lacrosse, rugby, and field hockey. Field may have goals and lining specific to a certain sport that may change with permitted use.	1
Shelter, Large	A shade shelter or pavilion large enough to accommodate a group picnic or other event for a minimum of 13 seated whether or not benches or picnic tables are provided. Lack of seating may be addressed in scoring.	2

## City of Golden Parks and Recreation Master Plan 2016

Shelter, Small	A shade shelter, large enough to accommodate a family picnic or other event for approximately 4-12 persons with seating for a minimum of 4. Covered benches for seating up to 4 people included as a modifier in comfort and convenience scoring and should not be included here.	1
Skate Feature	A stand-alone feature primarily for wheel sports such as skateboarding, in-line skating, etc. May or may not allow free-style biking. May be associated with a playground but is not part of it. Dedicated bike facilities should be categorized as "Bike Course".	2
Skate Park	An area set aside primarily for wheel sports such as skateboarding, in-line skating, etc. Attracts users from the entire community. May or may not allow free-style biking. May be specific to one user group or allow for several user types. Can accommodate multiple users of varying abilities. Typically has a variety of concrete or modular features.	3
Target Range	A designated area for practice and/or competitive target activities. Specify type, such as archery or firearms, in comments.	2
Tennis Complex	Multiple regulation courts in a single location with amenities suitable for tournament use.	1
Tennis Court	One standard regulation court suitable for recreation and/or competitive play. Specify Quick Start or other non-standard types in comments.	2
Tennis, Practice Wall	A wall intended for practicing tennis.	3
Track, Athletic	A multi-lane, regulation sized running track appropriate for track and field events.	1
Trail, Multi-Use	A trail, paved or unpaved, that is separated from the road and provides recreational opportunities or connection to walkers, bikers, roller bladers and equestrian users. Paths that make a circuit within a single site are "Loop Walks".	3
Trail, Primitive	A trail, unpaved, located within a park or natural area that provides recreational opportunities or connections to users. Minimal surface improvements that may or may not meet accessibility standards.	3
Trail, Water	A river, stream, canal or other waterway used as a trail for floating, paddling, or other watercraft.	3
Trailhead	A designated staging area at a trail access point. May include restrooms, an information kiosk, parking, drinking water, trash receptacles, seating, etc.	1
Volleyball Court	One full-sized court. May be hard or soft surface, including grass and sand. May have permanent or portable posts and nets. (Estimated from range of small, medium and large)	2
Wall Ball Court	Walled courts associated with sports such as handball and racquetball. Specify type in comments. (Assumed based on own estimate)	2
Water Access, Developed	A developed water access point. Includes docks, piers, kayak courses, boat ramps, fishing facilities, etc. Specify in comments including quantity for each unique type.	1
Water Access, General	Measures a user's general ability to access the edge of open water. May include undeveloped shoreline. Typically receives quantity of one for each contiguous site.	1
Water Feature	A passive water-based amenity that provides a visual focal point. Includes fountains and waterfalls.	1

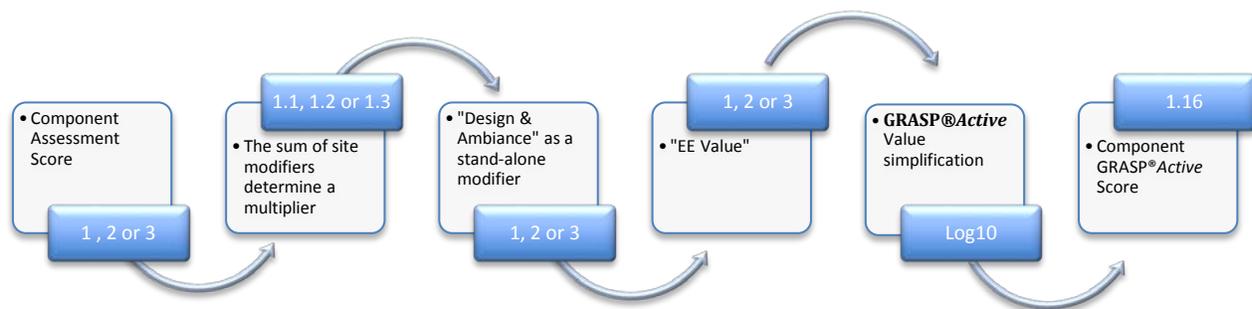
Water, Open	A body of water such as a pond, stream, river, wetland with open water, lake, or reservoir.	1
Winter Sport	An area designated for a winter sport or activity such as a downhill ski area, Nordic ski area, sledding hill, toboggan run, recreational ice, etc. Specify in comments.	3
Not addressed in original research. EE value assigned based on perceived value		
Direct correlation to original research component		
Interpreted value based on range of original research		

### Composite-Values Level of Service Analysis Methodology

Analysis of the existing parks, open space, trails, and recreation systems are often conducted in order to try and determine how the systems are serving the public. A Level of Service (LOS) has been typically defined in parks and recreation master plans as the capacity of the various components and facilities that make up the system to meet the needs of the public. This is often expressed in terms of the size or quantity of a given facility per unit of population.

#### GRASP® Active Score

Each park or recreation location, along with all on-site components, has been assigned a **GRASP® Active Score**. The GRASP® Active Score accounts for the assessment score and the EE value as well as available modifiers and the design and ambiance of a park. The following illustration shows this relationship. A basic algorithm is used to calculate scoring totals, accounting for both component and modifier scores, for every park and facility in the inventory. The resulting scores reflect the overall value of that site. Scores for each inventory site and its components may be found in the Final Inventory Atlas, a supplemental document to this master plan document.



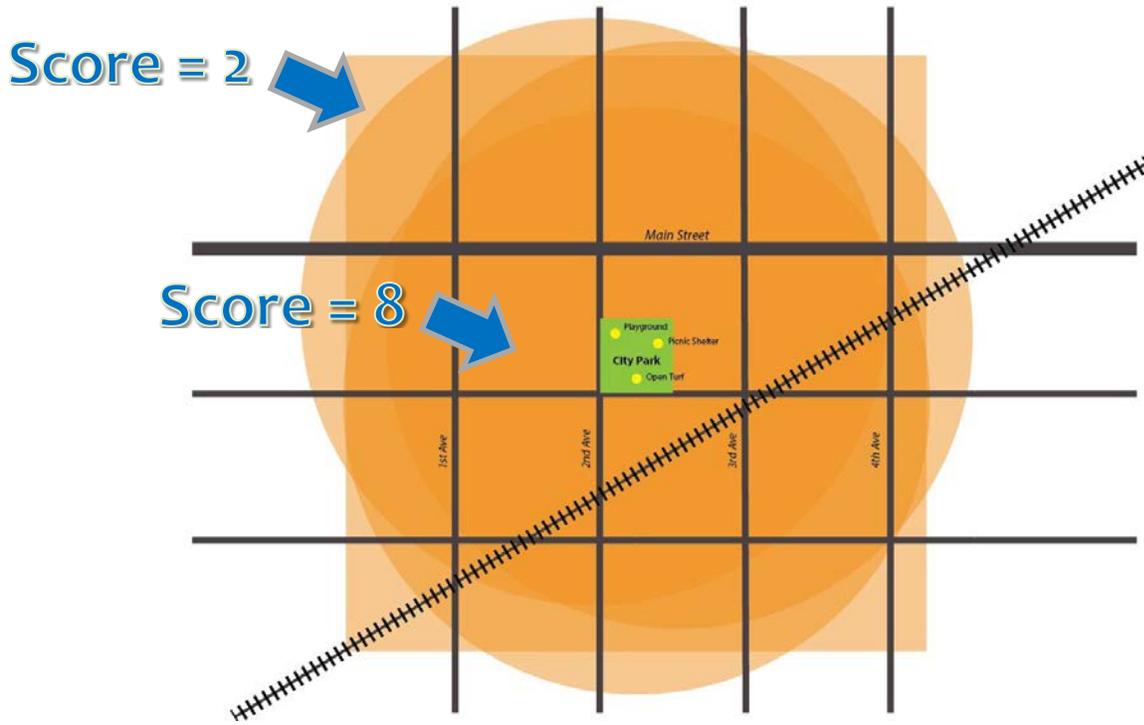
GRASP® Active Score calculation.

#### Catchment Areas

**Catchment areas**, also called buffers, radii or service area, are drawn around each component. The GRASP® Score for that component is then applied to that buffer and overlapped with all other component catchment areas. This process yields the data used to create perspective maps and analytical charts.

**Perspectives**

When service areas for multiple components are plotted on a map, a picture emerges that represents the cumulative level of service provided by that set of components in a geographic area.



This example graphic illustrates the GRASP® process assuming all three components and the park boundary itself, are scored a “2.” The overlap of their service areas yields higher or lower overall scores for different parts of a study area.

On a map, darker shades result from the overlap of multiple service area and indicate areas served by more and/or higher quality components. For any given spot, there is a GRASP® Value for that reflects cumulative scoring for nearby assets. Image A, below, provides an example from the Golden analysis to illustrate.

Image A: Example of Golden GRASP® Active Level of Service (LOS)



## GRASP® (Geo-Referenced Amenities Standards Program) and GRASP® Active

In order to address these and other relevant questions, a new methodology for determining Level of Service was developed. It is called a **composite-values methodology** and has been applied in communities across the nation in recent years to provide a better way of measuring and portraying the service provided by parks and recreation systems. Primary research and development on this methodology was funded jointly by GreenPlay, LLC, a management consulting firm for parks, open space and related agencies, Design Concepts, a landscape architecture and planning firm, and Geowest, a spatial information management firm. The trademarked name for the composite-values methodology process that these three firms use is called **GRASP® (Geo-Referenced Amenities Standards Program)**. For this methodology, capacity is only part of the LOS equation. Other factors are brought into consideration, including *quality, condition, location, comfort, convenience, and ambience*. To do this, parks, trails, recreation, and open space are looked at as part of an overall infrastructure for a community made up of various components, such as playgrounds, multi-purpose fields, passive areas, etc. The ways in which the characteristics listed above affect the amount of service provided by the components of the system are explained in the following text.

**Quality** – The service provided by anything, whether it is a playground, soccer field, or swimming pool is determined in part by its quality. A playground with a variety of features, such as climbers, slides, and swings provides a higher degree of service than one with nothing but an old teeter-totter and some “monkey-bars.”

**Condition** – The condition of a component within the park system also affects the amount of service it provides. A playground in disrepair with unsafe equipment does not offer the same service as one in good condition. Similarly, a soccer field with a smooth surface of well-maintained grass certainly offers a higher degree of service than one that is full of weeds, ruts, and other hazards.

**Location** – To be served by something, you need to be able to get to it. The typical park playground is of more service to people who live within easy reach of it than it is to someone living all the way across town. Therefore, service is dependent upon proximity and access.

**Comfort** – The service provided by a component, such as a playground, is increased by having amenities such as shade, seating, and a restroom nearby. Comfort enhances the experience of using a component.

**Convenience** – Convenience encourages people to use a component, which increased the amount of service that it offers. Easy access and the availability of trash receptacles, bike rack, or nearby parking are examples of conveniences that enhance the service provided by a component.

**Ambience** – Simple observation will prove that people are drawn to places that “feel” good. This includes a sense of safety and security, as well as pleasant surroundings, attractive views, and a sense of place. A well-designed park is preferable to poorly-designed one, and this enhances the degree of service provided by the components within it.

**Energy Expenditure** -- The North Carolina State Cooperative Extension Service (Floyd et al., 2016)<sup>48</sup> provides a listing of features commonly found in parks and a rating of the total energy expenditure within each feature by all participants. The list of features can be approximately equated to the set of GRASP® components described earlier and included in this appendix. Also included is a rating for the energy expended above and beyond the sedentary rate for each feature and a re-coding of that into categories of low, medium, and high. This results in a relative value (1, 2 or 3) for each feature in terms of its effectiveness at generating physical activity within the population.

In this methodology, the geographic location of the component is also recorded. Capacity is still part of the LOS analysis (described below) and the quantity of each component is recorded as well. The methodology uses comfort, convenience, and ambience as characteristics that are part of the context and setting of a component. They are not characteristics of the component itself, but when they exist in proximity to a component, they enhance the value of the component.

By combining and analyzing the composite values of each component, it is possible to measure the service provided by a parks and recreation system from a variety of perspectives and for any given location. Typically, this begins with a decision on “**relevant components**” for the analysis, collection of an accurate inventory of those components, analysis and then the results are presented in a series of maps and tables that make up the **GRASP®** analysis of the study area.

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<sup>48</sup> Floyd, M., Suau, L.J., Layton, R., Maddock, J.E., Bitsura-Meszaros, K. (2015). *Cost analysis for improving park facilities to promote park-based physical activity*. North Carolina Cooperative Extension.

## Making Justifiable Decisions

All of the data generated from the GRASP® evaluation is compiled into an electronic database that is then available and owned by the agency for use in a variety of ways. The database can help keep track of facilities and programs, and can be used to schedule services, maintenance, and the replacement of components. In addition to determining LOS, it can be used to project long-term capital and life-cycle costing needs. All portions of the information are in standard available software and can be produced in a variety of ways for future planning or sharing with the public.

It is important to note that the GRASP® methodology provides not only accurate LOS and facility inventory information, but also works with and integrates with other tools to help agencies make decisions. It is relatively easy to maintain, updatable, and creates easily understood graphic depictions of issues. Combined with a needs assessment, public and staff involvement, program and financial assessment, GRASP® allows an agency to defensibly make recommendations on priorities for ongoing resource allocations along with capital and operational funding.

### GRASP® THRESHOLD SCORES

GRASP® *Active* perspectives show the cumulative level of service available to a resident at any given location in the City. It is a blended value based on the number, quality of opportunities to enjoy a recreation experience and the average energy expenditure of components that exist in a reasonable proximity to the given location. A reasonable goal would be to offer a selection of active recreation opportunities to every residence, along with access to a recreational trail.

### Computed Base Score

Based on the consistency in level of service provided by “Neighborhood Parks” in Golden using the actual determined GRASP® *Active* value of a “typical” Neighborhood Park is reasonable in calculating the threshold score for the system. The following table compares each of the nine “neighborhood” parks in Golden based on available components as well as comfort and convenience amenities. The second table shows the calculation of the actual averages for each of the categories. Based on these calculations it was determined that Southridge Park most represented an average park in Golden and therefore we be equated to the desired “threshold” value.

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### Southridge Park

GIS Acres: 3.5

- INDOOR\_FACILITIES
- Trail
- Component
- Trail Access
- Trailhead
- Location
- School
- Other Location



### **Trails Base Score**

In addition to having access to a park with a base score, it is ideal to for residents to also have access to a trail. This was further supported during the public input process as the top priority. It can be assumed that a trail has an intrinsic value as providing both active and passive opportunities. Also the land or right-of way that contains the trail provides value to the community by providing a break in the urban landscape and providing the opportunity for the trail. This equates to three components. In same way that parks are modified with comfort and convenience scores and design and ambiance, trails also have increased value by considering these things. Thus the equation that creates the base score for trails is: *Number of Components (3) x Score for each Component (2.0) x Modifier Value (1.2) x Design and Ambience Score (2.0) = Base Score (14.4)*

*The base score was then multiplied times 3 (the EE value for a trail). Finally, the log10 was calculated for the trail and added to the average park score to calculated the “threshold” value.*

## Appendix E: Walkability

Walkability is an important consideration in recreation these days. Various walkability metrics and methodologies have emerged to assist park and recreation managers and planners in understanding this dynamic. These include:

- Walk score
- Walkability TM
- Walkonomics
- RateMy Street
- Walkability App
- Safe Routes to Play
- Safe Routes to School
- Sidewalk and Walkability Inventory

It is important to take bicycle and public transportation users into account as well as pedestrians. The concept of “complete streets” refers to a built environment that serves various types of users of varying age and ability. Many associations and organizations provide guidance on best practices in developing walkable and bikeable complete streets infrastructure. One such entity, the Association of Pedestrian and Bicycle Professionals (APBP, [www.apbp.org](http://www.apbp.org)) actively promotes complete streets in cities around the country. Another such organization, the National Association of City Transportation Officials (NACTO, [www.nacto.org](http://www.nacto.org)) recently released the **NACTO Urban Street Design Guide**, which provides a full understanding of complete streets based on successful strategies employed in various North American cities. This most comprehensive reference on the topic is a valuable resource for all stakeholders involved in city planning and will likely prove to be a critical reference in building the cities of tomorrow.

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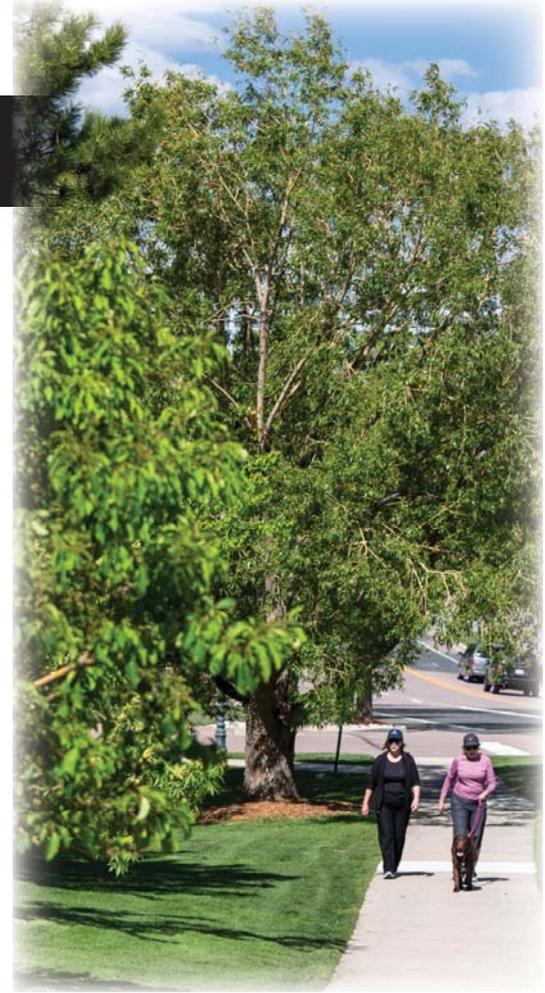
# Walkability Standards:

a test of common assumptions  
related to walkable access



# Abstract

The increasing interest in walking as a healthy and sustainable means of getting around highlights a need to fill the gaps in what is known about walking as a form of transportation. Planners have traditionally relied on normative standards rather than ones based on evidence to determine time and distance relationships associated with walkability. This paper reports the results of an activity designed to test basic assumptions about walking speed and distance in the built environment and provides suggested guidelines for use in planning for walkability.



## Introduction

Determining how far apart to space things like parks, trails and transit stops has a direct bearing on the cost of providing such services to the public. Placing facilities too far away may discourage people from using them, while spacing them too close together is inefficient. It is important to get it right.

Parks are a good example. Providing parks within walking distance of people's homes has long been a basic principle of urban planning. But serious study of the relationship between walking and parks has been lacking, so planners have relied on general practices and rules of thumb, rather than standards based on research. The increasing emphasis of walking as a viable and desirable means of transportation highlights a need to fill the gaps in what is known about walking as it relates to parks and other destinations. Questions such as how far and how fast people walk; what influences their choices of when to walk and where to walk; and other behavioral aspects of walking have relevance to an expanding cadre of people interested in walking.

The purpose of this paper is to offer some insight into the principles behind planning for walkability.

## Normative Standards for Walking

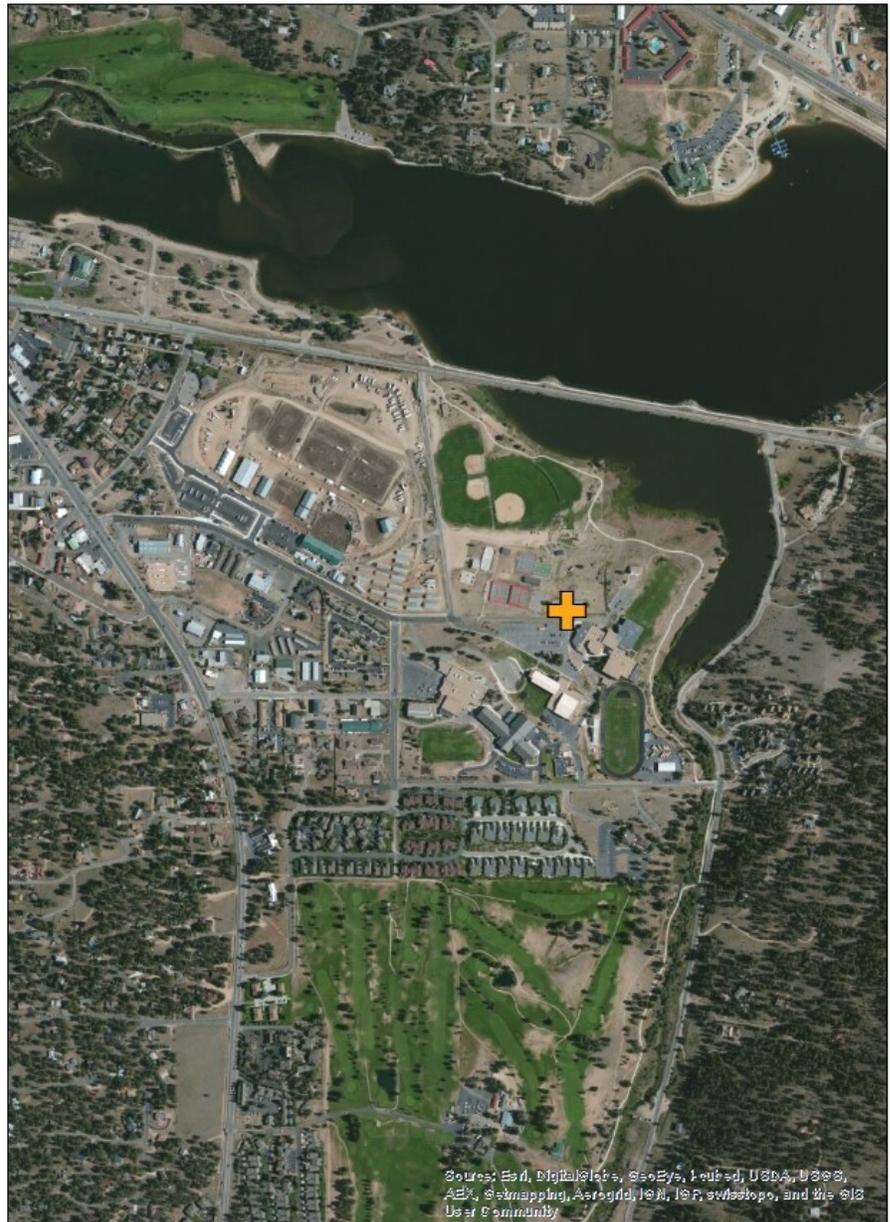
Planners typically use ten minutes as the duration that people are willing to spend to walk to a destination. While there is little empirical evidence to support the validity of this measure, it has nonetheless been accepted as a standard. Translating ten minutes of walking into a measure of distance brings up the question of walking speed. Obviously, speed varies depending on the physical ability of the pedestrian and any encumbrances they may have, such as pushing a baby stroller or carrying packages. Other factors, such as the nature of the route (including such things as pavement type, terrain, and impediments like busy streets or waterways) affect pedestrian speed as well. As a result there is a lack of consistency in the distances used among planners to make decisions related to walking. Distances ranging from 1/8 mile to a mile or more are found in planning studies, with 1/4 mile being the most commonly used standard for determining walkable access.

# Methodology

A gathering of people interested in parks and other public spaces at the GP RED Think Tank in Estes Park, Colorado in 2014 provided an opportunity to test assumptions about walking and generate empirical data. The event was attended by approximately 50 participants from the US and Canada. The participants came primarily from the fields of parks and recreation, land management, and public health. While they ranged in age and physical condition, all were adults able to walk without the aid of mobility devices. They

agreed to take part in a quasi-experiment to study walking behaviors through a short exercise. In the exercise, the participants were divided into groups of three people (11 groups total) and given a set of maps and instructions. All of the groups were taken to a single starting point located between a community park and a high school. Figure 1 shows the starting point and surrounding area.

**Figure 1. Aerial Photo Map of Starting Point and Surrounding Area**



*The GP RED Think Tank in Estes Park, Colorado in 2014 provided an opportunity to test assumptions about walking and generate empirical data.*



0 0.25 0.5 Miles

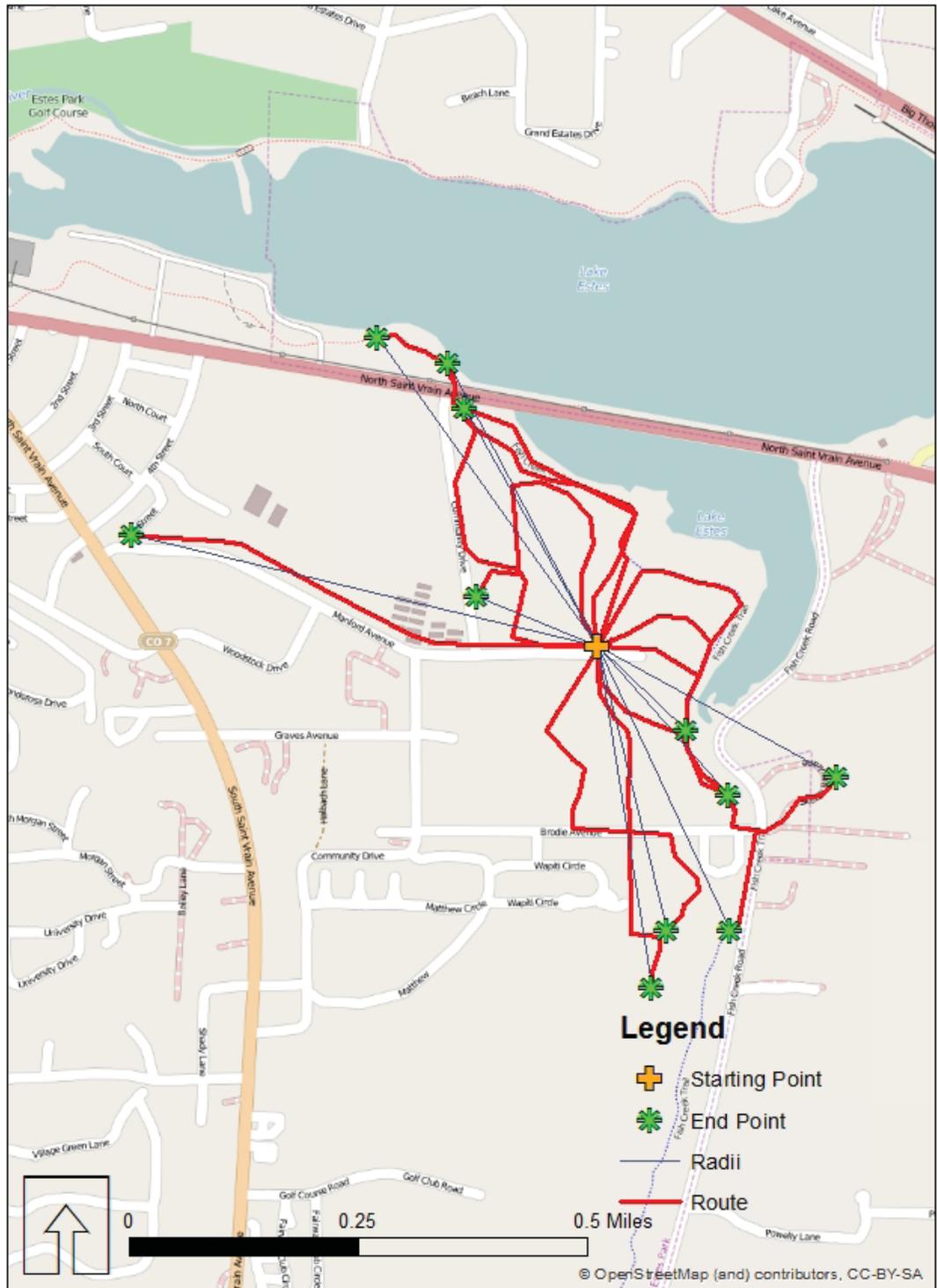
**Legend**

 Starting Point

Upon a signal, the groups were asked to fan out simultaneously from the starting point. Each group was instructed to walk in a direction generally away from the starting point and away from the other groups, and to walk casually as a group for a period of exactly 10 minutes. At the 10-minute point they recorded their group's location

on the map and returned to the starting point, re-tracing their route and marking it on the map. The maps were then collected and the starting point, routes, and end points were entered into a GIS map for analysis. Figure 2 shows the end points, routes, and a radial line from the starting point for all of the groups.

**Figure 2. Map of Results for All Groups**



Using the GIS, three specific aspects of walking were analyzed. First the Euclidian, or straight line (radial) distance between the origin and the destinations was measured.

Second, the length of the actual routes walked were measured. Third, the speed at which the groups walked was calculated. The results are shown in Table 1.

**Table 1. - Summary of Results**

Group	Radial Length (Ft.)	Radial Length (Miles)	Path Length (Ft.)	Path Length (Miles)	Speed MPH
1	755	0.14	2155	0.41	2.45
2	1576	0.30	2035	0.39	2.31
3	1846	0.35	2337	0.44	2.66
4	2184	0.41	2838	0.54	3.23
5	703	0.13	1944	0.37	2.21
6	1144	0.22	1265	0.24	1.44
7	1808	0.34	2375	0.45	2.70
8	1688	0.32	2485	0.47	2.82
9	1995	0.38	2181	0.41	2.48
10	2753	0.52	2922	0.55	3.32
11	1571	0.30	2697	0.51	3.06
Average	1638	0.31	2294	0.43	2.61
Median	1688	0.32	2337	0.44	2.66

Rounding off the results, we find that the radial distance from the starting point ranged from as little as 0.13 miles (just over 1/8 mile) to as far as 0.52 miles (just over 1/2 mile). The average of all eleven teams was 0.31 (mean of 0.32), or just under 1/3 mile.

The lengths of the routes taken by the teams ranged from 0.24 (just under 1/4 mile) to 0.55 miles (just over 1/2 mile). The speed of the teams (averaged over the 10 minute walking time) ranged from 1.44 miles per hour to 3.32 miles per hour, with an average speed of 2.62 (mean of 2.66) miles per hour.

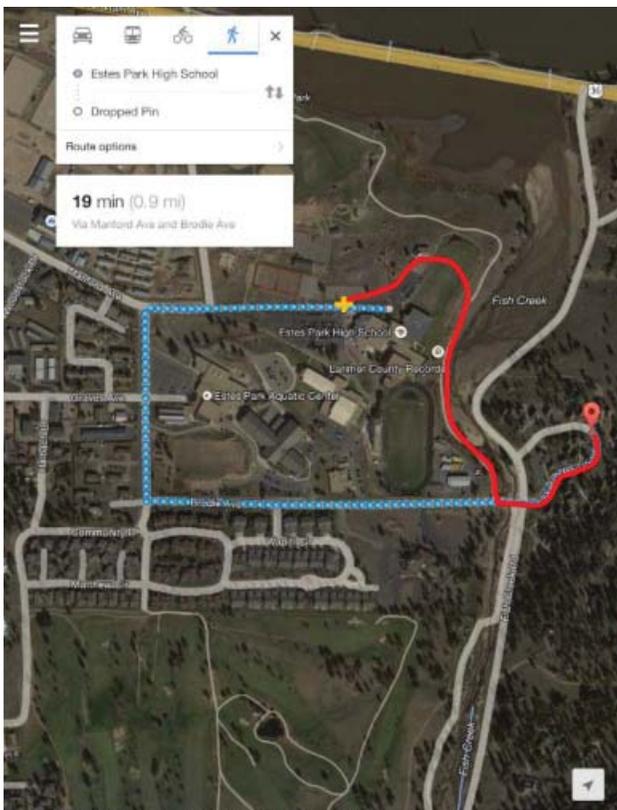
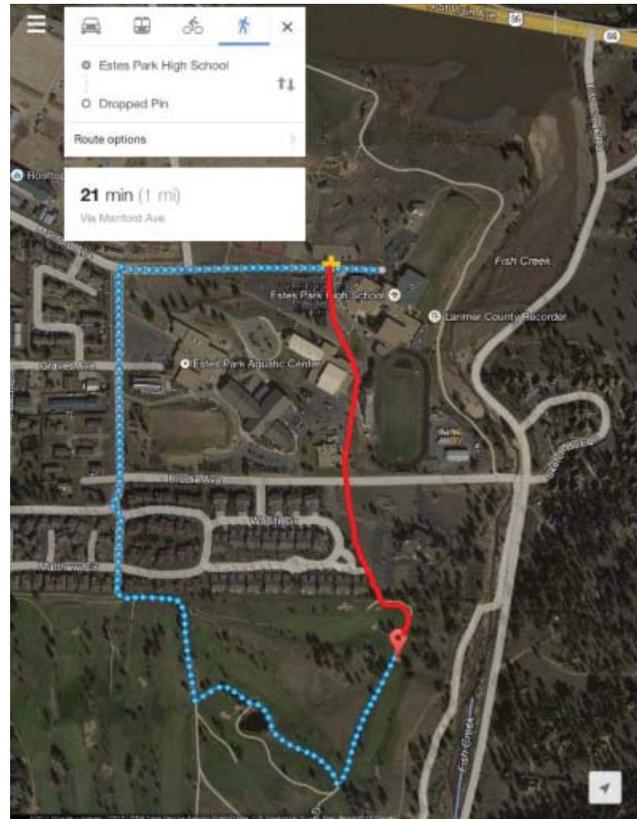
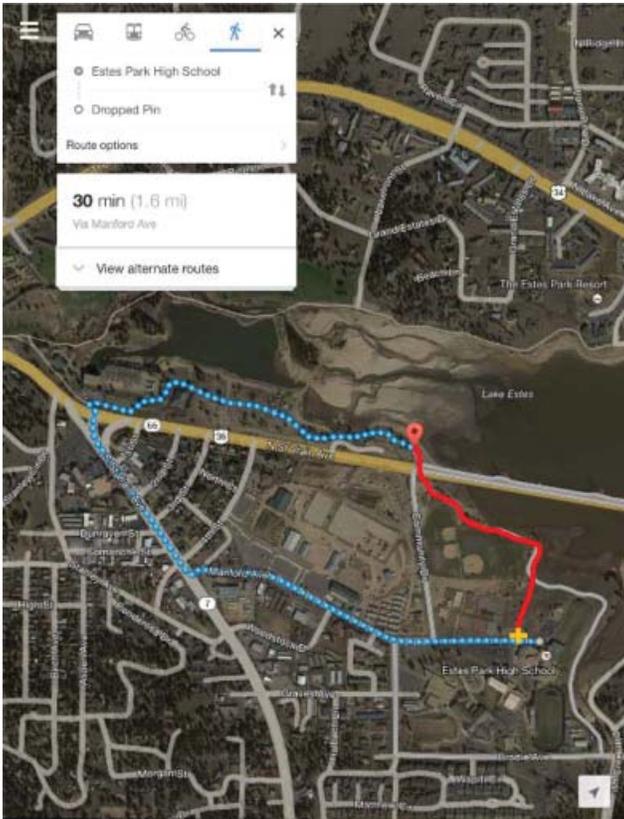
## Radial vs Network Buffers

Buffers are typically used around origins or destinations to determine walkable access. Buffers are typically one of two types, although other types are sometimes used. Radial (also called Euclidian or straight-line) buffers are circular and have the travel origin or destination at their center. Network buffers are plotted along defined routes, such as streets, trails, or sidewalks. While radial buffers are commonly used and easily applied, some feel that network buffers produce more accurate results when measuring access between origins and destinations. However, to be accurate, network buffers require a GIS base map that contains all possible routes. In the case of the study area used here, it was possible for participants to take a number

of shortcuts across the park and school grounds. As a result, some groups walked across the large parking lots and/or sports fields while others stayed on designated paths.

Barriers, such as highways and water bodies, also affect the results of different buffer types. Figure 3 shows the difference between some of the routes recorded by the groups and those prescribed by Google Maps along its known network. Note that while Google Maps accurately included the trail system as part of the walking network, it did not recognize the presence of a tunnel under the adjacent highway of which the two groups took advantage. The use of the tunnel made a significant difference in where the groups ended up on their prescribed 10-minute walk.

Figure 3. Network-Based Routes vs. Actual Routes Walked



Google Maps for iPad was used to see how computer-generated network maps would compare to the actual routes taken by the groups. The blue dotted lines show suggested routes from Google Maps application. The red lines show the actual routes walked by the group to that destination in 10 minutes.

*(Note: the starting points are slightly different in the Google Map from the actual starting points of the groups. This is due to the way Google Maps selects starting locations. This makes the distance of the route as calculated by Google Maps approximately 0.05 miles longer than it would be if it was calculated from the true starting point.)*

## Limitations

This study was conducted as an exercise using volunteers. The sample size is small, and the participants were not randomly selected. They are not intended to represent the set of all pedestrians who may want to walk to a park, school, or other destination. The results described here should not be considered statistically valid nor generalizable to other places and situations. The intent was simply to test generally-held assumptions about walking patterns against empirically measured results in a specific case. It is hoped that additional studies will be conducted by others to build the base of knowledge and allow more informed decisions to be made by planners.

The location used for this case study consisted in large part of a developed park and the grounds of a public school campus and local government center. Thus, the results may apply best to situations such as university grounds; government or corporate campuses; regional shopping centers; downtowns with high proportions of public plazas and open parking lots; and large parks and open space areas. They may not apply as effectively to residential areas with gridded streets and/or cul-de-sacs.

## Recommendations

The results suggest some general guidelines that may be useful to planners, keeping in mind the limitations discussed earlier. These guidelines are only suggestions, and are not intended to be final or definitive.

### For Radial Distances from a Destination (such as a Park or School)

**1/8 mile** is the radius of a circle centered on the destination within which typical pedestrians should be able to arrive at the destination within 10 minutes. Any walk originating inside this circle and proceeding towards the destination by the most expedient route should arrive within 10 minutes in most circumstances.

**1/3 mile** is the average radial distance from the destination from which a walker will arrive at the destination in 10 minutes. Stated differently, the average of all possible 10 minute walks to the destination would originate this far away in a straight line.

**1/2 mile** is the farthest radial distance from the destination that can be covered in 10 minutes by a typical pedestrian. This distance will capture essentially all possible walkers traveling at a normal pace within 10 minutes of the destination. I.e., all possible walks of 10 minute duration at normal walking speed and ending at the destination are captured within this distance.

### For Network Distances

**1/2 mile** should be considered the maximum distance along a network from which a destination can be reached in ten minutes. The average ten minute walk would be slightly shorter.

**1/8 mile** should be considered the distance along a network from which most everyone should be able to arrive at the destination within ten minutes, except in unusual situations.

## Summary

The results of this study suggest that the standards in common use, including 1/8 mile, ¼ mile, and ½ mile, are all useful, but should be applied with a clear understanding of how they differ and what they actually represent. It is recommended that **1/3 mile** be used as a standard for radial buffers that represent the average origin of a ten minute walk to a selected destination. A distance of **½ mile** should be used as the typical distance along a network from which a 10 minute walk to a selected destination would originate. Walks originating closer to the destination along the network would be likely to take less than 10 minutes.

When GIS base data is known to be complete and accurate, or if non-network shortcuts are not common within the proximate area of a destination, network buffers are recommended. However, if base data is incomplete or if there are numerous possible shortcuts, radial buffers are recommended.

It is important to note that this study does not address the validity of ten minutes as a planning standard for the duration of walks. Further tests are recommended to determine the true relationship between walk duration and people's motivation to walk.

## Additional Resources

While research on walking behaviors, particularly those associated with walking to parks, seems to be lacking in the literature, there is growing interest and discussion in the subject of walking. The following examples might be useful to those interested in this topic:

Kuzmyak, Richard, & Dill, Jennifer (2012). Walking and Bicycling in the United States: The who, what, where, and why. *TR News*, 280, 4-15. PDF.

Walker, Jarrett (2011). Basics: walking distance to transit. *Human Transit: the professional blog of public transit planning consultant Jarrett Walker*. 24 July 2011. Web. 25 July 2014.

**Robby Layton, FASLA, PLA, CPRP** is a member of GP RED's Operating Board and a Principal at Design Concepts, CLA, Inc., a landscape architecture and planning firm. He is also a PhD student and instructor at North Carolina State University's College of Design, where he is researching the links between physical attributes of public greenspace and people's perceptions of how they are served by the public greenspace that exists in proximity to where they live.

Tags: Walkability; walking buffers; walking behaviors; walking distances; walkable access; walking studies; pedestrian standards; walking standards.



Layout and graphics provided by:



## Appendix F: Summary Tables of Assets Inventoried for Level of Service Analysis

### Inventory Summary Tables

Park or Facility Inventory Summary and Modifiers

Modifiers that scored low have been highlighted in the table below in yellow flags. Modifiers that were not present at the time of site visits scored a zero and have no flag. This is not meant to imply that all parks and facilities should have all modifiers but rather that the presence of modifiers should be considered as they positively impact user experience.

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# Appendix G: Research Resources

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# **Potential Public Health Performance Metrics for Parks and Greenspace**

## **Assessments**

By:

Robby Layton

For:

**Emily McCoy**

**LAR 582 – Introduction to Landscape Performance + Metrics**

Spring, 2016

Department of Landscape Architecture

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## **Abstract**

The concept of parks and greenspace as policy elements with which governments promote the health and well-being of citizens emerged nearly 200 years ago. The importance of this function for parks has varied over the years, but recent concerns for public health has sparked heightened interest in the capacity of parks and other public greenspaces within the built environment to encourage and facilitate healthy lifestyles. For this study, an assessment of the evidence base correlating greenspace with five dimensions of health was conducted. The purpose was to look for potential indicators that could be used to assess the merits of a given site (park, greenway, etc.) or collection of sites in terms of public health outcomes. Based on the strength of the evidence, a decision was made to focus on the single dimension of physical health, particularly in relation to physical activity.

In the study presented here, a proposed measurement was tested to determine its practicality, utility, and efficiency for evaluating the potential of a park to generate physical activity. Using data collected through a direct-observation audit tool, an index was developed to measure the contribution of an individual park or greenspace location towards net physical activity within its surrounding community. The metric is based on ratings for Active Energy Expenditure (AEE) developed by researchers at North Carolina State University and published by North Carolina State Extension after a peer-review process. The proposed index for individual sites can be aggregated to produce performance measurements for a collection of sites or locations, such as that of a park agency, planning district, or other jurisdiction. The scores produced for the case-study parks in this study were analyzed using multiple linear regression to determine the relative contribution of each of three primary variables in predicting the total score for an individual park: park features, park quality, and park quantity (size).

Results show that the measure is feasible and practical to use, and should be refined through further research and testing. Application of the methodology for the metric to the other dimensions of health should also be explored.

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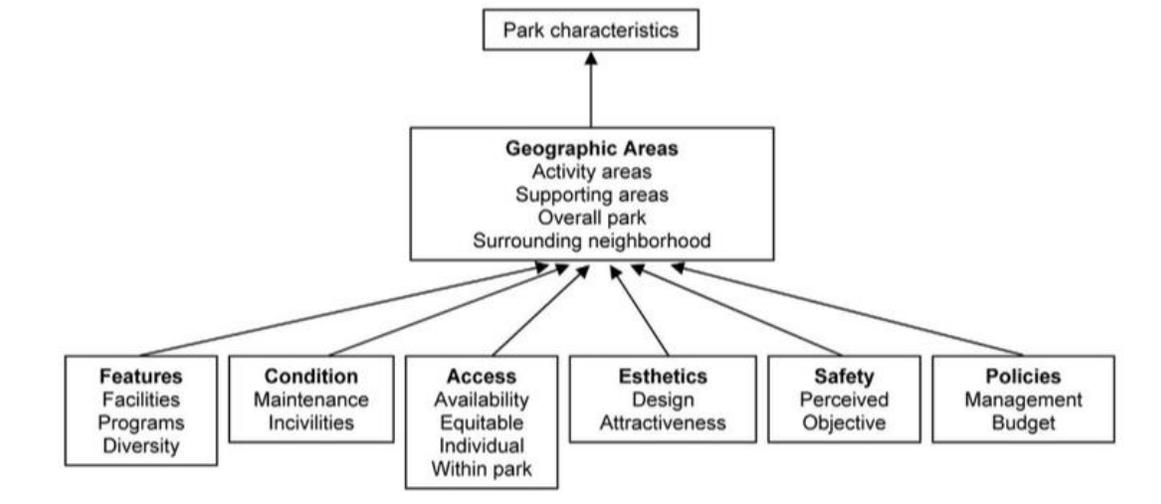
## **Introduction**

### *Public Greenspace and the Health Imperative*

Public parks, as we think of them today, are a special kind of landscape that is a relatively new phenomenon in human history. They were part of a larger reform movement during the 19<sup>th</sup> century to improve the lives of urban dwellers during the Industrial Revolution. The emphasis on parks and greenspace as policy elements by which governments promote the health and well-being of citizens has evolved over the years, but has re-emerged recently in response to new threats to public health brought about by contemporary lifestyles. Urban lifestyles have improved in many ways since the mid-1800's, but modern living has brought with it new health challenges. While advances in medicine have provided treatments and cures for many infectious and congenital diseases, the removal of physical activity from life through technology has resulted in the rise of new ailments. The sedentary lifestyle made possible through technology has led to new epidemics of behavior-related diseases including obesity, Type 2 diabetes, and others (e.g., Bedimo-Rung, Mowen & Cohen, 2005; Kaplan, 1995; Sallis, Floyd, Rodreguez & Saelens, 2012)

To mitigate this, a new emphasis is being placed on the capacity of parks and other public greenspaces within the built environment to encourage and facilitate physical activity. Along with this interest in physical activity has come new research on other aspects of health that might be associated with parks and greenspace, including psychological, social, ecological, and economic well-being. (Sallis & Spoon, 2015). Much of this research is correlational, looking for associations between individual behaviors and health outcomes. A large body of research is focused on the relationship between characteristics of the physical environment and individual behaviors that promote better health. For example, Bedimo-Rung et al. (2005) propose a

classification scheme for parks comprised of six attributes related to higher use and, by extension, higher levels of physical activity and better health (Figure 1).



**Figure 1. Bedimo-Rung Framework**

Source: Bedimo-Rung et al. (2005)

### *Environmental Audits*

The study of correlations between the physical environment and health outcomes requires effective tools for measuring characteristics of the environment (Giles-Corti et al., 2005; Saelens et al., 2006). Dunstan et al. (2005) stress the importance of developing methods that produce “a reliable, valid and genuinely contextual measure of the physical characteristics of a local environment in order to properly investigate the area effects on individual well-being” (294). As a result, a number of audit tools have been developed to assess outdoor environments, including parks, trails, streets, and others. Combined with research findings, these tools can be used to develop metrics and indicators that are correlates of health outcomes.

### *Intent and Approach for this Study*

The approach to this assignment was to review several existing audit tools and the literature on the relationship between the environment and health to look for potential indicators

and metrics that could be used to assess the merits of a given site (park, greenway, etc.) or collection of sites in terms of public health outcomes. A set of metrics were then proposed and tested to assess their application towards further research and the development of policies related to public health goals.

While this topic falls primarily within the socio-cultural category of landscape performance, it encompasses all of the categories listed for this assignment because good health depends upon a healthy environment and economic well-being as well as physical activity. Sound mental health is aided by exposure to places with aesthetic beauty: and such places can also boost economic vitality by attracting creative class workers, tourists, and businesses that seek them out. The sub-category for this paper is, of course, health and well-being. The significance of this topic, as explained earlier, is the urgent need to address chronic diseases now associated with the built environment. As park agencies, community planners, and policymakers look to greenspace as a remedy for these diseases, metrics are needed to guide investments into greenspace and measure outcomes from those investments. Researchers need tools with which to measure characteristics of the built environment to determine how those characteristics are associated with health outcomes. The results of this research may be useful in advancing the state of the art in auditing greenspace and measuring its effectiveness in addressing public health goals. It may also lead to better policies and decisions that support public health and well-being.

The location chosen for this study is Cary, North Carolina. The choice was based partly on convenience and feasibility, but supported by the availability of primary and secondary data available through my dissertation research and professional practice. I was part of the consulting team for Cary's recent parks and recreation master plan, and have since expanded on the data

from that project for my dissertation. The activities proposed as part of this study will enhance the knowledge generated from those related efforts.

## **Methods**

### *Case Study*

The case study presented here tested proposed measurement techniques in a specific location (Cary, NC) to determine the practicality, utility, and efficiency of the measures for providing data that can be used to assess the value of greenspace in addressing health goals.

The tools used to generate the proposed measurements are an extension of the GRASP-IT audit tool developed by myself and colleagues over the past 15 years. That tool is being tested for reliability and validity as part of my current dissertation work, but it has already been applied in the industry to evaluate over 100 park and recreation systems across the USA. The tool was developed primarily to measure recreation value, but this study tests its application to measuring the contribution of a greenspace location towards public health needs.

The procedure was to consider five categories of well-being identified by Sallis and Spoon (2015) - physical, psychological, social, environmental, and economic - in the context of the current state of the literature and develop measurements that can serve as indicators of a site's potential to support public health goals. The measurements derive in part from an earlier study in which I took part and which is just being released (Schultz, Layton et al. 2016). In the current study I refine those into specific measurements that can be applied at the site scale and aggregated to the jurisdictional and larger scales to measure overall efficacy of a greenspace system within a defined boundary.

*Comparison of Audit Tools*

As explained earlier, a number of audit tools have been developed in recent years to assess the characteristics of parks and other elements of the built environment for purposes of research and policy related to public health and well-being. Table 1 summarizes the characteristics of some of these.

**Table 1. Summary of Audit Tools**

Audit tool	Use setting	Length (pages [items])	Completion time (minutes)	Park quality	Youth-oriented	Developed with stakeholders	Tested with stakeholders
BRAT-DO	Parks	16 (181)	Not available	Yes	Somewhat	Some	No
EAPRS	Parks	47 (646)	M: 67 Range: 10–258	Yes	Somewhat	Some	No
PARA	Various resources	1 (49)	M: 10 Range: up to 30	Limited	No	No	No
POST	Parks, ovals	2.5 (88)	Not available	Limited	No	Some	No
RFET	Various facilities	5 (61)	M: 20	Limited	No	No	No
SAGE	Various green spaces	2.5 (96)	Not available	Limited	No	No	No
SHAPE	Parks	1 (20)	Not available	Yes	No	Some	No

Source: Kaczynski, et al. (2012)

The tools listed rely primarily on direct observation as opposed to remote sensing and/or secondary data. Direct observation is considered to be a reliable and valid method for collecting such data, but it is not the only one available. Remote sensing, crowd-sourcing, and use of secondary data are other methods that are available and growing in popularity among researchers. Most of the observational tools are intended to be used by trained observers, although new tools, such as eCPAT are being developed for use by citizens, youth, and other constituencies (BEACH Lab, 2016)

No single audit tool is perfect for all applications. Each has its strengths and weaknesses. Some are shorter and take less time to complete, while others are longer and provide greater

depth. Some capture general data on a wide range of features, and others capture more data on fewer features. Testing has found some tools to be more reliable on certain features than others, although direct observation tools have been found reliable on most items (Layton, 2015). In general, reliability is highest for objective items that rate presence and number of features. Reliability tends to be lower for more subjective items and ones that may change over a relatively short timeframe.

### *The GRASP®-IT Audit Tool*

The GRASP®-IT audit tool was developed as part of the composite values methodology for park and recreation master planning (Penbrooke & Layton, 2007). GRASP® is a proprietary brand for the methodology as applied by Design Concepts, CLA, Inc. and GreenPlay LLC; and the GRASP®-IT tool is the audit instrument used to capture data on characteristics of parks and other amenities related to parks and recreation services. The GRASP®-IT tool captures data on approximately 70 individual feature types (GRASP® components) and 15 overall site attributes (GRASP® modifiers). The distinction between components and modifiers will be explained further in a later section. GRASP®-It is designed for use by trained auditors using direct observation. For each item, a score is assigned on a Likert scale of 1 to 3 to rate the item on its “functionality for its intended purpose at that location”. The scale ranges from a low of “1” (below expectations) to a high of “3” (exceeds expectations). Validity and reliability testing for the GRASP®-IT tool are underway at this time.

The GRASP®-IT tool was used for this study in order to test its application in the health-based planning of park systems. It has previously been used primarily for measuring levels of service (LOS) and equity related to park and recreation needs, although it has also been used in planning for cost recovery and recreation programming. The increasing focus on health

outcomes related to parks drives the need to develop effective planning tools for park planners, designers, and managers to use in making decisions that will support public health goals.

### *Approach*

The current list of GRASP®-IT items were reviewed for each item's potential relevance to the five categories of health outcomes (Table 2). Each item may contribute to multiple health outcomes. Additional items may be developed in the future to fill gaps identified through studies like this one. The coding was performed by myself, based on professional opinion and knowledge of the literature, and is intended only as an example of how such a coding scheme might look. The coding could be refined through additional research and input from experts through methods such as the Delphi technique (Habibi et al., 2014).

The resulting list of items was compared with the literature to evaluate the evidence base for each item's application to health outcomes. It was through that process that the decision was made to focus on physical health indicators for the purposes of this study. These were used to perform an assessment of several park sites in Cary, NC. The results were analyzed to identify the following for each item:

- Type of data (categorical, ordinal, interval)
- Ease of acquiring the data (is it easily measured in a meaningful way?)
- Usefulness of the data (issues, ambiguities, etc.)
- Strength of the evidence supporting the data

Findings and conclusions to be drawn as to which items and measures have the greatest potential for incorporation into an overall strategy for planning parks and recreation systems with health outcomes in mind are discussed later in this report.

**Table 2. Potential Applicability of GRASP® Components to Categories of Public Health**

COMPONENT	Physical	Mental	Social	Environmental	Economic
Ballfield					
Basketball					
Batting Cage					
Complex, Ballfield					
Complex, MP Field					
Complex, Tennis					
Concessions					
Disk Golf					
Dog Park					
Educational Experience					
Event Space					
Fitness Course					
Garden, Community					
Garden, Display					
Horseshoes					
Loop Walk					
MP Field, Large					
MP Field, Small					
Multiuse Court					
Natural Area					
Open Turf					
Open Water					
Other-Active					
Passive Node					
Picnic Grounds					
Playground, Destination					
Playground, Local					
Public Art					
Shelter					
Shelter, Group					
Shelter, Shade					
Skate Park					
Tennis					
Track, Competition					
Trail, Multi-use					
Trail, Primitive					
Trailhead					
Volleyball					
Water Access, Developed					
Water Access, General					

## **The Metrics**

Each of the five categories of health were initially examined for this study. An assessment of the evidence base for the correlation of greenspace with each dimension of health resulted in the decision to focus on a single dimension: physical health, particularly as related to physical activity.

### *Physical Health*

The evidence base for physical health is perhaps the strongest of the five categories. Studies have linked the availability of greenspace to increased physical activity and, by extension, potentially lower risk of obesity and other related diseases. Bauman, et al. (2012) report that a review of the literature showed that among a variety of environmental variables, the most convincing relationship to physical activity was found with recreation facilities and locations, followed by transportation environment and aesthetics.

Common metrics for parks and greenspace include total land available, number of park locations available, distance to greenspace, and features within the greenspace. Among these, features within greenspace seems to be emerging as the most significant contributor to park use. McCormack et al. (2010) conclude that “attributes of parks appear to be as important as their location in influencing usage” (725). Two variables that Kaczynski et al. (2016) found to be significantly associated with park use were 1) the number of parks within one mile, and 2) an average park quality index for parks within one mile. However, distance to the nearest park and the amount of park space within one mile were not found to be significantly correlated with park use in their study. In contrast, a summary of existing research published by Active Living Research (ALR) in 2010 cites evidence that park proximity is associated with higher levels of park use and physical activity, particularly among youth (Active Living Research, 2010). That

same summary found evidence that having more parks and more park acreage within a community is associated with higher physical activity levels. Thus, the evidence for distance and quantity of park land and locations as indicators of physical health is inconclusive. The ALR study also indicates that within parks, people tend to be more physically active on trails, at playgrounds and at sports facilities, and that park aesthetics, condition and safety may be associated with park visitation and physical activity levels within parks. While quantitative measures have long been used in research and policy for parks services, the role of qualitative measures such as aesthetics, condition and safety is an emerging aspect of greenspace research. Recent studies, such as Kaczynski et al. (2016) are finding that park quality is an important aspect of park use. Smiley et al. (2015) found a preference for enhanced park quality over the provision of new facilities in a study of minority populations in Houston, Texas.

Thus, evidence from the literature points to park features and park quality as significant attributes associated with visits to greenspace and physical activity, suggesting that a metric which incorporates both the number of features within a park and overall site quality could be useful in assessing the park's contribution towards physical activity. The incorporation of park acreage into the metric is less definitive. While total park acreage within a community has been identified as potentially having an effect on physical activity (Cohen et al., 2010), it may be the greater number of features often found in larger parks that contribute to that effect (Giles-Corti et al., 2005). If so, including park acres in the metric could result in double-counting park features. The way this was addressed in the metrics will be discussed later in this paper.

#### *Park Components and Physical Activity*

The contribution of individual features towards physical activity varies. Cohen et al. (2010) found that gymnasiums and baseball fields were the busiest areas, while areas most

frequently used were dog parks, walking paths, water features, and multipurpose fields. The North Carolina State Cooperative Extension Service (Floyd et al., 2016) provides a listing of features commonly found in parks and a rating of the total energy expenditure within each feature by all participants. The list of features can be approximately equated to the set of GRASP® components described earlier. Also included is a rating for the energy expended above and beyond the sedentary rate for each feature and a re-coding of that into categories of low, medium, and high. This results in a relative value for each feature in terms of its effectiveness at generating physical activity within the population. This value was incorporated into a metric that is computed by adding up the physical activity ratings for all of the components within the site.

Once measures for individual parks are computed, they can be aggregated to produce additional metrics that assess the performance of an entire park system or set of greenspaces within a given jurisdiction.

#### *A Proposed Physical Activity Metric*

The metric developed for this study is derived from the inventory of features located within site using the GRASP®-IT audit tool, combined with physical activity ratings from the NC Cooperative Extension document. The metric was tested in a case study of parks in Cary, North Carolina.

The GRASP® methodology assigns a functional score to each of a number of features found within a site. The features are divided into two categories: *components*, which are those things that individuals visit a park to use, such as fields, courts, picnic facilities, and playgrounds, as well as paths, natural areas, open lawns, and other items related to passive use; and *modifiers*, which support and enhance the experience of using the site's components. Modifiers include such things as restrooms, drinking water, seating, shade, and the aesthetic

quality of the site. A full listing of GRASP® components and modifiers is found in the appendix of this report. The theory behind GRASP® is that when an individual visits a park to make use of one or more components found there, such as a playground, tennis court, picnic area, or water feature, that person’s experience is enhanced or diminished by the presence or absence of modifiers at the site. For example, if a restroom is available at the park, the person might enjoy their experience of the playground or tennis court more and remain in the park longer or visit more often, thereby realizing more value from the components.

By assigning a physical activity rating from the NC Extension document to each component in the GRASP®-IT audit for a particular site and applying the modifiers found at the site, it is possible to determine a total physical activity value for that site. This value can then be used for a variety of purposes, including comparing the performance of one site to another in terms of its contribution to physical health. It might also be used in assessing the total value of all sites within a community or park system, and to look at the distribution of assets across a jurisdiction. This is an important environmental justice consideration, especially if equitable allocation of assets or the targeting of assets to populations of highest need or risk is a goal.

*Demonstration Test Case: Town of Cary*

To test the concept of a physical activity performance metric for sites, a set of 32 parks in Cary, North Carolina was used. Descriptive statistics for the parks are shown in Table 3.

**Table 3. Descriptive Statistics for Parks in the Study**

	<b>N</b>	<b>Range</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Size in Acres	32	274.26	0.63	274.89	50.99	74.66
Number of Components	32	41	1	42.00	11.06	9.94
Modified Value	32	5.6	2.2	7.80	5.59	1.75

The data were derived from a GRASP®-IT inventory of park assets performed as part of a recent city-wide parks and recreation master plan. As described earlier, the GRASP®-IT tool assigns a score for each component at a particular site based on its functionality. Modifier scores are also assigned for the entire site and can be thought of as an index of park quality for the site. The scores of the modifiers are summed and classified into a ranked value for the entire site that is then multiplied by each component's functional score to obtain a total value for that component at that site, referred to here as the Modified Component Value. The total value for all of the components at a site can be summed to obtain a total value for the entire site. Those values were available for Cary's parks from the prior master planning study. However, for this study an additional measure of physical activity was added by assigning an Active Energy Expenditure (AEE) rating from the NC Extension report to each component. The net value of each component is then calculated as follows. (Items in parentheses make up the Modified Component Value):

$$\text{Component Physical Score (CPS)} = (\text{Functional Score of Component} \times \text{Modifier Value of Site}) \times \text{AEE Rating of Component}$$

The CPS's for all of components at each park were summed to derive a Total CPS value for the park. The results can be found in Table 4.

Evidence in the literature suggests that the influence of park size on park visitation and usage may be related to the tendency for larger parks to have more features and that it is the features rather than the park size that affect park use (Giles-Corti et al., 2005). Thus, including park size in the physical activity metric could unintentionally be double-counting the influence of park features. To investigate this, the statistical relationship between park size and the total

number of components was analyzed in SPSS. Results show that the number of components in a park is positively correlated with the number of acres with a correlation of  $r = .600$  ( $R^2 = .360$ ;  $P < .01$ ). While this is evidence of correlation, it does not account for all of the variation in the number of components. It also does not take into account the fact that larger parks might tend to have higher modifier values, so a separate correlation analysis was done for park size and modifier values, yielding a non-significant correlation of  $r = .264$  ( $R^2 = .070$ ;  $P = .072$ ). Finally, a correlation analysis was run on park size and the CPS for all parks, resulting in  $r = .548$  ( $R^2 = .300$ ;  $P = .001$ ).

While the statistical analyses show some correlation between park size and park features, there is enough variation left unexplained in the values for Cary's parks to warrant including park size in the metric. Therefore, the CPS for each park was multiplied by the size of the park in acres to arrive at a final Total Physical Health Score for each park. Results are shown in Table 4. Descriptive statistics for the final scores are shown in Table 5.

The resulting scores cover an immense range of values. By transforming the scores to a logarithmic values, the scale is easier to comprehend. This also allows for a clearer picture of the distribution of values, which could offer clues to what a proposed target range for values ought to be. The values were transformed to base 10 logarithms (Log10) in SPSS, and the distribution of values are shown in Figure 2. The Log10 values are shown ascending order in Table 7.

Also, while the scoring algorithm is rooted in evidence in the literature, there is no clear basis for what the target value should be for any given park. In light of that, it makes sense to consider the scores an ordering system rather than an empirical value. One approach would be to divide them into categories of low, medium, and high, as shown in Table 6. While this simplifies the relationship between parks within Cary, it does not solve the question of what the "right"

value is for a given park, nor does it allow for comparison between a park in Cary and one in another community, other than to reveal the relative value of that park compared to others within its own jurisdiction.

**Table 4. Metrics for Parks in Cary**

Location	Total Components	Modifier Value	AEE Total	CPS	Size in Acres	Total Physical	Log10
Annie Jones Greenway 1	2	4.80	3	28.8	2.66	76.61	1.88
Annie L Jones Park	12	4.80	15	213.6	9.76	2084.74	3.32
Black Creek GW Trailhead	1	4.40	1	8.8	1.22	10.74	1.03
Cary High School	4	2.20	10	8.8	38.96	342.85	2.54
Cary Tennis Park	37	7.80	19	1630.2	18.46	30093.49	4.48
Davis Drive Park	10	4.80	15	230.4	15.72	3621.89	3.56
Davis Drive School Park	9	4.80	24	201.6	55.38	11164.61	4.05
Dorothy Park	1	4.40	1	4.4	0.79	3.48	0.54
Fred G Bond Metro Park	42	7.80	43	1053	274.89	289459.17	5.46
Green Hope Elemen School Park	12	4.80	20	206.4	15.42	3182.69	3.50
Green Hope High School	10	4.80	23	57.6	72.48	4174.85	3.62
Harold D Ritter Park	9	7.80	16	273	34.65	9459.45	3.98
Heater Park	1	4.80	1	7.2	1.49	10.73	1.03
Hemlock Bluffs Nature Preserve	6	7.20	7	122.4	139.85	17117.64	4.23
Koka Booth Amphitheatre	7	7.80	7	167.7	14.11	2366.25	3.37
Lexie Lane Park	3	2.40	5	22.8	2.72	62.02	1.79
Lions Park	4	4.80	7	67.2	6.15	413.28	2.62
MacDonald Woods Park	6	4.80	9	96	14.13	1356.48	3.13
Marla Dorrel Park	13	7.80	17	343.2	17.51	6009.43	3.78
Middle Creek School Park	26	7.20	33	824.4	166.88	137575.87	5.14
Mills School Park	9	4.80	22	187.2	195.79	36651.89	4.56
North Cary Park	19	7.80	22	577.2	60.82	35105.30	4.55
Preston Soccer Fields	2	2.20	6	26.4	14.99	395.74	2.60
Robert V Godbold Park	18	5.20	22	319.8	24.61	7870.28	3.90
Rose Street Park	2	10.80	3	29.4	0.63	18.52	1.27
RS Dunham Park	12	4.80	16	249.6	5.58	1392.77	3.14
Sears Farm Road Park	16	7.80	22	444.6	12.91	5739.79	3.76
T E Brooks Park USA Baseball	23	4.80	37	403.2	224.28	90429.70	4.96
Urban Park	2	4.80	3	31.2	1.15	35.88	1.55
WakeMed Soccer Park	17	7.20	21	547.2	163.3	89357.76	4.95
Walnut Street Park	11	7.20	19	298.8	12.7	3794.76	3.58
White Oak Park	8	7.80	19	257.4	11.83	3045.04	3.48

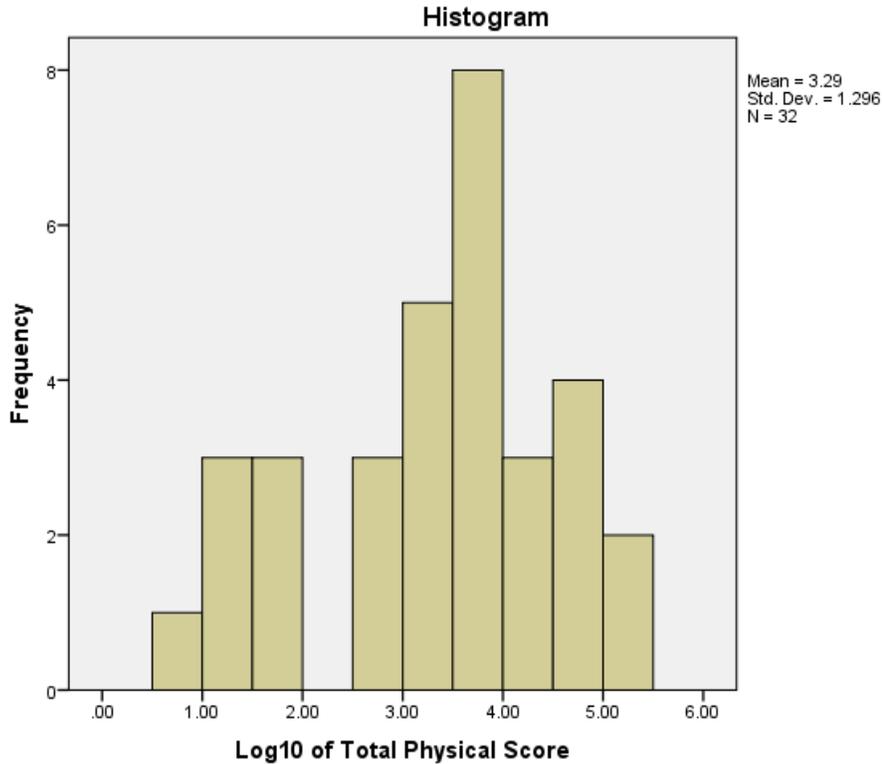
**Table 5. Descriptive Statistics for Total Physical Health Scores for Parks in Cary**

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Number of Components	32	41	1	42	11.06	9.938
Modifier Value	32	5.60	2.20	7.80	5.5875	1.75164
AEE Total	32	42.00	1.00	43.00	15.2500	10.62559
Size in Acres	32	274.26	.63	274.89	50.9944	74.66308
Total CPS	32	1625.80	4.40	1630.20	279.3594	347.11601
Total Physical Health Score	32	289455.69	3.48	289459.17	24763.2406	57767.92494
Log10 of Total Physical Score	32	4.92	.54	5.46	3.2922	1.29609
Valid N (listwise)	32					

The histogram in Figure 2 shows clustering around the Log10 values of 1.5 and 3.75. A look at the specific parks around the two clusters shows that the lower value tends to be made up of small parks that the Town of Cary classifies as “Mini Parks” (e.g., Heater, Rose Street, Urban) and one classified as “Neighborhood Park”, but which was rated low in the original inventory and considered by Cary parks staff at that time to be an under-performing park. The higher cluster is made up of locations classified as “Neighborhood Parks”, which contain more features and are intended to serve a larger area (e.g., Sears Farm Road Park, Robert V. Godbold Park, Marla Dorrel Park). At the highest end of the scale are large parks that Cary classifies as “Community” and “Metro” parks (North Cary Park, Fred G. Bond Metro Park) and venue-type locations classified by Cary as “Special Use Facilities” that have concentrations of sports fields and active-use features (e.g., T.E. Brooks Park USA Baseball and WakeMed Soccer Park).

**Table 6. Log10 Values for Parks in Cary**

Location	Classification	Log10	Recoded Log10	
Dorothy Park	Mini Park	0.54	1.00	
Heater Park	Mini Park	1.03	1.00	
Black Creek GW Trailhead	Special Use Facility	1.03	1.00	
Rose Street Park	Mini Park	1.27	1.00	
Urban Park	Mini Park	1.55	1.00	
Lexie Lane Park	Neighborhood Park	1.79	1.00	
Annie Jones Greenway 1	Special Use Facility	1.88	1.00	
Cary High School	Special Use Facility	2.54	1.00	
Preston Soccer Fields	Special Use Facility	2.60	1.00	
Lions Park	Neighborhood Park	2.62	1.00	
MacDonald Woods Park	Neighborhood Park	3.13	1.00	Lowest Third
RS Dunham Park	Neighborhood Park	3.14	2.00	
Annie L Jones Park	Neighborhood Park	3.32	2.00	
Koka Booth Amphitheatre	Special Use Facility	3.37	2.00	
White Oak Park	Neighborhood Park	3.48	2.00	
Green Hope Elemen School Park	Neighborhood Park	3.50	2.00	Median = 3.53
Davis Drive Park	Special Use Facility	3.56	2.00	
Walnut Street Park	Special Use Facility	3.58	2.00	
Green Hope High School	Special Use Facility	3.62	2.00	
Sears Farm Road Park	Neighborhood Park	3.76	2.00	
Marla Dorrel Park	Neighborhood Park	3.78	2.00	
Robert V Godbold Park	Neighborhood Park	3.90	3.00	Highest Third
Harold D Ritter Park	Community Park	3.98	3.00	
Davis Drive School Park	Special Use Facility	4.05	3.00	
Hemlock Bluffs Nature Preserve	Special Use Facility	4.23	3.00	
Cary Tennis Park	Special Use Facility	4.48	3.00	
North Cary Park	Community Park	4.55	3.00	
Mills School Park	Special Use Facility	4.56	3.00	
WakeMed Soccer Park	Special Use Facility	4.95	3.00	
T E Brooks Park USA Baseball	Community Park	4.96	3.00	
Middle Creek School Park	Community Park	5.14	3.00	
Fred G Bond Metro Park	Metro Park	5.46	3.00	



**Figure 2. Histogram of Logarithmic Values for Park Physical Activity Scores**

### *Analyzing the Results*

Given the inconclusive nature of the evidence for the relationship of park acreage to physical activity, a regression analysis was run to determine the relative effects of the main variables (total AEE, modifier value, and park acreage) in predicting the Log10 Score of a park (Table 7). Results show that the three variables together account for about 80% of the variation in Log10 scores for parks in Cary ( $R^2 = .822$ ; Adjusted  $R^2 = .80$ ;  $F = 43.19$ ;  $P = .000$ ). Total AEE accounts for the largest portion of the variance in the Log10 Score, with the park's modifier value next, and park size as the least important (and non-significant) contributor of the three. Given the empirical values from NCSU Extension and evidence from other sources for the contributions to physical activity from park features, it seems appropriate for AEE to be weighted more heavily in the equation than park quality and park size. The desired relative

proportions of each variable could be appropriately addressed through the Delphi method or other process until more conclusive and empirical evidence is available.

**Table 7. Log10 Values for Total Physical Scores**

	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>
(Constant)	0.883	0.346		2.553	0.016
AEE Total	0.077	0.015	0.629	5.028	0.000
Modifier Value	0.195	0.066	0.263	2.945	0.006
Size in Acres	0.003	0.002	0.172	1.482	0.149
a. Dependent Variable: Log10 of Total Physical Score					

*Landscape Performance at the System Scale: Aggregated Measures for a Specific Geographical Area and the Role of Proximity*

While the performance measurement for individual parks described in this paper is based on the behaviors of people once they are at the park and does not incorporate travel behaviors to and from it, the relationship between parks and their geography should be considered when measuring the performance of parks as a system of landscapes. Access and proximity become part of the performance equation. Recent studies have established a positive link between access to greenspace and public health (Sallis et al., 2012; Kaplan, 1995; Boone et al., 2009), and active transit to and from the greenspace location is an important aspect of this association (e.g., Heinrich et al., 2007; Tilt, 2009; Wang et al., 2013).

The use of standardized buffers to measure access has helped researchers study areal geographic units, such as a park system or jurisdictional region (Brownson, et al., 2009). Numerous studies have used buffers to analyze access to greenspace within walking distance of residences (e.g., Lee and Moudon, 2006; Olaru et al., 2007; Lin and Gau, 2004). While there are a variety of ways to measure walking distances to parks and other greenspace features, there is no adopted standard. The range for what is considered a walkable distance typically falls

between 400 meters and one kilometer (0.25 miles to 0.621 miles), as shown by the sample of studies summarized in Table 8.

**Table 8. Comparison of Buffer Methods and Access Distances in Studies**

Study	Buffers		Access Distance Referenced	Notes
	Euclidian	Network		
Brownson, et al. (2009)	X		400 to 3200 Meters	400 Meters = 0.25 Miles, 3200 Meters = 1.98 Miles
Chang and Liao (2011)	X	X	Varies	Gravity model uses whatever distance exists
Cho & Choi, 2005)		X	Varies	Gravity model uses whatever distance exists
Dills, et al. (2012)		X	1 Mile	1 Mile = 1609 Meters
Forsyth, et al. (2007)	X		1.00 Kilometer	1 Kilometer = 0.62 Miles
Giles-Corti, et al. (2006)			10- 15 Minute Walk	0.25 Miles = 402 Meters (Buffers referenced but not reported)
Godbey (2009)			1 Kilometer and 1 Mile	0.25 Miles = 402 Meters (Buffers referenced but not reported)
Heinrich, et al. (2007)	X		0.80 Kilometers	0.8 Kilometers = 0.50 Miles
Nichols (2001)	X	X	0.50 Miles	0.50 Miles = 805 Meters
Oh and Jeong (2007)	X	X	1.00 Kilometer	1 Kilometer = 0.62 Miles
Smoyer-Tomic, et al. (2004)	X		0.80 Kilometer	0.8 Kilometers = 0.50 Miles
Talen (2010)			5 Minutes (1/4 Mile)	0.25 Miles = 402 Meters (Buffers referenced but not reported)
TPL (2004)	X		0.25 Miles	0.25 Miles = 402 Meters

Similarly, there is no consensus on how distance should be measured. A common type of buffer is referred to as Euclidian (Smoyer-Tomic et al., 2004) or “straight-line” (Cho & Choi, 2005). Another type preferred by some researchers is the network buffer, which is measured along the actual network of streets to the access point of the park. This addresses a disadvantage of the radius method: it assumes parks to be open to access at all points along their boundaries (Nichols, 2001).

However, not everyone agrees that network buffers are always preferable. Smoyer-Tomic et al. (2004) used Euclidian buffers because digital representations of street networks may lack the detail to account for sidewalks, shortcuts and other aspects of travel by foot or bike. Dills et al. (2012) add that pedestrians may sometimes choose routes based on perceptions of walkability rather than shortest distance. In general, Euclidian buffers are likely to over-sample a service area, while network buffers may under-sample them (Layton, 2014).

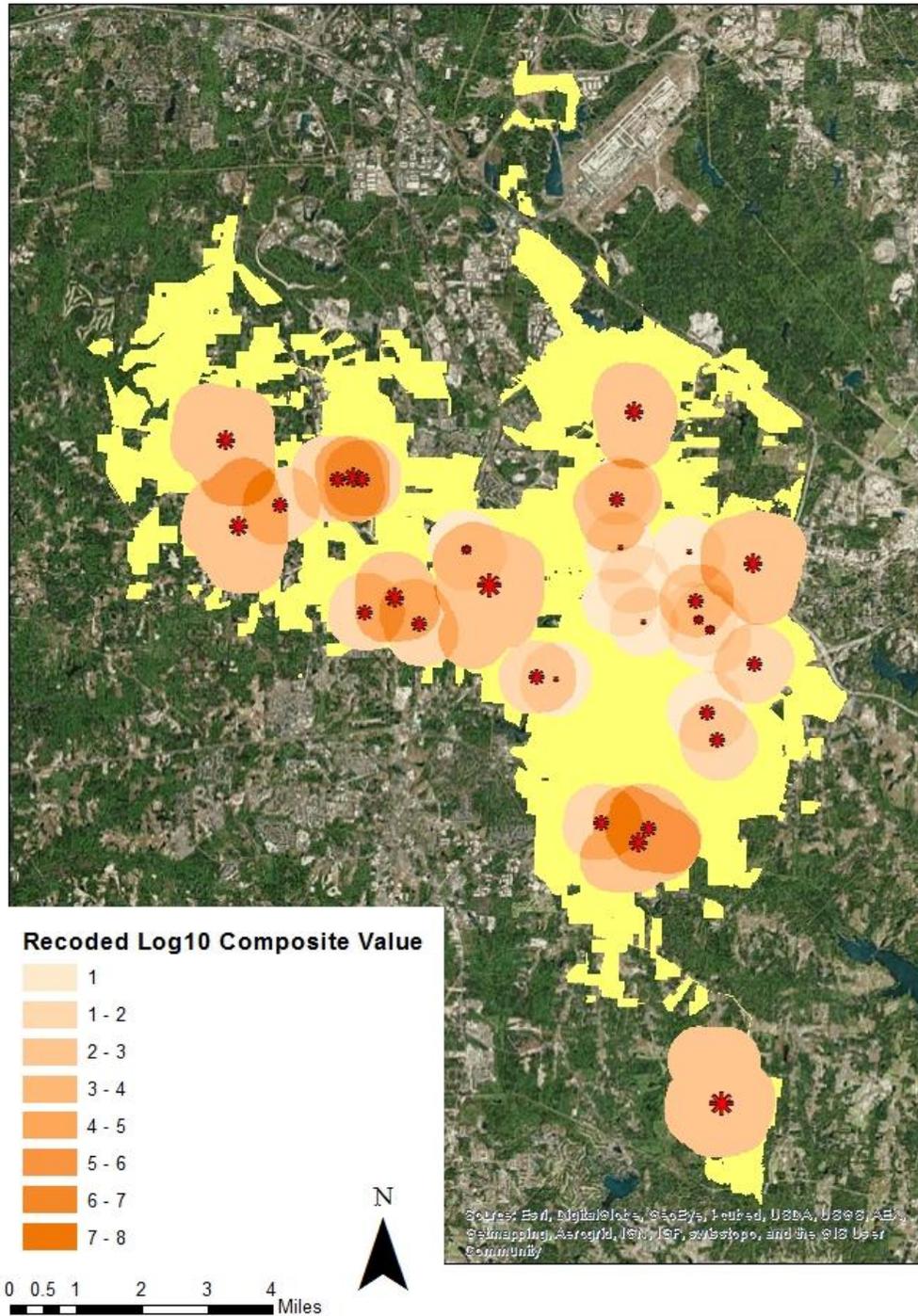
In the GRASP® methodology, scores for various features are used in aggregate to determine a Level of Service (LOS) value for any given location within a study area or

jurisdiction. The resultant choropleth map, in which shades or patterns represent the measurement of the statistical value being displayed, provides the range of values across the geography as well as the value at any given location. In the GRASP® system, these are referred to as ‘Perspectives’. This technique can be used to measure aggregate LOS for park physical activity scores. To demonstrate, the physical health values for Cary’s parks were used to create a GRASP® Perspective with ArcMap 10.1 (Figure 3).

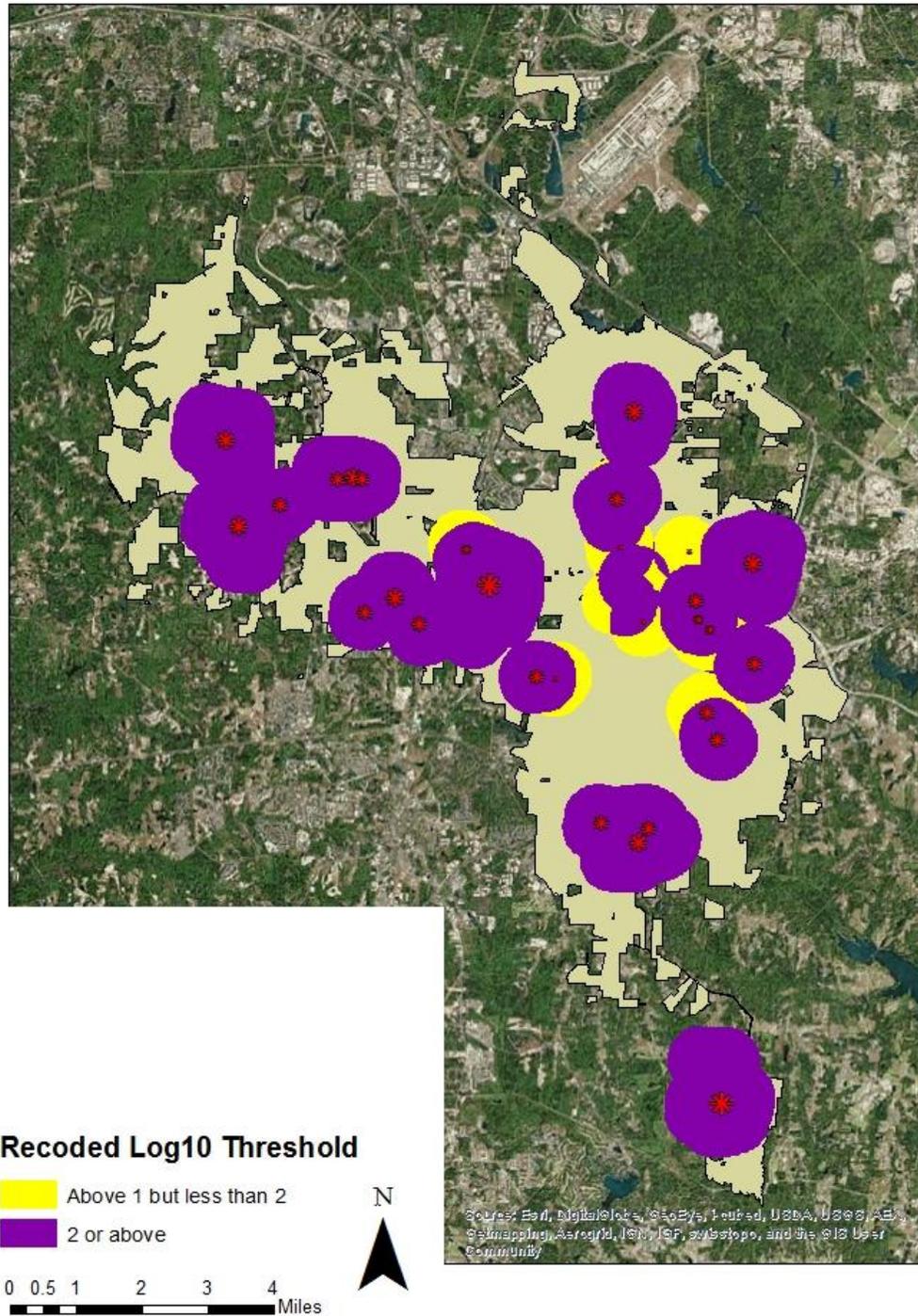
The recoded Log10 values were used in order to simplify the results, but the full Log10 values, or even the total physical scores could be used to create a more intricate map with greater subtlety between values.

The first step in the process was to enter the values for each park parcel into the attribute table of the park locations layer in ArcMap 10.1. The parcels were then buffered with a ½ mile Euclidian buffer, and the recoded Log10 score for each park was assigned to its corresponding buffer. Using customized GRASP® scripts, the buffers were combined to create a map displaying the composite values that result when the buffers are overlain on one another (Figure 3). The yellow background on the map indicates the geographic corporate extents of Cary at the time the data were collected. The shades on the map represent composite values for recoded Log10 from all parks whose buffer overlays a given location. Total values range from zero (no shading) to 8. Additional performance measures for the entire system of parks can be extracted from the GIS using this information. For example, 30.30 square miles of Cary’s total land mass of 55.60 square miles (55%) fall within a buffer, meaning that anyone living within that area can be considered to have walkable access to parks with features that support physical activity.

Figure 4 shows areas with value at or above the median recoded Log10 score of 2.



**Figure 3. Composite Map of Recoded Log10 Values for Physical Health**



**Figure 4. Areas At or Above Median Recoded Log10 Value**

A wide variety of possible performance metrics are available once scores have been assigned to parcels and imported into the GIS. It is possible to import census data and determine the demographics of residents who live within different parts of the Town of Cary. Thus, performance measures could target the number of people living within proximity of a certain threshold of physical activity values within a prescribed area.

*Extension of the Methodology to other Dimensions of Health*

A process similar to the one shown here for physical health could be applied to the other four dimensions of health identified earlier. To illustrate the concept, Figure 5 shows an example in which components have been categorized for health dimensions according to Table 2. The Modified Component Values (Functional Score of Component x Modifier Value of Site) were totaled for each park. (Park size and AEE values were not used in this simplified example.) This example is offered for illustration purposes only, as further research is needed to validate the assumptions on which the categories are assigned and assessed, but it suggests how scores for all of the health dimensions could be blended into an overall performance metric for health goals. GIS mapping could then be used as described above to generate a number of additional metrics, such as percentage of the population served within a given area and the mix or balance of the system in addressing the full range of health dimensions.

LOCATION	Physical	Mental	Social	Environmental	Economic	Site Totals
Fred G Bond Metro Park	20	12	37	5	15	89
Cary Tennis Park	33	1	36	1	3	74
Middle Creek School Park	22	2	26		3	53
T E Brooks Park USA Baseball	17	2	20	1	3	43
North Cary Park	11	3	16	2	6	38
Robert V Godbold Park	12	4	16	1	2	35
WakeMed Soccer Park	10	1	14	1	5	31
Sears Farm Road Park	5	10	9	2	1	27
Green Hope Elemen School Park	10	2	11	1	1	25
Marla Dorrel Park	5	7	8	2	2	24
Annie L Jones Park	10		12			22
RS Dunham Park	9	1	10	1	1	22
Davis Drive School Park	8	1	9	1	2	21
Green Hope High School	10		10		1	21
Davis Drive Park	8	1	10		1	20
Harold D Ritter Park	6	3	8	2	1	20
Walnut Street Park	3	7	6	3	1	20
Mills School Park	8		9		2	19
White Oak Park	5	3	7	3		18
Koka Booth Amphitheatre		3	4	2	4	13
MacDonald Woods Park	3	3	4	2	1	13
Hemlock Bluffs Nature Preserve	1	5	3	2	1	12
Cary High School	4		4		1	9
Lions Park	2	1	3	1	1	8
Lexie Lane Park	3		3			6
Annie Jones Greenway 1	1		2		1	4
Preston Soccer Fields	2		2			4
Rose Street Park	2		2			4
Urban Park	2		2			4
Black Creek GW Trailhead			1			1
Dorothy Park		1				1
Heater Park		1				1
System Totals	232	74	304	33	59	702

**Figure 5. Potential Model of Multi-Dimensional Metric**

*Generalization and Transferability of the Metric*

As mentioned earlier, the metric can be used to compare the relative rank of one park in Cary to another in terms of its potential performance at generating physical activity. However, there is no standard set of values against which the Log10 scores can be compared to determine if they are meeting a performance standard. One way to address this would be to perform the equation on a broader sample of parks from a wider range of locations and look for normative values among the results, much like what was done with the histogram in Figure 2. This could then be used to establish a normative threshold or target value for the Log10 score for a park to

be considered adequate for addressing physical activity needs. It is assumed that the AEE values are somewhat generalizable, since they have been published for use in the NCSU Extension report. The GRASP® protocols used in the scoring methodology to assign functional scores for components and modifiers are intended to account for variations in local conditions, preferences, and expectations, and as such do not need re-scaling or calibrating to different locales. While park sizes can vary from one locale to another, there is a certain amount of consistency due to the fact that park systems have historically been developed to normative standards generally adopted by agencies across the country. While such standards are considered obsolete, they persist and are still being utilized. Thus, variations in park sizes from one locale to another should not be problematic for generalization of the metric.

A better way to establish standards is to use the Log10 metric in future research to look for correlations between it and the likelihood of residents achieving recommended levels of physical activity. A threshold might be found where the likelihood of an individual meeting physical activity goals increases when park Log10 values are at a certain level within a given proximity of the individual's residence.

### *Limitations and Conclusions*

The performance metrics described here are rooted in evidence found in the literature relating parks and greenspace to public health goals. The evidence base, however, while expanding, is incomplete and lacking in some dimensions. Until conclusive evidence is found, application of the metrics will be limited to providing suggestions, recommendations, and guidelines for best practices. In the meantime, they may be useful in conducting research that will lead to their improvement and adoption as verifiable tools for evaluating and managing greenspace landscapes and landscape systems.

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**Appendix A. GRASP® Outdoor Component List**

<b>GRASP® Outdoor Component List</b>	
<b>GRASP® Outdoor Component Type</b>	<b>Definition</b>
Adventure Course	An area designated for activities such as ropes courses, zip-lines, challenge courses, etc. Specify type in comments.
Amusement Ride	Carousel, train, go carts, bumper cars, or other ride upon features. Has an operator and controlled access.
Aquatics, Complex	A facility that has at least one immersion pool and other features intended for aquatic recreation.
Aquatics, Lap Pool	A man-made basin designed for people to immerse themselves in water and intended for swimming laps.
Aquatics, Leisure Pool	A man-made basin designed for people to immerse themselves in water and intended for leisure water activities. May include zero depth entry, slides, and spray features.
Aquatics, Spray Pad	A water play feature without immersion intended for the purpose of interacton with moving water.
Aquatics, Therapy Pool	A temperature controlled pool intended for rehabilitation and therapy.
Basketball Court	Describes a dedicated full sized outdoor court with two goals.
Basketball, Practice	Describes a basketball goal for half-court play or practice. Includes goals in spaces associated with other uses.
Batting Cage	A stand-alone facility that has pitching machines and restricted entry.
Bike Complex	A facility that accommodates various bike skills activities with multiple features or skill areas.
Bike Course	A designated area for non-motorized bicycle use. Can be constructed of concrete, wood, or compacted earth. May include a pump track, velodrome, skills course, etc.
Camping, Defined	<u>Defined</u> campsites that may include a variety of facilities such as restrooms, picnic tables, water supply, etc. Quantity based on official agency count. For use only if quantity of sites is available. Use "Camping, Undefined" for other instances.
Camping, Undefined	Indicates allowance for users to stay overnight in the outdoors in informal and/or <u>undefined</u> sites. Receives a quantity of one for each park or other location.
Climbing, Designated	A designated natural or man-made facility provided and/or managed by an agency for the purpose of recreation climbing not limited to childs play.
Climbing, General	Indicates allowance for users to participate in a climbing activity. Receives a quantity of one for each park or other location.
Concession	A facility used for the selling, rental, or other provision of goods and services to the public.
Diamond Field	Describes softball and baseball fields of all kinds suitable for organized diamond sport games. Not specific to size or age-appropriateness.
Diamond Field, Complex	Multiple ballfields at a single location suitable for tournaments.

Diamond Field, Practice	Describes any size of grassy area used for practice. Distinguished from ballfield in that it doesn't lend itself to organized diamond sport games. Distinguished from open turf by the presence of a backstop.
Disc Golf	Describes a designated area that is used for disc golf. Quantities: 18 hole course = 1; 9 hole course = .5
Dog Park	An area designated specifically as an off-leash area for dogs and their guardians.
Educational Experience	Signs, structures, or historic features that provide an educational, cultural, or historic experience. Receives a quantity of one for each contiguous site. Distinguished from public art by presence of interpretive signs or other information.
Equestrian Facility	Area designated for equestrian use. Typically applied to facilities other than trails.
Event Space	A designated area or facility for an outdoor class, performance, or special event including amphitheater, band shell, stage, etc.
Fitness Course	One or more features intended for personal fitness activities. Receives a quantity of one for each complete grouping.
Game Court	Outdoor court designed for a game other than tennis, basketball, volleyball, as distinguished from a multi-use pad including bocce, shuffleboard, lawn bowling, etc. Specify type in comments. Quantity counted per court.
Garden, Community	Describes any garden area that provides community members a place to have a personal vegetable or flower garden.
Garden, Display	Describes any garden area that is designed and maintained to provide a focal point or destination including a rose garden, fern garden, native plant garden, wildlife/habitat garden, arboretum, etc.
Golf	A course designed and intended for the sport of golf. Counted per 18 holes. Quantities: 18 hole course = 1; 9 hole course = .5
Golf, Miniature	A course designed and intended for use as a multi-hole golf putting game.
Golf, Practice	An area designated for golf practice or lessons including driving ranges and putting greens.
Horseshoe Court	A designated area for the game of horseshoes including permanent pits of regulation length. Quantity counted per court.
Horseshoes Complex	Several regulation horseshoe courts in single location suitable for tournaments.
Ice Hockey	Regulation size outdoor rink built specifically for ice hockey games and practice. General ice skating included in "Winter Sport".
Inline Hockey	Regulation size outdoor rink built specifically for in-line hockey games and practice.
Loop Walk	Opportunity to complete a circuit on foot or by non-motorized travel mode. Suitable for use as an exercise circuit or for leisure walking. Quantity of one for each park or other location unless more than one distinct circuit is present.
Multi-Use Pad	A paved area that is painted with games such as hopscotch, 4 square, tetherball, etc. Often found in school yards. As distinguished from "Games Court" which is typically single use.

Natural Area	Describes an area in a park that contains plants and landforms that are remnants of or replicate undisturbed native areas of the local ecology. Can include grasslands, woodlands and wetlands.
Open Turf	A grassy area that is not suitable for programmed field sports due to size, slope, location or physical obstructions. May be used for games of catch, tag, or other informal play and uses that require an open grassy area.
Other	Active or passive component that does not fall under any other component definition. Specify in comments.
Passive Node	A place that is designed to create a pause or special focus within a park and includes seating areas, plazas, overlooks, etc. Not intended for programmed use.
Pickleball Court	A designated court designed primarily for pickleball play.
Picnic Ground	A designated area with a grouping of picnic tables suitable for organized picnic activities. Individual picnic tables are accounted for as Comfort and Convenience modifiers.
Playground, Destination	Playground that attracts families from the entire community. Typically has restrooms and parking on-site. May include special features like a climbing wall, spray feature, or adventure play.
Playground, Local	Playground that is intended to serve the needs of the surrounding neighborhood. Includes developed playgrounds and designated nature play areas. Park generally does not have restrooms or on-site parking.
Public Art	Any art installation on public property. Receives a quantity of one for each contiguous site.
Rectangular Field Complex	Several rectangular fields in single location suitable for tournament use.
Rectangular Field, Large	Describes a specific field large enough to host one adult rectangular field sport game such as soccer, football, lacrosse, rugby, and field hockey. Approximate field size is 180' x 300' (60 x 100 yards). Field may have goals and lining specific to a certain sport that may change with permitted use.
Rectangular Field, Multiple	Describes an area large enough to host one adult rectangular field sport game and a minimum of one other event/game, but with an undetermined number of actual fields. This category describes a large open grassy area that can be arranged in any manner of configurations for any number of rectangular field sports. Sports may include, but are not limited to: soccer, football, lacrosse, rugby, and field hockey. Field may have goals and lining specific to a certain sport that may change with permitted use.
Rectangular Field, Small	Describes a specific field too small to host a regulation adult rectangular field sport game. Accommodates at least one youth field sport game. Sports may include, but are not limited to: soccer, football, lacrosse, rugby, and field hockey. Field may have goals and lining specific to a certain sport that may change with permitted use.
Shelter, Large	A shade shelter or pavilion large enough to accommodate a group picnic or other event for a minimum of 13 seated whether or not benches or picnic tables are provided. Lack of seating may be addressed in scoring.
Shelter, Small	A shade shelter, large enough to accommodate a family picnic or other event for approximately 4-12 persons with seating for a minimum of 4. Covered benches for seating up to 4 people included as a modifier in comfort and convenience scoring and should not be included here.

Skate Feature	A stand-alone feature primarily for wheel sports such as skateboarding, in-line skating, etc. May or may not allow free-style biking. May be associated with a playground but is not part of it. Dedicated bike facilities should be categorized as "Bike Course".
Skate Park	An area set aside primarily for wheel sports such as skateboarding, in-line skating, etc. Attracts users from the entire community. May or may not allow free-style biking. May be specific to one user group or allow for several user types. Can accommodate multiple users of varying abilities. Typically has a variety of concrete or modular features.
Target Range	A designated area for practice and/or competitive target activities. Specify type, such as archery or firearms, in comments.
Tennis Complex	Multiple regulation courts in a single location with amenities suitable for tournament use.
Tennis Court	One standard regulation court suitable for recreation and/or competitive play. Specify Quick Start or other non-standard types in comments.
Tennis, Practice Wall	A wall intended for practicing tennis.
Track, Athletic	A multi-lane, regulation sized running track appropriate for track and field events.
Trail, Multi-Use	A trail, paved or unpaved, that is separated from the road and provides recreational opportunities or connection to walkers, bikers, roller bladers and equestrian users. Paths that make a circuit within a single site are "Loop Walks".
Trail, Primitive	A trail, unpaved, located within a park or natural area that provides recreational opportunities or connections to users. Minimal surface improvements that may or may not meet accessibility standards.
Trail, Water	A river, stream, canal or other waterway used as a trail for floating, paddling, or other watercraft.
Trailhead	A designated staging area at a trail access point. May include restrooms, an information kiosk, parking, drinking water, trash receptacles, seating, etc.
Volleyball Court	One full-sized court. May be hard or soft surface, including grass and sand. May have permanent or portable posts and nets.
Wall Ball Court	Walled courts associated with sports such as handball and racquetball. Specify type in comments.
Water Access, Developed	A developed water access point. Includes docks, piers, kayak courses, boat ramps, fishing facilities, etc. Specify in comments including quantity for each unique type.
Water Access, General	Measures a user's general ability to access the edge of open water. May include undeveloped shoreline. Typically receives quantity of one for each contiguous site.
Water Feature	A passive water-based amenity that provides a visual focal point. Includes fountains and waterfalls.
Water, Open	A body of water such as a pond, stream, river, wetland with open water, lake, or reservoir.
Winter Sport	An area designated for a winter sport or activity such as a downhill ski area, nordic ski area, sledding hill, toboggan run, recreational ice, etc. Specify in comments.

## Appendix B. GRASP® Methodology Exhibits



### Components

Components are elements of greenspace that support, encourage, or facilitate an activity or experience. The activity or experience can be active or passive, structured or unstructured, group or individual. The playground shown here is an example of a component.

### Modifiers

Modifiers are elements within greenspace that support, facilitate, or enhance the comfort and convenience of using greenspace components. This includes shade, restrooms, and pleasant surroundings.



### Scoring of Components

Score of 1: Playground is old, unsafe, obsolete, not up to expectations

Score of 2: Meets expectations for size, condition, type of equipment

Score of 3: Has unique features or qualities beyond those expected



### Scoring of Modifiers

Low Modifier Score: Poorly located, unattractive, lacks seating

Medium Modifier Score: Attractive setting, with shade and benches

High Modifier Score: Restrooms, drinking fountain, benches, shade

### Composite Values Mapping

Each component receives a total score based on it's individual score and the site's modifier scores

Outside of Buffer: score of 0

Score of 1.1

Score of 3.5

Score of 6.3

Score of 2.4

Score of 3.9

**Appendix C – Energy expenditure ratings from NCSU Extension**

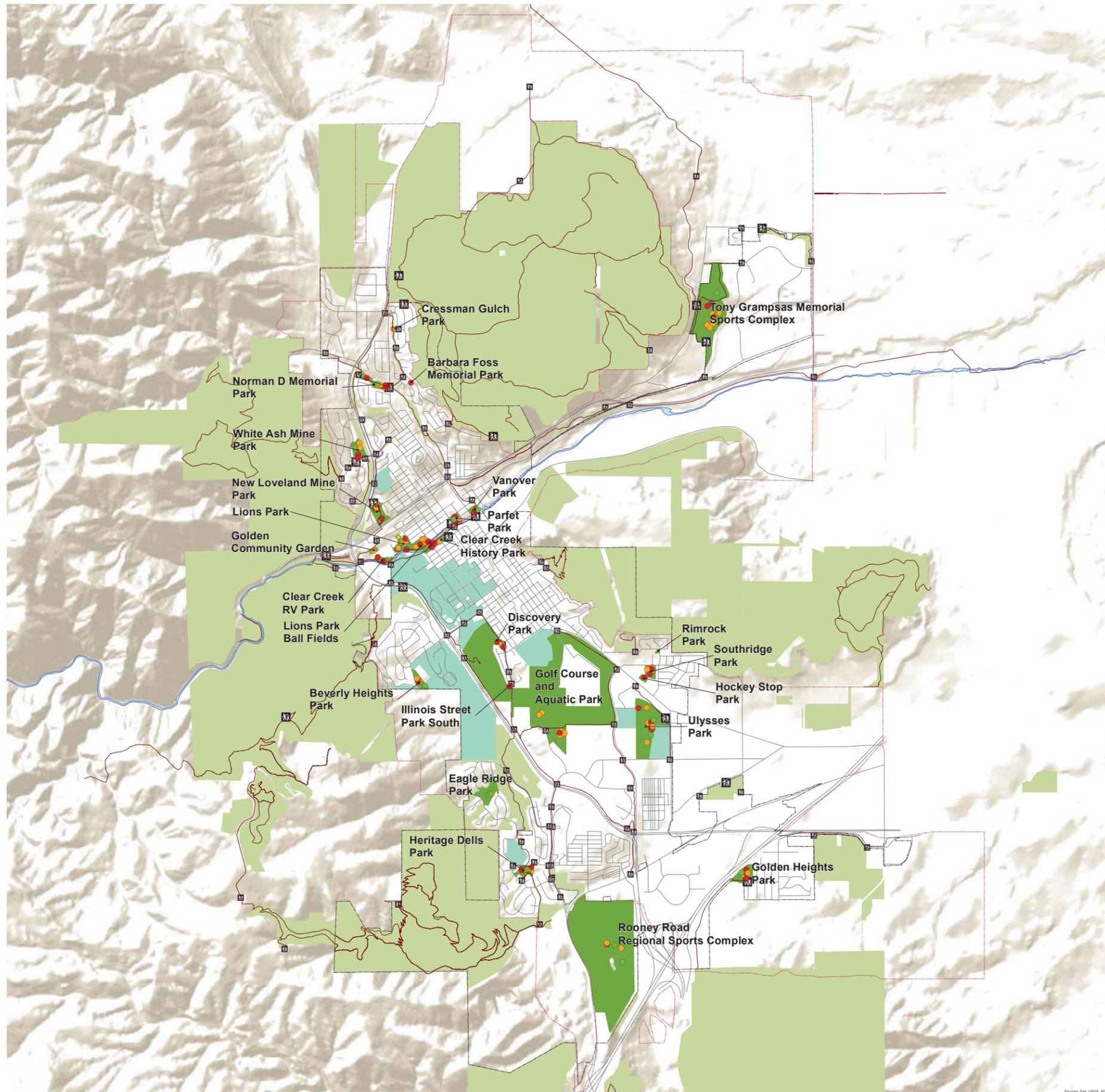
**Park Zones Ranked by Cost-Active Energy Expenditure (EE) per Zone**

<b>Zone Name</b>	<b>Cost</b>	<b>Cost (recoded)</b>	<b>Active EE (kcal/kg/hr)</b>	<b>Active EE (recoded)</b>	<b>AEE-Cost Ratio (recoded)</b>
Shelter—Small	\$25,000	1	7.35	1	1
Multi-court	\$20,000	1	9.45	1	1
Open Area—Small	\$7,500	1	2.57	2	2
Basketball—Medium	\$30,000	1	2.59	2	2
Basketball—Small	\$15,000	1	3.25	2	2
Open Area—Medium	\$25,000	1	4.69	2	2
Volleyball—Medium	\$100,000	2	7.65	1	2
Shelter—Medium	\$45,000	2	8.66	1	2
Volleyball—Small	\$50,000	2	9.60	1	2
Soccer—Small	\$40,000	2	12.39	1	2
Football	\$100,000	2	35.93	1	2
Shuffleboard	\$3,000	1	0.00	3	3
Handball	\$10,000	1	0.00	3	3
Trail—Small	\$10,000	1	0.36	3	3
Picnic Area—Medium	\$9,000	1	0.41	3	3
Exercise Area—Small	\$20,000	1	0.91	3	3
Picnic Area—Large	\$30,000	1	1.17	3	3
Picnic Area—Small	\$4,000	1	1.50	3	3
Tennis—Small	\$90,000	2	3.50	2	3
Shelter—Large	\$100,000	2	4.42	2	3
Basketball—Large	\$60,000	2	5.02	2	3
Playground—Large	\$500,000	3	7.09	1	3
Racquetball	\$120,000	3	7.64	1	3
Rink/Skate	\$120,000	3	7.74	1	3
Track	\$400,000	3	14.77	1	3
Soccer—Large	\$115,000	2	16.01	1	3
Amphitheater	\$50,000	2	0.00	3	4
Trail—Medium	\$30,000	1	0.74	3	4
Color Design/Walkway	\$79,794	2	1.09	3	4
Soccer—Medium	\$75,000	2	1.73	3	4
Open Area—Large	\$90,000	2	1.85	3	4
Playground—Small	\$100,000	2	1.92	3	4
Tennis—Large	\$270,000	3	2.03	2	4
Tennis—Medium	\$180,000	3	3.36	2	4
Softball/Baseball—Large	\$400,000	3	4.64	2	4
Playground—Medium	\$250,000	3	5.08	2	4
Softball/Baseball—Small	\$200,000	3	6.42	2	4
Pool	\$7,000,000	3	6.87	2	4
Volleyball—Large	\$200,000	3	1.04	3	5
Trail—Large	\$150,000	3	1.85	3	5

Note: AEE Cost Ratio was calculated by adding the recoded cost and the recoded Active EE. The result was reduced by 1 to reflect a scale from 1 to 5.

## Appendix H: GRASP<sup>®</sup> Active Maps

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- Legend**
- Low EE Component
  - Medium EE Component
  - High EE Component
  - Trail Access
  - Trailhead
  - Street or Road
  - Trail
  - Clear Creek
  - Location
  - Other Location
  - School
  - CityLimits
  - Urban Growth Boundary



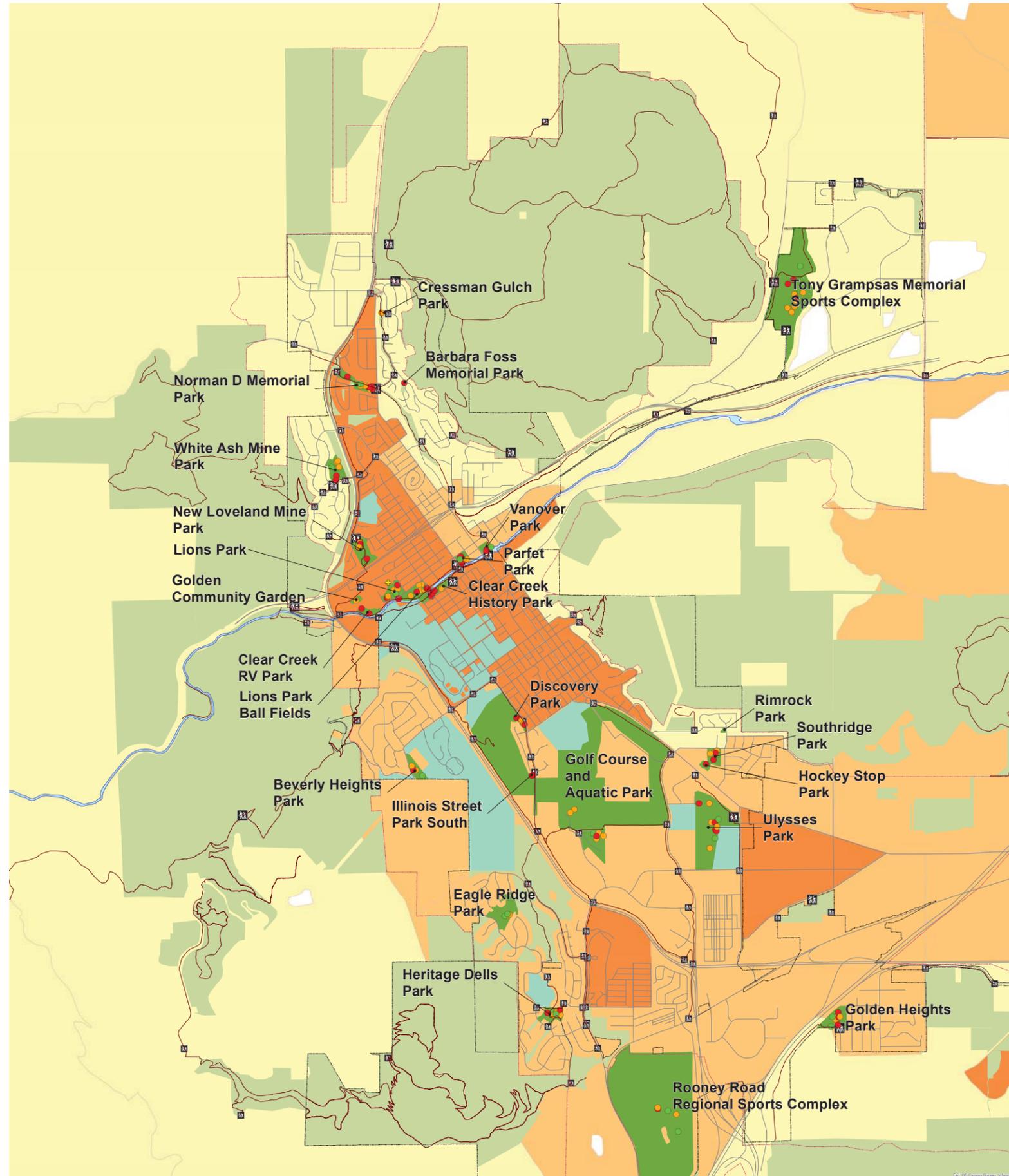
Map Produced For Golden, CO - By The GRASP® Team  
 This Map Is Intended For Planning & Discussion Purposes Only -  
 All data is subject to current availability. No guarantee is made to  
 accuracy of base data or data provided by client or partners.  
 Please Refer To The Project Document For Map Details.  
 Legend Elements May Vary Slightly In Size, Color And Transparency From Those Shown On Map  
 GIS Data Sources May Include: City of Golden GIS, ESRI, US Census, GRASP® Team - July 2016  
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Source: City, USGS, NOAA



# Golden, Colorado Parks and Recreation Master Plan Update

## Map B: ESRI Population Density by US Census Block Group



### Legend

- 0 - 1,000 people per sq mi
- 1,000 - 4,000 people per sq mi
- 4,000 - 22,000 people per sq mi
- 22,000 - 116,000 people per sq mi
- 116,000 - 618,125 people per sq mi
- Low EE Component
- Medium EE Component
- High EE Component
- Trail Access
- Trailhead
- Street or Road
- Trail
- Clear Creek
- Location
- Other Location
- School
- CityLimits
- Urban Growth Boundary



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# Golden, Colorado Parks and Recreation Master Plan Update

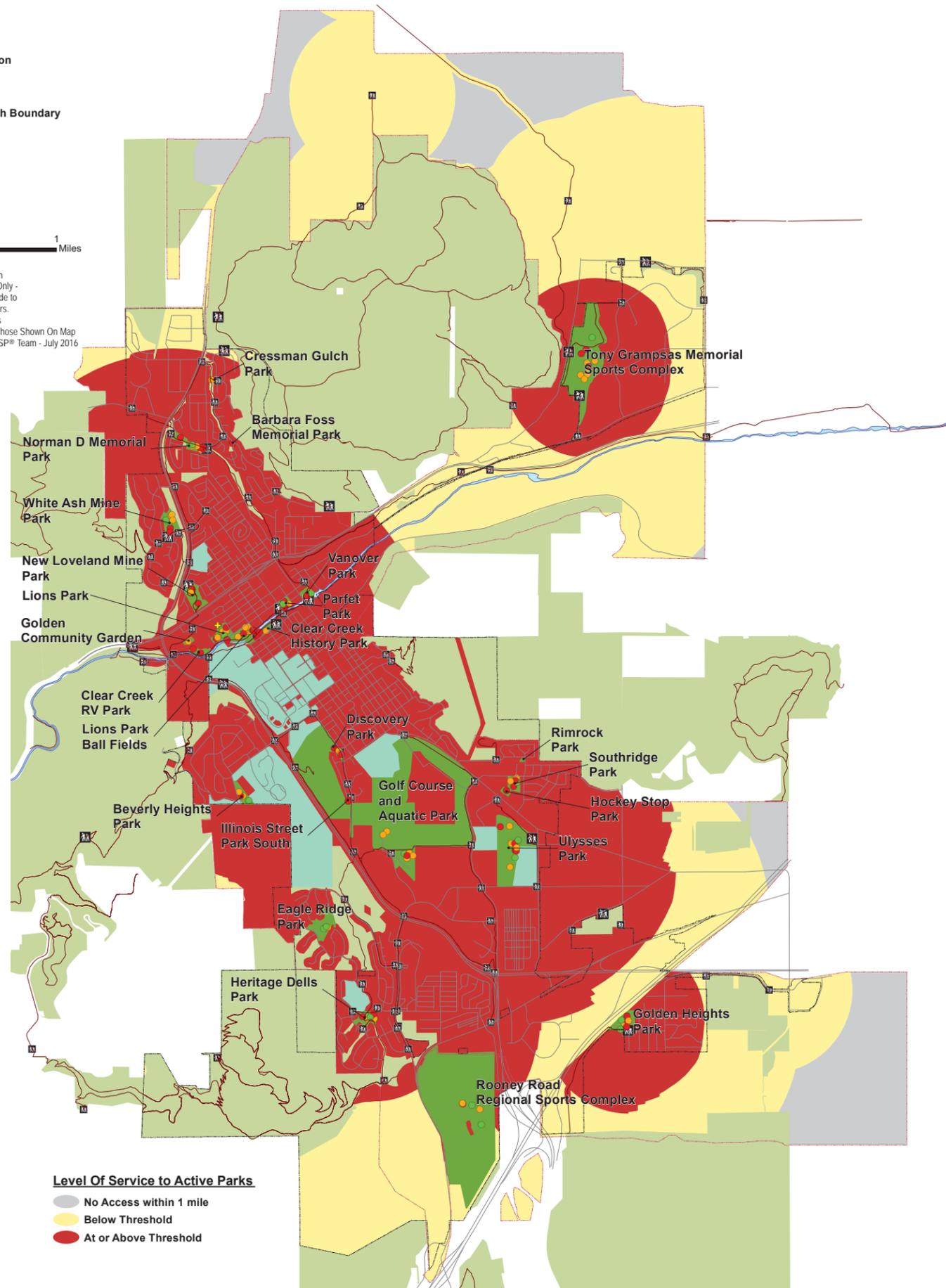
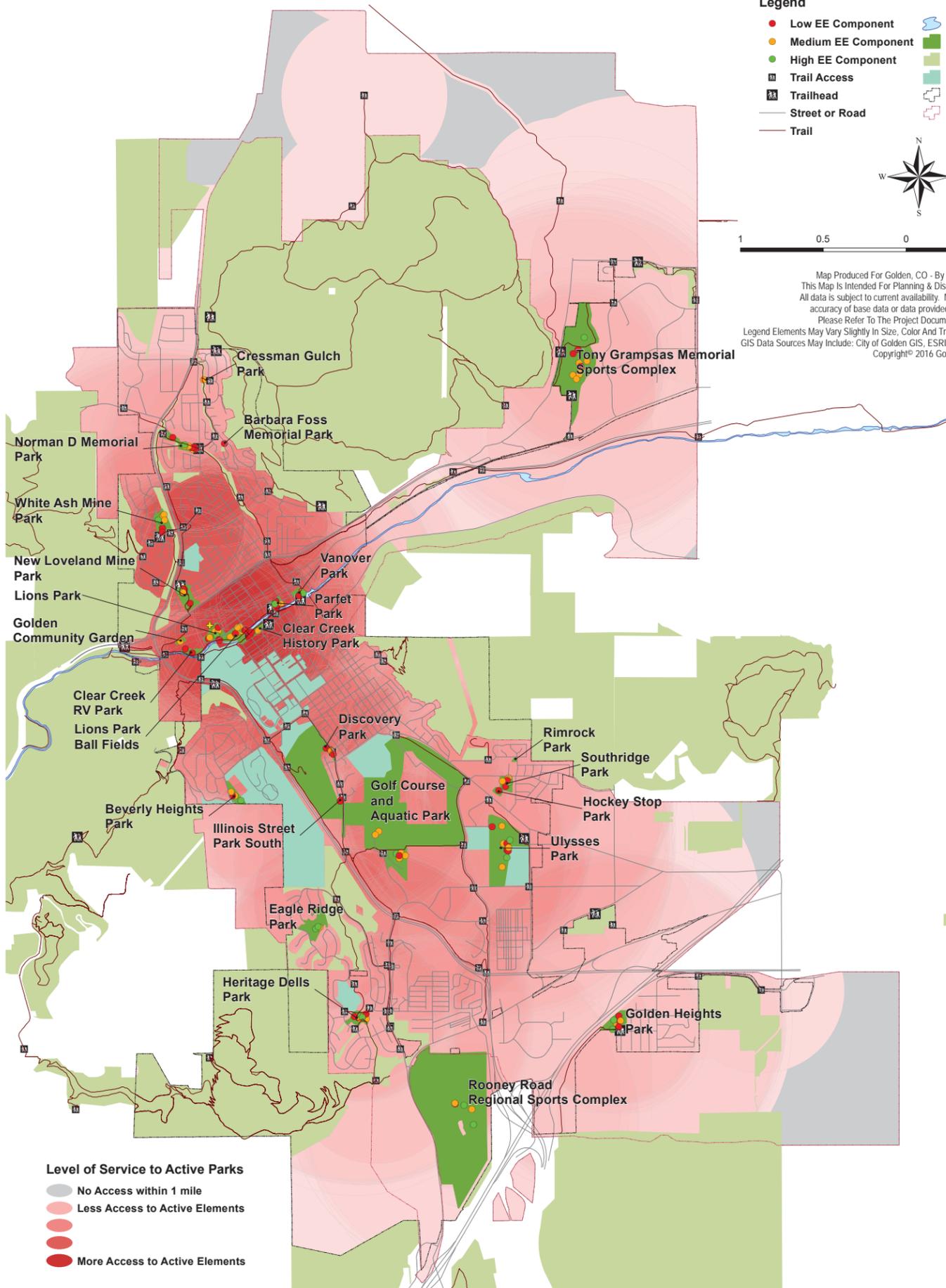
## Map C: Neighborhood Proximity to Active Parks

- Legend**
- Low EE Component
  - Medium EE Component
  - High EE Component
  - Trail Access
  - Trailhead
  - Street or Road
  - Trail
  - Clear Creek
  - Location
  - Other Location
  - School
  - CityLimits
  - Urban Growth Boundary



1 0.5 0 1 Miles

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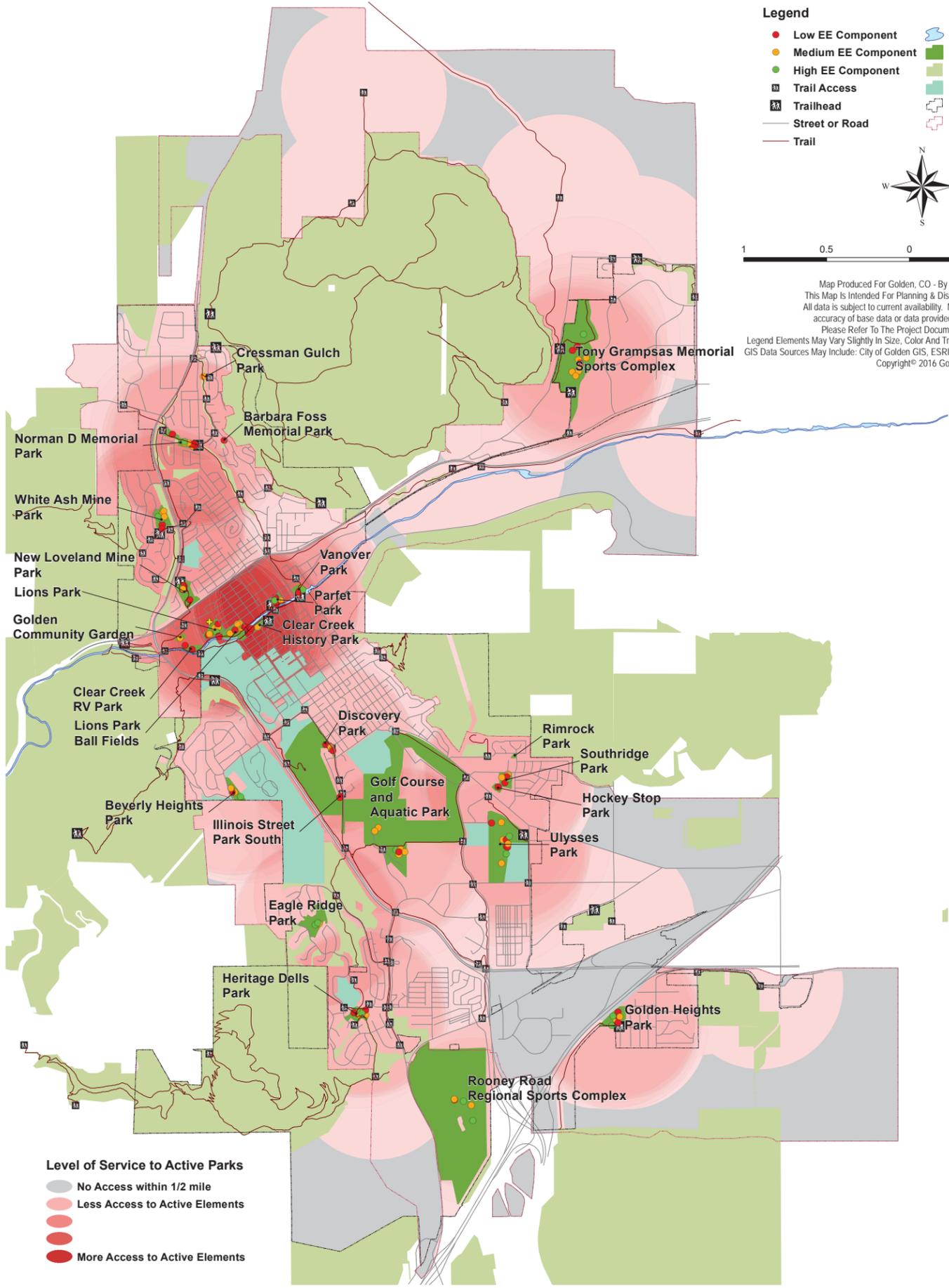
# Golden, Colorado Parks and Recreation Master Plan Update

## Map D: Walkable Proximity to Active Parks

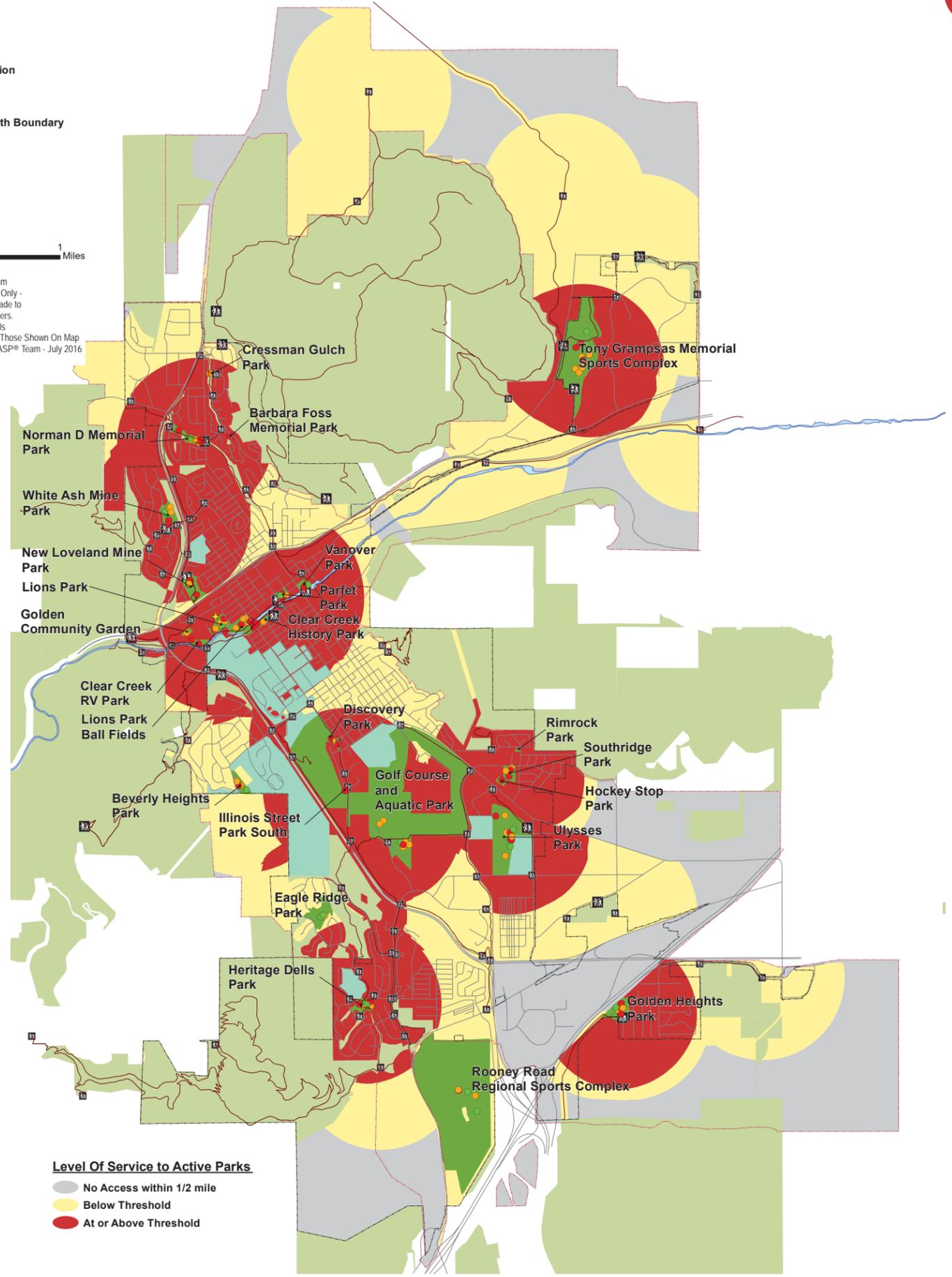
- Legend**
- Low EE Component
  - Medium EE Component
  - High EE Component
  - Trail Access
  - Trailhead
  - Street or Road
  - Trail
  - Clear Creek
  - Location
  - Other Location
  - School
  - City Limits
  - Urban Growth Boundary



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- Level of Service to Active Parks**
- No Access within 1/2 mile
  - Less Access to Active Elements
  - More Access to Active Elements



- Level Of Service to Active Parks**
- No Access within 1/2 mile
  - Below Threshold
  - At or Above Threshold



## **Appendix I: Sample Sponsorship Policy**

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# *Sample*

**XX**

**Parks & Recreation Department**

**Sponsorship Policy**

*Created for XX by:*

**GREENPLAY<sup>LLC</sup>**

*The Leading Edge In Parks, Recreation  
And Open Space Consulting*

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# XX Parks & Recreation Department

## Sponsorship Policy

### Introduction

The following guidelines in this Sponsorship Policy have been specifically designed for the XX Parks & Recreation Department, while considering that these guidelines may be later adapted and implemented on a city-wide basis. Some assumptions regarding this policy are:

- Partnerships for recreation and parks facilities and program development may be pursued based on the XX Partnership Policy, encouraging the development of partnerships for the benefit of the city, its citizens, and potential partners. Sponsorships are one type of partnership, and one avenue of procurement for alternative funding resources. The Sponsorship Policy may evolve as the needs of new projects and other City departments are incorporated into its usage.
- Broad guidelines are offered in this policy primarily to delineate which types of sponsors and approval levels are currently acceptable for the XX Parks & Recreation Department.
- The policy should ensure that the definition of potential sponsors may include non-commercial community organizations (for example: YMCAs and Universities), but does not include a forum for non-commercial speech or advertising.
- Sponsorships are clearly defined and are different from advertisements. Advertisements are one type of benefit that may be offered to a sponsor in exchange for cash or in-kind sponsorship.
- The difference between sponsors and donors must be clarified, as some staff and the public often confuse and misuse these terms.

### Structure

**Part A** of this document gives the **Sponsorship Policy**

**Part B** gives the **Levels of Sponsorship Tiers and Benefits**

**Part C** provides the vocabulary and **Glossary of Sponsorship Terms**

**Part A.**  
**Sponsorship Policy**  
**XX Parks & Recreation Department**

**I. Purpose**

In an effort to utilize and maximize the community's resources, it is in the best interest of the City's Parks & Recreation Department to create and enhance relationship-based sponsorships. This may be accomplished by providing local, regional, and national commercial businesses and non-profit groups a method for becoming involved with the many opportunities provided by the Parks & Recreation Department. The Department delivers quality, life-enriching activities to the broadest base of the community. This translates into exceptional visibility for sponsors and supporters. It is the goal of the Department to create relationships and partnerships with sponsors for the financial benefit of the Department.

**Sponsorships vs. Donations**

It is important to note that there is a difference between a sponsorship and a philanthropic donation. Basically, sponsorships are cash or in-kind products and services offered by sponsors with the clear expectation that an obligation is created. The recipient is obliged to return something of value to the sponsor. The value is typically public recognition and publicity or advertising highlighting the contribution of the sponsor and/or the sponsor's name, logo, message, products, or services. The Sponsor usually has clear marketing objectives that they are trying to achieve, including but not limited to the ability to drive sales directly based on the sponsorship, and/or quite often, the right to be the exclusive sponsor in a specific category of sales. The arrangement is typically consummated by a letter of agreement or contractual arrangement that details the particulars of the exchange.

In contrast, a donation comes with no restrictions on how the money or in-kind resources are used. This policy specifically addresses sponsorships, the agreements for the procurement of the resources, and the benefits provided in return for securing those resources. Since donations or gifts come with no restrictions or expected benefits for the donor, a policy is generally not needed.

## II. Guidelines for Acceptable Sponsorships

Sponsors should be businesses, non-profit groups, or individuals that promote mutually beneficial relationships for the Parks & Recreation Department. All potentially sponsored properties (facilities, events, or programs) should be reviewed in terms of creating synergistic working relationships with regard to benefits, community contributions, knowledge, and political sensitivity. All sponsored properties should promote the goals and mission of the Parks & Recreation Department as follows:

### NEED SPECIFIC MISSION STATEMENT

#### **Sample XX Parks & Recreation Mission Statement:**

### NEED SPECIFIC GOALS

#### **Sample Goals of the Park & Recreation Department:**

## III. Sponsorship Selection Criteria

### A. Relationship of Sponsorship to Mission and Goals

The first major criterion is the appropriate relationship of a sponsorship to the above outlined Parks & Recreation Department's Mission and Goals. While objective analysis is ideal, the appropriateness of a relationship may sometimes be necessarily subjective. This policy addresses this necessity by including Approval Levels from various levels of City management staff and elected officials, outlined in **Section B**, to help assist with decisions involving larger amounts and benefits for sponsorship.

**The following questions are the major guiding components of this policy and should be addressed prior to soliciting potential sponsors:**

- Is the sponsorship reasonably related to the purpose of the facility or programs as exemplified by the Mission Statement and Goals of the Department?
- Will the sponsorship help generate more revenue and/or less cost per participant than the City can provide without it?
- What are the real costs, including staff time, for procuring the amount of cash or in-kind resources that come with the generation of the sponsorship?

**Sponsorships which shall NOT be considered are those which:**

- Promote environmental, work, or other practices that, if they took place in the City, would violate U.S. or state law (i.e., dumping of hazardous waste, exploitation of child labor, etc.), or promote drugs, alcohol, or tobacco, or that constitute violations of law.
- Duplicate or mimic the identity or programs of the Parks & Recreation Department or any of its divisions.

- Exploit participants or staff members of the Department.
- Offer benefits which may violate other accepted policies or the Sign Code. **DO YOU HAVE A SIGN CODE?**

### **B. Sponsorship Plan and Approval Levels**

Each project or program that involves solicitation of Sponsors should, PRIOR to procurement, create a Sponsorship Plan specific to that project or program that is in line with the Sponsorship Levels given in **Part B**. This plan needs to be approved by the Management Team Members supervising the project and in accordance to City Partnership, Sponsorship, and Sign Code policies. In addition, each sponsorship will need separate approval if they exceed pre-specified limits. The Approval Levels are outlined below:

<b>Under \$1,000</b>	The program or project staff may approve this level of Agreement, with review by their supervising Management Team Member.
<b>\$1,001 to \$10,000</b>	The Agreement needs approval of a Management Team Member.
<b>\$10,001 to \$25,000</b>	The Agreement needs approval of the entire Senior Management Team and Department Director.
<b>Over \$25,000</b>	The Agreement needs approval of the City Supervisor (the City Supervisor may recommend a City Council or Board of Trustees review).

### **C. No Non-Commercial Forum is Permitted**

This criterion deals with the commercial character of a sponsorship message. The City intends to create a limited forum, focused on advertisements incidental to commercial sponsorships of Parks & Recreation facilities and programs. While non-commercial community organizations or individuals may wish to sponsor Department activities or facilities for various reasons, no non-commercial speech is permitted in the limited forum created by this policy.

Advertisements incidental to commercial sponsorship must primarily propose a commercial transaction, either directly, through the text, or indirectly, through the association of the sponsor's name with the commercial transaction of purchasing the commercial goods or services which the sponsor sells.

The reasons for this portion of the Policy include:

- (1) The desirability of avoiding non-commercial proselytizing of a "captive audience" of event spectators and participants.
- (2) The constitutional prohibition on any view-point related decisions about permitted advertising coupled with the danger that the City and the Parks & Recreation Department would be associated with advertising anyway.

- (3) The desire of the City to maximize income from sponsorship, weighed against the likelihood that commercial sponsors would be dissuaded from using the same forum commonly used by persons wishing to communicate non-commercial messages, some of which could be offensive to the public.
- (4) The desire of the City to maintain a position of neutrality on political and religious issues.
- (5) In the case of religious advertising and political advertising, specific concerns about the danger of “excessive entanglement” with religion (and resultant constitutional violations) and the danger of election campaign law violations, respectively.

Guidelines for calculating the **Levels of Sponsorship Tiers and Benefits** are provided and outlined in **Part B**.

## **IV. Additional Guidelines for Implementation**

### **A. Equitable Offerings**

It is important that all sponsorships of equal levels across divisions within Parks & Recreation yield the same value of benefits for potential sponsors.

### **B. Sponsorship Contact Database**

A designated staff person or representative of the Parks & Recreation Department will keep an updated list of all current sponsors, sponsored activities, and contacts related to sponsorship.

#### ***Purpose of Maintaining the Database:***

- Limit duplicate solicitations of one sponsor
- Allow management to make decisions based on most appropriate solicitations and levels of benefits offered
- Keep a current list of all Department supporters and contacts
- Help provide leads for new sponsorships, if appropriate

For staff below Management Team level, access to the database will be limited to printouts of listings of names of sponsors and their sponsored events. This limited access will provide information to help limit duplicated solicitations, and will also protect existing sponsor relationships, while allowing the evaluation of future sponsorships to occur at a management level.

If a potential sponsor is already listed, staff should not pursue a sponsorship without researching the sponsor's history with the most recently sponsored division. If more than one division wishes to pursue sponsorship by the same company, the Management Team shall make a decision based on several variables, including but not limited to:

- History of sponsorship, relationships, and types of sponsorship needed.
- Amount of funding available.
- Best use of funding based on departmental priorities.

### **C. Sponsorship Committee**

A committee consisting of the supervisors of each program using sponsorships and other management team designees shall meet twice per year to review the database, exchange current contract samples, and recommend adjusting benefit levels and policy as needed. Changes shall not take effect before approval by the Management Team.

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## **Part B.**

### **Levels of Sponsorship Tiers and Benefits**

The following tiers are presented as a guideline for types of benefits that may be presented as opportunities for potential sponsors.

Each sponsorship will most likely need to be individually negotiated. One purpose for these guidelines is to create equity in exchanges across sponsorship arrangements. While for the sake of ease the examples given for levels are based on amount of sponsorship requested, the level of approval needed from City staff is really based on the amount of benefits exchanged for the resources. The levels of approval are necessary because the costs and values for different levels of benefits may vary, depending on the sponsorship. It is important to note that these values may be very different. Sponsors will not typically offer to contribute resources that cost them more than the value of resources that they will gain and, typically, seek at least a 2-1 return on their investment. Likewise, the City should not pursue sponsorships unless the total value the City receives is greater than its real costs.

A hierarchy of Sponsors for events, programs, or facilities with more than one sponsor is listed below from the highest level to the lowest. Not all Levels will necessarily be used in each Sponsorship Plan. Note that the hierarchy is not dependent on specific levels or amounts of sponsorship. Specific levels and amounts should be designed for each property before sponsorships are procured within the approved Sponsorship Plan. Complete definitions of terms are included in **Part C**.

#### ***Hierarchy of Sponsorship Levels (highest to lowest)***

**Parks and Recreation Department-Wide Sponsor ⇒**  
**Facility/Park Title or Primary Sponsor ⇒**  
**Event/Program Title or Primary Sponsor ⇒**  
**Presenting Sponsor (Facility, Event, or Program) ⇒**  
**Facility/Park Sponsor ⇒**  
**Program/Event Sponsor ⇒ Media Sponsor ⇒ Official Supplier ⇒**  
**Co-sponsor**

This hierarchy will help decide the amounts to ask various sponsors for, and will determine what levels of benefits to provide. It is important to build flexibility and choice into each level so that sponsors can have the ability to choose options that will best fit their objectives. Note that the benefits listed under each level are examples of value. The listing does not mean that all of the benefits should be offered. It is a menu of options for possible benefits, depending on the circumstances. These are listed primarily as a guideline for **maximum** benefit values. It is recommended that each project create a project-specific Sponsorship Plan for approval in advance of Sponsorship procurement, based on the benefits available and the values specific to the project.

## **I. Sponsorship Assets and Related Benefits Inventory**

***TO BE DETERMINED FOR EACH AGENCY BASED ON OFFERINGS  
(PROPERTIES), VALUATION, AND DETERMINED BENEFITS***

***A tiered structure of actual values and approval levels should be  
determined as part of a Sponsorship Plan.***

## **Part C.**

# **Glossary of Sponsorship Terms**

### **Activation**

The marketing activity a company conducts to promote its sponsorship. Money spent on activation is over and above the rights fee paid to the sponsored property. Also known as leverage.

### **Advertising**

The direct sale of print or some other types of City communication medium to provide access to a select target market.

### **Ambush Marketing**

A promotional strategy whereby a non-sponsor attempts to capitalize on the popularity/prestige of a property by giving the false impression that it is a sponsor. Often employed by the competitors of a property's official sponsors.

### **Audio Mention**

The mention of a sponsor during a TV or radio broadcast.

### **Business-to-Business Sponsorship**

Programs intended to influence corporate purchase/awareness, as opposed to individual consumers.

### **Category Exclusivity**

The right of a sponsor to be the only company within its product or service category associated with the sponsored property.

### **Cause Marketing**

Promotional strategy that links a company's sales campaign directly to a non-profit organization. Generally includes an offer by the sponsor to make a donation to the cause with purchase of its product or service. Unlike philanthropy, money spent on cause marketing is a business expense, not a donation, and is expected to show a return on investment.

### **Co-sponsors**

Sponsors of the same property.

### **CPM (Cost per Thousand)**

The cost to deliver an ad message to a thousand people.

### **Cross-Promotions**

A joint marketing effort conducted by two or more co-sponsors using the sponsored property as the central theme.

### Donations

Cash or in-kind gifts that do not include any additional negotiated conditions in return.  
Synonyms: Philanthropy, Patronage.

### Editorial Coverage

Exposure that is generated by media coverage of the sponsored property that includes mention of the sponsor.

### Emblem

A graphic symbol unique to a property. Also called a mark.

### Escalator

An annual percentage increase built into the sponsorship fee for multi-year contracts. Escalators are typically tied to inflation.

### Exclusive Rights

A company pays a premium or provides economic benefit in exchange for the right to be the sole advertised provider, at the most competitive prices, of goods purchased by consumers within Parks & Recreation Department facilities and parks.

### Fulfillment

The delivery of benefits promised to the sponsor in the contract.

### Hospitality

Hosting key customers, clients, government officials, employees, and other VIPs at an event or facility. Usually involves tickets, parking, dining, and other amenities, often in a specially designated area, and may include interaction with athletes.

### In-Kind Sponsorship

Payment (full or partial) of sponsorship fee in goods or services rather than cash.

### Licensed Merchandise

Goods produced by a manufacturer (the licensee) who has obtained a license to produce and distribute the official Marks on products such as clothing and souvenirs.

### Licensee

Manufacturer which has obtained a license to produce and distribute Licensed Merchandise.

### Licensing

Right to use a property's logos and terminology on products for retail sale. Note: While a sponsor will typically receive the right to include a property's marks on its packaging and advertising, sponsors are not automatically licensees.

### Mark

Any official visual representation of a property, including emblems and mascots.

### Mascot

A graphic illustration of a character, usually a cartoon figure, used to promote the identity of a property.

### Media Equivalencies

Measuring the exposure value of a sponsorship by adding up all the coverage it generated and calculating what it would have cost to buy a like amount of ad time or space in those outlets based on media rate cards.

### Media Sponsor

TV and radio stations, print media, and outdoor advertising companies that provide either cash, or more frequently advertising time or space, to a property in exchange for official designation.

### Municipal Marketing

Promotional strategy linking a company to community services and activities (sponsorship of parks and recreation programs, libraries, etc.)

### Option to Renew

Contractual right to renew a sponsorship on specified terms.

### Philanthropy

Support for a non-profit property where no commercial advantage is expected.  
Synonym: Patronage.

### Perimeter Advertising

Stationary advertising around the perimeter of an arena or event site, often reserved for sponsors.

### Premiums

Souvenir merchandise, produced to promote a sponsor's involvement with a property (customized with the names/logos of the sponsor and the property).

### Presenting Sponsor

The sponsor that has its name presented just below that of the sponsored property. In presenting arrangements, the event/facility name and the sponsor name are not fully integrated since the word(s) "presents" or "presented by" always come between them.

### Primary Sponsor

The sponsor paying the largest fee and receiving the most prominent identification (Would be naming rights or title sponsor if sponsored property sold name or title).

### Property

A unique, commercially exploitable entity (could be a facility, site, event, or program)  
Synonyms: sponsee, rightsholder, seller.

### Right of First Refusal

Contractual right granting a sponsor the right to match any offer the property receives during a specific period of time in the sponsor's product category.

### Selling Rights

The ability of a sponsor to earn back some or all of its sponsorship fee selling its product or service to the property or its attendees or members.

### Signage

Banners, billboards, electronic messages, decals, etc., displayed on-site and containing sponsors ID.

### Sole Sponsor

A company that has paid to be the only sponsor of a property.

### Sponsee

A property available for sponsorship.

### Sponsor

An entity that pays a property for the right to promote itself and its products or services in association with the property.

### Sponsor ID

Visual and audio recognition of sponsor in property's publications and advertising; public-address and on-air broadcast mentions.

### Sponsorship

The relationship between a sponsor and a property, in which the sponsor pays a cash or in-kind fee in return for access to the commercial potential associated with the property.

### Sponsorship Agency

A firm which specializes in advising on, managing, brokering, or organizing sponsored properties. The agency may be employed by either the sponsor or property.

### Sponsorship Fee

Payment made by a sponsor to a property.

### Sports Marketing

Promotional strategy linking a company to sports (sponsorship of competitions, teams, leagues, etc.).

### Supplier

Official provider of goods or services in exchange for designated recognition. This level is below official sponsor, and the benefits provided are limited accordingly.

### Title Sponsor

The sponsor that has its name incorporated into the name of the sponsored property.

### Venue Marketing

Promotional strategy linking a sponsor to a physical site (sponsorship of stadiums, arenas, auditoriums, amphitheatres, racetracks, fairgrounds, etc.)

### Web Sponsorship

The purchase (in cash or trade) of the right to utilize the commercial potential associated with a site on the World Wide Web, including integrated relationship building and branding.



# Appendix J: Sample Partnership Policy

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# *Sample*

## Partnership Policy and Proposal Format

*Created By:*

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# Sample Parks and Recreation Department Partnership Policy And Proposal Format

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# I. Sample Parks and Recreation Department Partnership Policy

## A. Purpose

This policy is designed to guide the process for XX Parks and Recreation Department in their desire to partner with private, non-profit, or other governmental entities for the development, design, construction, and operation of possibly partnered recreational facilities and/or programs that may occur on City property.

The XX Parks and Recreation Department would like to identify for-profit, non-profit, and governmental entities that are interested in proposing to partner with the City to develop recreational facilities and/or programs. A major component in exploring any potential partnership will be to identify additional collaborating partners that may help provide a synergistic working relationship in terms of resources, community contributions, knowledge, and political sensitivity. These partnerships should be mutually beneficial for all proposing partners including the City, and particularly beneficial for the citizens of the community.

### **This policy document is designed to:**

- Provide essential background information.
- Provide parameters for gathering information regarding the needs and contributions of potential partners.
- Identify how the partnerships will benefit the Sample Parks and Recreation Department and the community.

**Part Two: The “Proposed Partnership Outline Format,”** provides a format that is intended to help guide Proposing Partners in creating a proposal for review by Sample Parks and Recreation Department staff.

## B. Background and Assumptions

Partnerships are being used across the nation by governmental agencies in order to utilize additional resources for their community's benefit. Examples of partnerships abound, and encompass a broad spectrum of agreements and implementation. The most commonly described partnership is between a public and a private entity, but partnerships also occur between public entities and non-profit organizations and/or other governmental agencies.

### **Note on Privatization:**

This application is specific for proposed partnering for new facilities or programs.

This information does not intend to address the issue of privatization, or transferring existing City functions to a non-City entity for improved efficiency and/or competitive cost concerns. An example of privatization would be a contract for a landscaping company to provide mowing services in a park. The City is always open to suggestions for improving services and cost savings through contractual arrangements. If you have an idea for privatization of current City functions, please call or outline your ideas in a letter for the City's consideration.

**In order for partnerships to be successful, research has shown that the following elements should be in place prior to partnership procurement:**

- There must be support for the concept and process of partnering from the very highest organizational level – i.e.: the Board or Trustees, a council, and/or department head.
- **The most successful agencies have high-ranking officials that believe that they owe it to their citizens to explore partnering opportunities whenever presented, those communities both solicit partners and consider partnering requests brought to them.**
- **It is very important to have a Partnership Policy in place before partner procurement begins. This allows the agency to be proactive rather than reactive when presented with a partnership opportunity. It also sets a “level playing field” for all potential partners, so that they can know and understand in advance the parameters and selection criteria for a proposed partnership.**
- A partnership policy and process should set development priorities and incorporate multiple points for go/no-go decisions.
- **The partnership creation process should be a public process, with both Partners and the Partnering Agency well aware in advance of the upcoming steps.**

## C. Partnership Definition

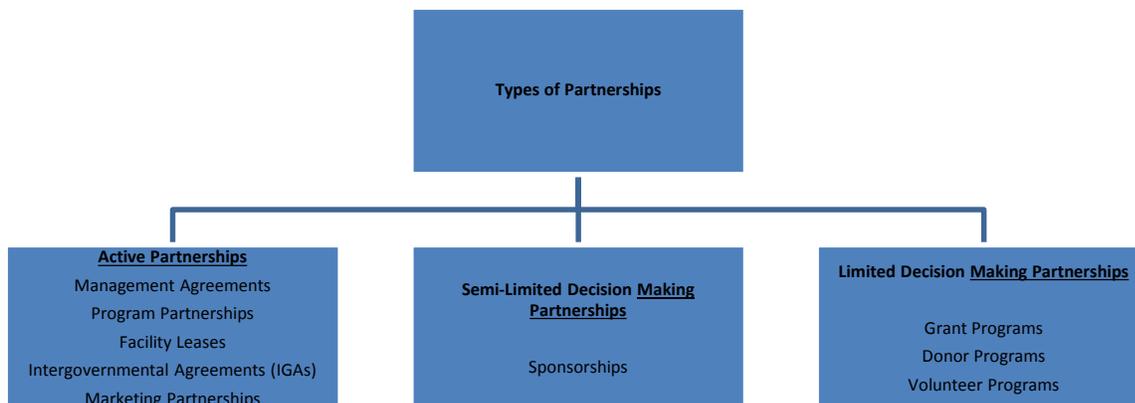
For purposes of this document and policy, a Proposed Partnership is defined as:

**"An identified idea or concept involving Sample Parks and Recreation Department and for-profit, non-profit, and/or governmental entities, outlining the application of combined resources to develop facilities, programs, and/or amenities for the City and its citizens."**

A partnership is a cooperative venture between two or more parties with a common goal, who combine complementary resources to establish a mutual direction or complete a mutually beneficial project. Partnerships can be facility-based or program-specific. The main goal for XX Parks and Recreation Department partnerships is enhancing public offerings to meet the mission and goals of the City. The XX Parks and Recreation Department is interested in promoting partnerships which involve cooperation among many partners, bringing resources together to accomplish goals in a synergistic manner. Proposals that incorporate such collaborative efforts will receive priority status.

Partnerships can accomplish tasks with limited resources, respond to compelling issues, encourage cooperative interaction and conflict resolution, involve outside interests, and serve as an education and outreach tool. Partnerships broaden ownership in various projects and increase public support for community recreation goals. Partners often have flexibility to obtain and invest resources/dollars on products or activities where municipal government may be limited.

Partnerships can take the form of (1) cash gifts and donor programs, (2) improved access to alternative funding, (3) property investments, (4) charitable trust funds, (5) labor, (6) materials, (7) equipment, (8) sponsorships, (9) technical skills and/or management skills, and other forms of value. The effective use of volunteers also can figure significantly into developing partnerships. Some partnerships involve active decision making, while in others, certain partners take a more passive role. The following schematic shows the types of possible partnerships discussed in this policy:



## **D. Possible Types of Active Partnerships**

The XX Parks and Recreation Department is interested in promoting collaborative partnerships among multiple community organizations. Types of agreements for Proposed “Active” Partnerships may include leases, contracts, sponsorship agreements, marketing agreements, management agreements, joint-use agreements, inter-governmental agreements, or a combination of these. An innovative and mutually beneficial partnership that does not fit into any of the following categories may also be considered.

Proposed partnerships will be considered for facility, service, operations, and/or program development including associated needs, such as parking, paving, fencing, drainage systems, signage, outdoor restrooms, lighting, utility infrastructure, etc.

The following examples are provided only to illustrate possible types of partnerships. They are not necessarily examples that would be approved and/or implemented.

### **Examples of Public/Private Partnerships**

- A private business seeing the need for more/different community fitness and wellness activities wants to build a facility on City land, negotiate a management contract, provide the needed programs, and make a profit.
- A private group interested in environmental conservation obtains a grant from a foundation to build an educational kiosk, providing all materials and labor, and is in need of a spot to place it.
- Several neighboring businesses see the need for a place for their employees to work out during the work day. They group together to fund initial facilities and an operating subsidy and give the facility to the City to operate for additional public users.
- A biking club wants to fund the building of a race course through a park. The races would be held one night per week, but otherwise the path would be open for public biking and in-line skating.
- A large corporate community relations office wants to provide a skatepark, but doesn't want to run it. They give a check to the City in exchange for publicizing their underwriting of the park's cost.
- A private restaurant operator sees the need for a concessions stand in a park and funds the building of one, operates it, and provides a share of revenue back to the City.
- A garden club wants land to build unique butterfly gardens. They will tend the gardens and just need a location and irrigation water.

### **Examples of Public/Non-Profit Partnerships**

- A group of participants for a particular sport or hobby sees a need for more playing space and forms a non-profit entity to raise funds for a facility for their priority use that is open to the public during other hours.
- A non-profit baseball association needs fields for community programs and wants to obtain grants for the building of the fields. They would get priority use of the fields, which would be open for the City to schedule use during other times.
- A museum funds and constructs a new building, dedicating some space and time for community meetings and paying a portion of revenues to the City to lease its land.

### **Examples of Public/Public Partnerships**

- Two governmental entities contribute financially to the development and construction of a recreational facility to serve residents of both entities. One entity, through an IGA, is responsible for the operation of the facility, while the other entity contributes operating subsidy through a formula based on population or some other appropriate factor.
- Two governmental public safety agencies see the need for more physical training space for their employees. They jointly build a gym adjacent to City facilities to share for their training during the day. The gyms would be open for the City to schedule for other users at night.
- A school district sees the need for a climbing wall for their athletes. The district funds the wall and subsidizes operating costs, and the City manages and maintains the wall to provide public use during non-school hours.
- A university needs meeting rooms. They fund a multi-use building on City land that can be used for City community programs at night.

## **E. Sponsorships**

The XX Parks and Recreation Department is interested in actively procuring sponsorships for facilities and programs as one type of beneficial partnership. Please see the ***Sample Parks and Recreation Department Sponsorship Policy*** for more information.

## **F. Limited-Decision Making Partnerships: Donor, Volunteer, and Granting Programs**

While this policy document focuses on the parameters for more active types of partnerships, the City is interested in, and will be happy to discuss, a proposal for any of these types of partnerships, and may create specific plans for such in the future.

## **G. Benefits of Partnerships with Sample Parks and Recreation Department**

The City expects that any Proposed Partnership will have benefits for all involved parties. Some general expected benefits are:

### **Benefits for the City and the Community:**

- Merging of resources to create a higher level of service and facility availability for community members.
- Making alternative funding sources available for public community amenities.
- Tapping into the dynamic and entrepreneurial traits of private industry.
- Delivering services and facilities more efficiently by allowing for collaborative business solutions to public organizational challenges.
- Meeting the needs of specific groups of users through the availability of land for development and community use.

### **Benefits for the Partners:**

- Land and/or facility availability at a subsidized level for specific facility and/or program needs.
- Sharing of the risk with an established stable governmental entity.
- Becoming part of a larger network of support for management and promotion of facilities and programs.
- Availability of professional City recreation and planning experts to maximize the facilities and programs that may result.
- Availability of City staff facilitation to help streamline the planning and operational efforts.

## II. The Partnering Process

The steps for creation of a partnership with the XX Parks and Recreation Department are as follows:

- A. XX Parks and Recreation Department will create a public notification process that will help inform any and all interested partners of the availability of partnerships with the City. This will be done through notification in area newspapers, listing in the brochure, or through any other notification method that is feasible.
- B. The proposing partner takes the first step to propose partnering with the City. To help in reviewing both the partnerships proposed, and the project to be developed in partnership, the City asks for a **Preliminary Proposal** according to a specific format as outlined in **Part Two - Proposed Partnership Outline Format**.
- C. If initial review of a Preliminary Proposal yields interest and appears to be mutually beneficial based on the City Mission and Goals, and the Selection Criteria, a City staff member or appointed representative will be assigned to work with potential partners.
- D. The City representative is available to answer questions related to the creation of an initial proposal, and after initial interest has been indicated, will work with the proposing partner to create a checklist of what actions need to take place next. Each project will have distinctive planning, design, review, and support issues. The City representative will facilitate the process of determining how the partnership will address these issues. This representative can also facilitate approvals and input from any involved City departments, providing guidance for the partners as to necessary steps.
- E. An additional focus at this point will be determining whether this project is appropriate for additional collaborative partnering, and whether this project should prompt the City to seek a **Request for Proposal (RFP)** from competing/collaborating organizations.

**Request for Proposal (RFP) Trigger:** In order to reduce concerns of unfair private competition, if a proposed project involves partnering with a private "for-profit" entity and a dollar amount greater than \$5,000, and the City has not already undergone a public process for solicitation of that particular type of partnership, the City will request Partnership Proposals from other interested private entities for identical and/or complementary facilities, programs, or services. A selection of appropriate partners will be part of the process.

- F. For most projects, a **Formal Proposal** from the partners for their desired development project will need to be presented for the City's official development review processes and approvals. The project may require approval by the Legal, Planning, Fire and Safety, Finance, and/or other City Departments, Parks and Recreation Advisory Board, Planning Board, The Board of Trustees, and/or the City Supervisor's Office, depending on project complexity and applicable City Charter provisions, ordinances or regulations. If these reviews are necessary, provision to reimburse the City for its costs incurred in having a representative facilitate the partnered project's passage through Development Review should be included in the partnership proposal.
- G. Depending on project complexity and anticipated benefits, responsibilities for all action points are negotiable, within the framework established by law, to ensure the most efficient and mutually beneficial outcome. Some projects may require that all technical and professional expertise and staff resources come from outside the City's staff, while some projects may proceed most efficiently if the City contributes staff resources to the partnership.
- H. The partnership must cover the costs the partnership incurs, regardless of how the partnered project is staffed, and reflect those costs in its project proposal and budget. The proposal for the partnered project should also discuss how staffing and expertise will be provided, and what documents will be produced. If City staff resources are to be used by the partnership, those costs should be allocated to the partnered project and charged to it.
- I. Specific **Partnership Agreements** appropriate to the project will be drafted jointly. There is no specifically prescribed format for **Partnership Agreements**, which may take any of several forms depending on what will accomplish the desired relationships among partners. The agreements may be in the form of:
- Lease Agreements
  - Management and/or Operating Agreements
  - Maintenance Agreements
  - Intergovernmental Agreements (IGAs)
  - Or a combination of these and/or other appropriate agreements

Proposed partnership agreements might include oversight of the development of the partnership, concept plans and project master plans, environmental assessments, architectural designs, development and design review, project management, and construction documents, inspections, contracting, monitoring, etc. Provision to fund the costs and for reimbursing the City for its costs incurred in creating the partnership, facilitating the project's passage through the Development Review Processes, and completing the required documents should be considered.

- J. If all is approved, the Partnership begins. The City is committed to upholding its responsibilities to Partners from the initiation through the continuation of a partnership. Evaluation will be an integral component of all Partnerships. The agreements should outline who is responsible for evaluation and what types of measures will be used, and should detail what will occur should the evaluations reveal Partners are not meeting their Partnership obligations.



### III. The Partnership Evaluation Process

#### A. Mission Statements and Goals

All partnerships with Sample Parks and Recreation Department should be in accord with the City's and the Parks and Recreation Department's Mission and Goals to indicate how a proposed partnership for that Department would be preliminarily evaluated.

##### **SAMPLE MISSION STATEMENT**

The XX Parks and Recreation Department will provide a variety of parks, recreation facilities, and program experiences equitably throughout the community. Programs will be developed and maintained to the highest quality, ensuring a safe environment with exceptional service while developing a lifetime customer. Services will demonstrate a positive economic investment through partnerships with other service providers, both public and private, ensuring a high quality of life for citizens of XX.

##### ***(Sample)* GOALS –**

- Promote physical and mental health and fitness
- Nourish the development of children and youth
- Help to build strong communities and neighborhoods
- Promote environmental stewardship
- Provide beautiful, safe, and functional parks and facilities that improve the lives of all citizens
- Preserve cultural and historic features within the City's parks and recreation systems
- Provide a work environment for the Parks & Recreation Department staff that encourages initiative, professional development, high morale, productivity, teamwork, innovation, and excellence in management

#### B. Other Considerations

##### **1. Costs for the Proposal Approval Process**

**For most proposed partnerships, there will be considerable staff time spent on the review and approval process once a project passes the initial review stage. This time includes discussions with Proposing Partners, exploration of synergistic partnering opportunities, possible RFP processes, facilitation of the approval process, assistance in writing and negotiating agreements, contracting, etc. There may also be costs for construction and planning documents, design work, and related needs and development review processes mandated by City ordinances.**

Successful Partnerships will take these costs into account and may plan for City recovery of some or all of these costs within the proposal framework. Some of these costs could be considered as construction expenses, reimbursed through a negotiated agreement once operations begin, or covered through some other creative means.

## **2. Land Use and/or Site Improvements**

**Some proposed partnerships may include facility and/or land use. Necessary site improvements cannot be automatically assumed. Costs and responsibility for these improvements should be considered in any Proposal. Some of the general and usual needs for public facilities that may not be included as City contributions and may need to be negotiated for a project include:**

- Any facilities or non-existent infrastructure construction
- Roads or street improvements
- Maintenance to specified standards
- Staffing
- Parking
- Snow removal
- Lighting
- Outdoor restrooms
- Water fountains
- Complementary uses of the site
- Utility improvements (phone, cable, storm drainage, electricity, water, gas, sewer, etc.)
- Custodial services
- Trash removal

## **3. Need**

The nature of provision of public services determines that certain activities will have a higher need than others. Some activities serve a relatively small number of users and have a high facility cost. Others serve a large number of users and are widely available from the private sector because they are profitable. The determination of need for facilities and programs is an ongoing discussion in public provision of programs and amenities. The project will be evaluated based on how the project fulfills a public need.

## **4. Funding**

Only when a Partnership Proposal demonstrates high unmet needs and high benefits for City citizens, will the City consider contributing resources to a project. The City recommends that Proposing Partners consider sources of potential funding. The more successful partnerships will have funding secured in advance. In most cases, Proposing Partners should consider funding and cash flow for initial capital development, staffing, and ongoing operation and maintenance.

**The details of approved and pending funding sources should be clearly identified in a proposal.**

For many partners, especially small private user groups, non-profit groups, and governmental agencies, cash resources may be a limiting factor in the proposal. It may be a necessity for partners to utilize alternative funding sources for resources to complete a proposed project. Obtaining alternative funding often demands creativity, ingenuity, and persistence, but many forms of funding are available.

Alternative funding can come from many sources, e.g. Sponsorships, Grants, and Donor Programs. A local librarian and/or internet searches can help with foundation and grant resources. Developing a solid leadership team for a partnering organization will help find funding sources. In-kind contributions can, in some cases, add additional funding.

All plans for using alternative funding should be clearly identified. The City has an established Sponsorship Policy, and partnered projects will be expected to adhere to the Policy. This includes the necessity of having an Approved Sponsorship Plan in place prior to procurement of sponsorships for a Partnered Project.

### **C. Selection Criteria**

In assessing a partnership opportunity to provide facilities and services, the City will consider (as appropriate) the following criteria. The Proposed Partnership Outline Format in Part Two provides a structure to use in creating a proposal. City staff and representatives will make an evaluation by attempting to answer each of the following Guiding Questions.

- How does the project align with the City and affected Department's Mission Statement and Goals?
- How does the proposed facility fit into the current City and the affected Department's Master Plan?
- How does the facility/program meet the needs of City residents?
- How will the project generate more revenue and/or less cost per participant than the City can provide with its own staff or facilities?
- What are the alternatives that currently exist, or have been considered, to serve the users identified in this project?
- How much of the existing need is now being met within the City borders and within adjacent cities?
- What is the number and demographic profile of participants who will be served?
- How can the proposing partner assure the City of the long-term stability of the proposed partnership, both for operations and for maintenance standards?
- How will the partnered project meet the Americans with Disabilities Act (ADA) and Equal Employment Opportunity Commission (EEOC) requirements?
- How will the organization offer programs at reasonable and competitive costs for participants?
- What are the overall benefits for both the City and the Proposing Partners?

## D. Additional Assistance

The XX Parks and Recreation Department is aware that the partnership process does entail a great deal of background work on the part of the Proposing Partner. The following list of resources may be helpful in preparing a proposal:

- **Courses are available through local colleges and universities to help organizations develop a business plan and/or operational pro-formas.**
- The Chamber of Commerce offers a variety of courses and assistance for business owners and for those contemplating starting new ventures.
- There are consultants who specialize in facilitating these types of partnerships. For one example, contact **GreenPlay LLC** at **303-439-8369** or **info@greenplayllc.com**.
- Reference Librarians at libraries and internet searches can be very helpful in identifying possible funding sources and partners, including grants, foundations, financing, etc.
- Relevant information including the ***City of XX Comprehensive Plan***, the ***Parks and Recreation Master Plan***, site maps, and other documents are available at the \_\_\_\_\_. These documents may be copied or reviewed, but may not be taken off-site.
- The XX Parks and Recreation Department Web Site (***www.XXXX.com***) has additional information.
- **If additional help or information is needed, please call 000-000-0000.**

## Part Two

# Sample Proposed Partnership Outline Format

Please provide as much information as possible in the following outline form.

### I. Description of Proposing Organization:

- Name of Organization
- Years in Business
- Contact Name, Mailing Address, Physical Address, Phone, Fax, Email
- Purpose of Organization
- Services Provided/Member/User/Customer Profiles
- Accomplishments
- Legal Status

### II. Decision Making Authority

Who is authorized to negotiate on behalf of the organization? Who or what group (i.e. Council/Commission/Board) is the final decision maker and can authorize the funding commitment? What is the timeframe for decision making?

#### Summary of Proposal (100 words or less)

What is being proposed in terms of capital development, and program needs?

### III. Benefits to the Partnering Organization

Why is your organization interested in partnering with the XX Parks and Recreation Department? Please individually list and discuss the benefits (monetary and non-monetary) for your organization.

### IV. Benefits to the Sample Parks and Recreation Department

Please individually list and discuss the benefits (monetary and non-monetary) for the XX Parks and Recreation Department and residents of the City.

### V. Details (as currently known)

The following page lists a series of *Guiding Questions* to help you address details that can help outline the benefits of a possible partnership. Please try to answer as many as possible with currently known information. Please include what your organization proposes to provide and what is requested of XX Parks and Recreation Department. Please include (as known) initial plans for your concept, operations, projected costs and revenues, staffing, and/or any scheduling or maintenance needs, etc.

## **Guiding Questions**

### ***Meeting the Needs of our Community:***

- In your experience, how does the project align with park and recreation goals?
- How does the proposed program or facility meet a need for City residents?
- Who will be the users? What is the projected number and profile of participants who will be served?
- What alternatives currently exist to serve the users identified in this project?
- How much of the existing need is now being met? What is the availability of similar programs elsewhere in the community?
- Do the programs provide opportunities for entry-level, intermediate, and/or expert skill levels?
- How does this project incorporate environmentally sustainable practices?

### ***The Financial Aspect:***

- Can the project generate more revenue and/or less cost per participant than the City can provide with its own staff or facilities? If not, why should the City partner on this project?
- Will your organization offer programs at reasonable and competitive costs for all participants? What are the anticipated prices for participants?
- What resources are expected to come from the Parks & Recreation Department?
- Will there be a monetary benefit for the City, and if so, how and how much?

### ***Logistics:***

- How much space do you need? What type of space?
- What is critical related to location?
- What is your proposed timeline?
- What are your projected hours of operations?
- What are your initial staffing projections?
- Are there any mutually-beneficial cooperative marketing benefits?
- What types of insurance will be needed and who will be responsible for acquiring and paying premiums on the policies?
- What is your organization's experience in providing this type of facility/program?
- How will your organization meet ADA and EEOC requirements?

### ***Agreements and Evaluation:***

- How, by whom, and at what intervals should the project be evaluated?
- How can you assure the City of long-term stability of your organization?
- What types and length of agreements should be used for this project?
- What types of “exit strategies” should we include?
- What should be done if the project does not meet the conditions of the original agreements?

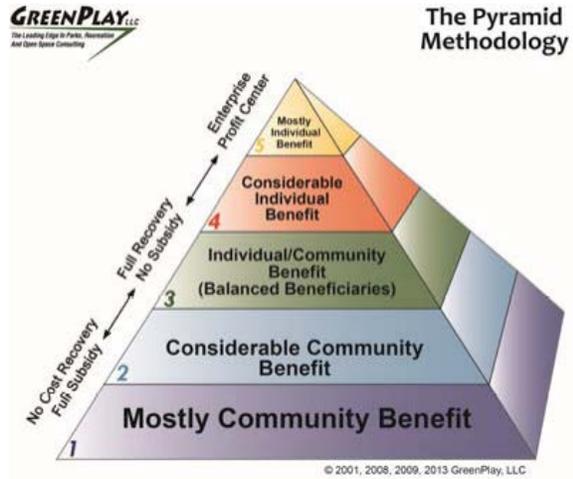
## **Appendix K: Pyramid Methodology for Cost Recovery**

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**THE PYRAMID METHODOLOGY: COST RECOVERY AND SUBSIDY ALLOCATION PHILOSOPHY**

The creation of a cost recovery and subsidy allocation philosophy and policy is a key component to maintaining an agency’s financial control, equitably pricing offerings, and helping to identify core services including programs and facilities.

Critical to this philosophical undertaking is the support and buy-in of elected officials and advisory boards, staff, and ultimately, citizens. Whether or not significant changes are called for, the organization should be certain that it philosophically aligns with its constituents. The development of a financial resource allocation philosophy and policy is built upon a very logical foundation, based upon the theory that those who benefit from parks and recreation services ultimately pay for services.



The development of a financial resource allocation philosophy can be separated into the following steps:

**Step 1 – Building on Your Organization’s Values, Vision, and Mission**

The premise of this process is to align agency services with organizational values, vision, and mission. It is important that organizational values are reflected in the vision and mission. Oftentimes, mission statements are a starting point and further work needs to occur to create a more detailed common understanding of the interpretation of the mission and a vision for the future. This is accomplished by engaging staff and community members in a discussion about a variety of Filters.

**Step 2 – Understanding the Pyramid Methodology, the Benefits Filter, and Secondary Filters**

Filters are a series of continuums covering different ways of viewing service provision. **Filters** influence the final positioning of services as they relate to each other and are summarized below. The **Benefits Filter**, however; forms the **foundation** of the **Pyramid Model** and is used in this discussion to illustrate a cost recovery philosophy and policies for parks and recreation organizations.

Filter	Definition
<b>Benefit</b>	Who receives the benefit of the service? (Skill development, education, physical health, mental health, safety)
<b>Access/Type of Service</b>	Is the service available to everyone equally? Is participation or eligibility restricted by diversity factors (i.e., age, ability, skill, financial)?
<b>Organizational Responsibility</b>	Is it the organization’s responsibility or obligation to provide the service based upon mission, legal mandate, or other obligation or requirement?
<b>Historical Expectations</b>	What have we always done that we cannot change?
<b>Anticipated Impacts</b>	What is the anticipated impact of the service on existing resources? On other users? On the environment? What is the anticipated impact of not providing the service?
<b>Social Value</b>	What is the perceived social value of the service by constituents, city staff and leadership, and policy makers? Is it a communitybuilder?

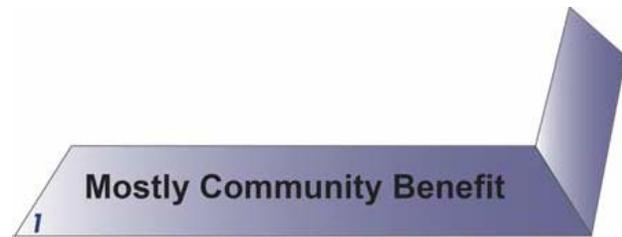
## THE BENEFITS FILTER

The principal foundation of the Pyramid is the **Benefits Filter**. Conceptually, the base level of the pyramid represents the mainstay of a public parks and recreation system. Services appropriate to higher levels of the pyramid should only be offered when the preceding levels below are comprehensive enough to provide a foundation for the next level. This foundation and upward progression is intended to represent public parks and recreation's core mission, while also reflecting the growth and maturity of an organization as it enhances its service offerings.

It is often easier to integrate the values of the organization with its mission if they can be visualized. An ideal philosophical model for this purpose is the pyramid. In addition to a physical structure, *pyramid* is defined by Webster's Dictionary as "an immaterial structure built on a broad supporting base and narrowing gradually to an apex." Parks and recreation programs are built with a broad supporting base of core services, enhanced with more specialized services as resources allow. Envision a pyramid sectioned horizontally into five levels.

### MOSTLY COMMUNITY Benefit

The foundational level of the Pyramid is the largest, and includes those services including programs and facilities which **MOSTLY** benefit the **COMMUNITY** as a whole. These services may increase property values, provide safety, address social needs, and enhance quality of life for residents. The community generally pays for these basic services via tax support. These services are generally offered to residents at a minimal charge or with no fee. A large percentage of the agency's tax support would fund this level of the Pyramid.



*Examples of these services could include: the existence of the community parks and recreation system, the ability for youngsters to visit facilities on an informal basis, low-income or scholarship programs, park and facility planning and design, park maintenance, or others.*

**NOTE: All examples above are generic – individual agencies vary in their determination of which services belong in the foundation level of the Pyramid based upon agency values, vision, mission, demographics, goals, etc.**

### CONSIDERABLE COMMUNITY Benefit

The second and smaller level of the Pyramid represents services which promote individual physical and mental well-being, and may begin to provide skill development. They are generally traditionally expected services and/or beginner instructional levels. These services are typically assigned fees based upon a specified percentage of direct (and may also include indirect) costs. These costs are partially offset by both a tax subsidy to account for **CONSIDERABLE COMMUNITY** benefit and participant fees to account for the **Individual** benefit received from the service.



*Examples of these services could include: the capacity for teens and adults to visit facilities on an informal basis, ranger led interpretive programs, beginning level instructional programs and classes, etc.*

### BALANCED INDIVIDUAL/COMMUNITY Benefit

The third and even smaller level of the Pyramid represents services that promote individual physical and mental well-being, and provide an intermediate level of skill development. This level provides balanced **INDIVIDUAL** and **COMMUNITY** benefit and should be priced accordingly. The individual fee is set to recover a higher percentage of cost than those services that fall within lower Pyramid levels.



*Examples of these services could include: summer recreational day camp, summer sports leagues, year-round swim team, etc.*

### CONSIDERABLE INDIVIDUAL Benefit

The fourth and still smaller Pyramid level represents specialized services generally for specific groups, and those which may have a competitive focus. Services in this level may be priced to recover full cost, including all direct and indirect expenses.



*Examples of these services could include: specialty classes, golf, and outdoor adventure programs.*

### MOSTLY INDIVIDUAL Benefit

At the top of the Pyramid, the fifth and smallest level represents services which have profit center potential, may be in an enterprise fund, may be in the same market space as the private sector, or may fall outside the core mission of the agency. In this level, services should be priced to recover full cost in addition to a designated profit percentage.



*Examples of these activities could include: elite diving teams, golf lessons, food concessions, company picnic rentals, and other facility rentals such as for weddings or otherservices.*

## Step 3 – Developing the Organization’s Categories of Service

In order to avoid trying to determine cost recovery or subsidy allocation levels for each individual agency service including every program, facility, or property, it is advantageous to categorize agency services into like categories. This step also includes the development of category definitions that detail and define each category and service inventory “checks and balances” to ensure that all agency services belong within a developed category. *Examples of Categories of Service could include: Beginner Instructional Classes, Special Events, and Concessions/Vending.*

## Step 4 – Sorting the Categories of Service onto the Pyramid

It is critical that this sorting step be done with staff, governing body, and citizen representatives involved. This is where ownership is created for the philosophy, while participants discover the current and possibly varied operating histories, cultures, and organizational values, vision, and mission. It is the time to develop consensus and get everyone on the same page – the page that is written together. Remember, this effort must reflect the community and must align with the thinking of policy makers.

**Sample Policy Development Language:**

XXX community brought together staff from across the department, agency leadership, and citizens to sort existing programs into each level of the Pyramid. The process was facilitated by an objective and impartial facilitator in order to hear all viewpoints. It generated discussion and debate as participants discovered what different people had to say about serving culturally and economically varied segments of the community, about historic versus active-use parks, about the importance of adult versus youth versus senior activities, and other philosophical and values-based discussions. This process gets at both the “what” and “why” with the intention of identifying common ground and consensus.

**Step 5 – Defining Direct and Indirect Costs**

The definition of direct and indirect costs can vary from agency to agency. What is important is that all costs associated with directly running a program or providing a service are identified and consistently applied across the system. Direct costs typically include all the specific, identifiable expenses (fixed and variable) associated with providing a service. These expenses would not exist without the service and may be variable costs. Defining direct costs, along with examples and relative formulas is necessary during this step.

Indirect costs typically encompass overhead (fixed and variable) including the administrative costs of the agency. These costs would exist without any specific service but may also be attributed to a specific agency operation (in which case they are direct expenses of that operation). If desired, all or a portion of indirect costs can be allocated, in which case they become a direct cost allocation.

**Step 6 – Determining (or Confirming) Current Subsidy/Cost Recovery Levels**

This step establishes the expectation that the agency will confirm or determine current cost recovery and subsidy allocation levels by service area based on the new or revised definition of direct and in-direct costs. This will include consideration of revenues sources and services costs or expenses. Typically, staff may not be cost accounting consistently, and these inconsistencies will become apparent. Results of this step will identify whether staff members know what it costs to provide services to the community, whether staff have the capacity or resources necessary to account for and track costs, whether accurate cost recovery levels can be identified, and whether cost centers or general ledger line items align with how the agency may want to track these costs in the future.

**Step 7 – Establishing Cost Recovery/Subsidy Goals**

Subsidy and cost recovery are complementary. If a program is subsidized at 75%, it has a 25% cost recovery, and vice-versa. It is more powerful to work through this exercise thinking about where the tax subsidy is used rather than what is the cost recovery. When it is complete, you can reverse thinking to articulate the cost recovery philosophy, as necessary.

The overall subsidy/cost recovery level is comprised of the average of everything in all of the levels together as a whole. This step identifies what the current subsidy level is for the programs sorted into each level. There may be quite a range within each level, and some programs could overlap with other levels of the pyramid. This will be rectified in the final steps.

This step must reflect your community and must align with the thinking of policy makers regarding the broad picture financial goals and objectives.

**Examples**

Categories in the bottom level of the Pyramid may be completely or mostly subsidized, with the agency having established limited cost recovery to convey the value of the experience to the user. An established 90-100% subsidy articulates the significant community benefit resulting from these categories.

The top level of the Pyramid may range from 0% subsidy to 50% excess revenues above all costs, or more. Or, the agency may not have any Categories of Service in the top level.

**Step 8 – Understanding and Preparing for Influential Factors and Considerations**

Inherent to sorting programs onto the Pyramid model using the Benefits and other filters is the realization that other factors come into play. This can result in decisions to place services in other levels than might first be thought. These factors also follow a continuum; however, do not necessarily follow the five levels like the Benefits Filter. In other words, a specific continuum may fall completely within the first two levels of the Pyramid. These factors can aid in determining core versus ancillary services. These factors represent a layering effect and should be used to make adjustments to an initial placement on the Pyramid.

**THE COMMITMENT FACTOR:** What is the intensity of the program; what is the commitment of the participant?



**THE TRENDS FACTOR:** Is the program or service tried and true, or is it a fad?



**THE POLITICAL FILTER:** What is out of our control?

This filter does not operate on a continuum, but is a reality, and will dictate from time to time where certain programs fit in the pyramid

**THE MARKETING FACTOR:** What is the effect of the program in attracting customers?



**THE RELATIVE COST TO PROVIDE FACTOR:** What is the cost per participant?



**THE ECONOMIC CONDITIONS FACTOR:** What are the financial realities of the community?



**FINANCIAL GOALS FACTOR:** Are we targeting a financial goal such as increasing sustainability, decreasing subsidy reliance?



### Step 9 – Implementation

Across the country, ranges in overall cost recovery levels can vary from less than 10% to over 100%. The agency sets their goals based upon values, vision, mission, stakeholder input, funding, and/or other criteria. This process may have been completed to determine present cost recovery levels, or the agency may have needed to increase cost recovery levels in order to meet budget targets. Sometimes, simply implementing a policy to develop equity is enough without a concerted effort to increase revenues. Upon completion of steps 1-8, the agency is positioned to illustrate and articulate where it has been and where it is heading from a financial perspective.

### Step 10 – Evaluation

The results of this process may be used to:

- Articulate and illustrate a comprehensive cost recovery and subsidy allocation philosophy
- Train staff at all levels as to why and how things are priced the way they are
- Shift subsidy to where is it most appropriately needed
- Benchmark future financial performance
- Enhance financial sustainability
- Recommend service reductions to meet budget subsidy targets, or show how revenues can be increased as an alternative
- Justifiably price new services

*This Cost Recovery/Subsidy Allocation Philosophy: The Pyramid Methodology Outline is provided by:*



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