



Plug in to Nature

Finding Connections to the Outdoors for Youth and Families
in Pueblo, Colorado

November 2015

Acknowledgements

Pueblo Plug in to Nature Advisory Committee

- Pueblo City-County Health Department – Katie Davis
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- Colorado State Parks and Wildlife – Monique Mullis
- Pueblo City Schools – Karen Ortiz, Julia Montano, Keli Coffey

City of Pueblo, CO

- Steven Meier, Planning Director
- Scott Hobson, Assistant City Manager for Community Investment
- Beritt Odom, Senior Planner, Project Manager
- Todd Zeiller, Senior Planner

Project Team



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Table of Contents

I. Introduction and Project Background	1
A. Project Approach	2
B. Warrant for Action	3
C. Research & Trends	5
D. New Tools for Community Engagement.....	6
II. Goals, Focus, and Outcomes	7
A. Goals	7
B. Focus	7
C. Outcomes	7
III. Methodology and Findings	9
A. Review, Inventory and Analysis of Nature Based Opportunities.....	10
B. Summary Findings for GIS Review, Inventory, and Analysis of Nature Based Opportunities	24
C. Collection and Review of Organizations Who Manage and Operate City-owned Outdoor Facilities and Nature Programs and other Alternative Providers	24
D. Facilitation and Analysis of Community Engagement	25
E. Development of Recommendations	49
IV. Recommendations	51
A. Student Outdoor Council	51
B. Continue to Re-establish the Pueblo Natural Resources & Environmental Education Coalition (PNREEC)	52
C. Initiate Pilot Programs to Fill Gaps.....	52
D. Promote an Outdoor Program Providers Clearinghouse	54
E. Develop Governmental Support and Financial Strategies	55
F. Implement Targeted Recreation Facilities Improvements.....	56
V. Partnership, Funding, and Staffing Opportunities.....	57
A. Looking to the Future	57
Appendix A: Additional GIS Analysis and Discussion	59
Appendix B: Questions Neighborhood and Regional.....	67
Appendix C: Youth and Parent Survey Instruments.....	71
Appendix D: Healthy Communities Research Group	77
Appendix E: YANS Overview	81
Appendix F: Safe Routes to Play	85



Table of Figures

Figure 1: City of Pueblo Parks and Trails Map, May 1, 2009.....	11
Figure 2: Pueblo Plug in to Nature Sub-Areas.....	12
Figure 3: Resident Access to Park Land within 1/3 Mile.....	14
Figure 4: Walkable Access by Sub-Area.....	16
Figure 5: Recent Pueblo Park Upgrades or Improvements.....	20
Figure 6: Neighborhood Access to Trails.....	21
Figure 7: Sub-Area Areas, Population, and 10-14 Age Group with Walkable Access to Trails.....	22
Figure 8: Outdoor/Nature Activities Participated in by Students.....	33
Figure 9: Keyword Word Cloud.....	34
Figure 10: Definitions of Nature and the Outdoors Word Cloud.....	36
Figure 11: Other Activities Word Cloud.....	37
Figure 12: Frequency of Barrier Types.....	37
Figure 13: Neighborhood Mapping Exercise: How Do Students Get There?.....	40
Figure 14: Regional Mapping Exercise: How Often Students Go.....	41
Figure 15: CartoDB Online Mapping Platform.....	42
Figure 16: Student and Parent Activity Outdoors.....	48
Figure 17: Pueblo Plug in to Nature Sub-Areas.....	59
Figure 18: Neighborhood Access to All Components Walkable Level of Service.....	62
Figure 19: Walkable Access to All Components Additional GRASP® Walkable Level of Service Analysis ..	63
Figure 20: Walkable Access by Sub-Area.....	64

Table of Tables

Table 1: National Resources on Nature and the Outdoors.....	4
Table 2: Pueblo Plug in to Nature Target Sub-Area Demographics.....	13
Table 3: Sub-Area Acreage.....	13
Table 4: Percentage of Residents with Walkable Access to Park Land.....	15
Table 5: Percentage of Area with Walkable Access by Sub-Area.....	17
Table 6: Percentage of 10-14 year olds with Outdoor Recreation Access by Sub-Area.....	18
Table 7: Percentage of 10-14 year olds with Trail Access.....	23
Table 8: Key Descriptions and Photo Samples.....	26
Table 9: Summary Analysis of Photographs.....	31
Table 10: Sub-Area Acreage.....	60
Table 11: Pueblo Plug in to Nature Sub-Area Demographics.....	60
Table 12: Sub-Area Acreage.....	61
Table 13: Walkable Access by Sub-Area.....	65



I. Introduction and Project Background

Across the nation, citizens, educators, health professionals, and community leaders are increasingly concerned about the lack of time children spend in nature. Societal trends including obesity, chronic disease, and behavioral issues are negatively impacting children in every community.



Fostering children’s physical, emotional, social, and intellectual health is vitally important to their overall well-being, and access to nature is an important component in their development. The positive impact of daily access to nature has been well documented – most notably by organizations such as the Children in Nature Network (CNN), the National Wildlife Federation (NWF), the Nature Conservancy (NC), the North American Association for Environmental Education (NAAEE), and the Natural Learning Initiative at North Carolina State University. Children who interact regularly in the outdoors are more mentally acute, physically healthy, and socially adept, and are more likely to maintain a positive disposition toward the environment and natural resources as adults.¹ There is ample justification for designing children’s play and learning environments to support the whole child’s development.

The ***Pueblo Plug in to Nature*** study is an analysis of an 18 square mile, low-moderate income census block within the City to determine the current levels of connectedness the citizens of Pueblo have to the outdoors and nature. The project was funded by Great Outdoors Colorado (GOCO), and the City of Pueblo identified the following issues in its grant application:

“In light of the significant amounts of public investments that preserve natural areas, a 26-mile river trail system, and specialized outdoor sports facilities that encourage access for outdoor activities, the overall health (especially within the lower income areas of Pueblo) continues to lag below the state averages. Despite much effort and several bright spots including excellent access to hospitals, medical clinics, and community healthcare, overall progress in Pueblo has been badly hampered by the absence of an overarching strategy and a coordinated effort to address physical activity and its positive relationship to improved health.

A significant effort needs to be undertaken to assess the important relationship between household income, the level of routine physical activity people engage in, and their health. By most definitions, low-income people as a group have access to less healthy food, engage in less physical activity, and suffer from poorer health outcomes than the general population. The health of residents within the study area could be improved by identifying and lowering community barriers to routine physical activity and access to nature.”

¹ Design Workshop. *Plug in to Nature Replication Guide*, Larimer County, CO. (2012).



The goal of the **Pueblo Plug in to Nature** study is to reveal gaps and barriers that may inhibit connections to nature, and identify opportunities to increase access to the outdoors for residents in the low-moderate income census block within the City. The Pueblo project was modeled on the 2012 Larimer County Plug in to Nature Pilot Project, and reinforced the concept that “...*understanding the particular values, opinions, and behaviors of community members, in the context of the physical environment and demographic indicators, leads to identifying challenges and opportunities unique to a geographic area.*” In keeping with this approach, the **Pueblo Plug in to Nature** study sought to:

- **Define** what access to nature means in Pueblo
- **Identify** barriers to and gaps in access to nature (physical, social, economic)
- **Create** accurate analysis that leads to actionable items
- **Improve health and social behaviors** by providing increased access to nature

A. Project Approach

A collaborative effort was undertaken by the City of Pueblo Plug in to Nature Advisory Committee and staff, Design Concepts, Tapis Associates, Place Matters, and GP RED’s Healthy Communities Research Group to engage students attending schools in the target neighborhoods of Bessemer, Eastside, and Westside to explore how to improve access to nature and the outdoors. The Pueblo Plug in to Nature Consultant Team and Advisory Committee determined that a practical approach to address these issues in Pueblo was to focus on the 10-14 age group based on various factors. Young people in this age group start to make personal decisions, shift from independent to social activities, increase their reliance on friends/peers, and seek independence from parent supervision.

A growing body of national research into the habits and behaviors of this demographic supports this focus. Early adolescence is a time of life that is crucial for the development of healthy habits and adherence to healthy lifestyles. During this stage of a child’s development, risk-taking behaviors may emerge (experimenting with tobacco, alcohol, physical risks, etc.), ideals begin to develop, including selection of role models, and body image becomes important.² These factors, in addition to the growing concern over obesity in young people, contributed to the rationale for focusing on the 10-14 year old age group for this project, and how access to nature and the outdoors can contribute to positive youth development in Pueblo.

A photograph interpretation exercise and/or visuals and a written survey were identified as a primary means of engaging the students. Efforts were also made to gather feedback from parents to further inform the findings. With a focus on the three target areas and the 10-14 age group, this project built upon previous analysis that examined access to parks in Pueblo.

The Pueblo Plug in to Nature Consultant Team and Advisory Committee were interested in answering a number of additional questions: “How would a citizen find out what is offered for outdoor recreation activities and facilities in Pueblo in addition to what is offered at City facilities?” “What else is out there and who is offering it?” “How do we identify alternative providers?”

To address these questions, the core elements of the project were to establish a working definition of the terms “nature” and “the outdoors,” identify barriers to access and proximity to recreation opportunities, and understand how middle schoolers in Pueblo access outdoor recreation destinations.

² McNeely, C. and Blanchard, J. *The Teen Years Explained: A Guide to Healthy Adolescent Development*. Center for Adolescent Health at the Johns Hopkins Bloomberg School of Public Health.



In taking a deeper look at how the young people of Pueblo define “nature” and “the outdoors,” the consultant team facilitated discussions to identify the concepts of, and distinctions between, the two terms. To achieve this, outreach discussions centered on common or popular nature and outdoor recreation activities.

Identifying barriers in access to nature and the outdoors involved an evaluation of physical barriers such as major streets, railroads, river and creeks, non-physical barriers such as technology, social or economic limitations, and targeted testing of possible barriers. Proximity and access to nature and the outdoors were mapped using specific outdoor recreation sites in the City of Pueblo, popular destinations, means of access, and social equity in outdoor recreation opportunities. In addition, the assets and programs of other outdoor recreation providers were identified.

B. Warrant for Action

Childhood obesity is a serious, growing epidemic in America. Obesity rates have tripled in the past 30 years. For the first time in our history, American children may face a shorter expected lifespan than their parents. The U.S. spends \$150 billion every year to treat obesity-related conditions, with childhood health care costs rapidly increasing.

Researchers estimate that the obesity rate for children ages 6 to 11 has more than quadrupled (from 4.2 to 19.6 percent), and it has tripled for adolescents ages 12 to 19 (from 4.6 to 18.1 percent) over the past four decades. Access to nature and the outdoors has the potential to reverse this alarming trend.

In “*Benefits of Connecting Children with Nature*,” the Natural Learning Initiative at North Carolina State University identified numerous benefits to children of all ages who have daily exposure to nature and the environment, including improved academic performance, reduced stress, and increased physical activity.³ Proximity to parks is also a key factor in increasing physical activity. Research has shown that children with better access to parks and recreational resources are less likely to experience significant increases in attained Body Mass Index (BMI) in later adolescence.⁴

Numerous national, state, and local organizations are working to address access to nature and the outdoors for youth and families. Highlights of the resources available from each organization are identified in **Table 1**.

³ Natural Learning Initiative, NC State University College of Design. *Benefits of Connecting Children with Nature: Why Naturalize Outdoor Learning Environments*. (2012).

⁴ Wolch, J., et al. Childhood Obesity and Proximity to Urban Parks and Recreational Resources: A Longitudinal Cohort Study. *Health & Place*, 207-214. (2011).



Table 1: National Resources on Nature and the Outdoors

Organization	Resources	Research Highlights
Children and Nature Network	Green schoolyards, natural leaders & grassroots leaders training, nature clubs for families, technical assistance	<i>Natural schoolyards decrease stress, strengthen attention, reduce behavior problems, and enhance factors associated with resilience in children of all ages.⁵</i>
National Wildlife Federation	Service learning, eco-schools, nature playgrounds, schoolyard habitats, tree planting, youth journalists	<i>Children 8-18 years old devote an average of 7 hours and 38 minutes using entertainment media in a typical day.⁶</i>
North American Association for Environmental Education	Environmental literacy campaign, educators conference, environmental curriculum guides	<i>Environmental youth groups, conferences and gatherings are more important to influencing youth involvement in environmental activities than in previous years.⁷</i>
Outdoor Industry Association	Grants, research, program resources, outdoor advocacy	<i>In 2014, overall outdoor participation dropped .8 percent since 2013, and, by a small margin, reached its lowest levels since the report began in 2006.⁸</i>
Nature Conservancy	Land conservation and protection, educator resources, climate change	<i>Youth are more likely to associate being in nature with being peaceful, free, calm, and happy than with any other characteristic.⁹</i>

Partnerships among federal, state, and local agencies for programs, and professional development opportunities offer a dynamic network of resources and research.

⁵ Chawla, L., Keena, K., Pevec, I., Stanley, E.,. Green schoolyards as havens from stress and resources for resilience in childhood and adolescence. *Health & Place*, 1-13. (2014).

⁶ Kaiser Family Foundation. *Generation M2: Media in the Lives of 8- to 18-Year-Olds*. (2010).

⁷ Arnold, H.E., Cohen, F.G., Warner, A. Youth and Environmental Action: Perspectives of Young Environmental Leaders on Their Formative Influences. *Journal of Environmental Education*. 40:3; (2009).

⁸ Outdoor Foundation. *Outdoor Recreation Participation Topline Report*. (2015).

⁹ The Nature Conservancy. *Connecting America's Youth to Nature Survey*. (2014).



C. Research & Trends

The Natural Learning Initiative at North Carolina State University identified the following benefits to children who have daily exposure to nature and the environment based on the Children in Nature Network's compiled research¹⁰:

- **Enhances cognitive abilities.** Proximity to, views of, and daily exposure to natural settings increases children's ability to focus and enhances cognitive abilities (Wells, 2000).
- **Improves academic performance.** Studies in the U.S. show that schools that use outdoor classrooms and other forms of nature-based experiential education support significant student gains in social studies, science, language arts, and math. Students in outdoor science programs improved their science testing scores by 27 percent (American Institutes for Research, 2005).
- **Reduces Attention Deficit Disorder (ADD) symptoms.** Contact with the natural world can significantly reduce symptoms of attention deficit disorder in children as young as five years old (Kuo and Taylor, 2004).
- **Increases physical activity.** Children who experience school grounds with diverse natural settings are more physically active, more aware of nutrition, more civil to one another, and more creative (Bell and Dymont, 2006).
- **Improves nutrition.** Children who grow their own food are more likely to eat fruits and vegetables (Bell & Dymont, 2008) and to show higher levels of knowledge about nutrition (Waliczek, & Zajicek, 2006). They are also more likely to continue healthy eating habits throughout their lives (Morris & Zidenberg-Cherr, 2002).
- **Improves eyesight.** More time spent outdoors is related to reduced rates of nearsightedness, also known as myopia, in children and adolescents (American Academy of Ophthalmology, 2011).
- **Improves social relations.** Children will be smarter, better able to get along with others, healthier and happier when they have regular opportunities for free and unstructured play in the out-of-doors (Burdette and Whitaker, 2005).
- **Improves self-discipline.** Access to green spaces, and even a view of green settings, enhances peace, self-control and self-discipline within inner city youth, and particularly in girls (Taylor, Kuo and Sullivan, 2001).
- **Reduces stress.** Green plants and vistas reduce stress among highly stressed children. Locations with a greater number of plants, greener views, and access to natural play areas show more significant results (Wells and Evans, 2003).

¹⁰ Natural Learning Initiative, NC State University College of Design. *Benefits of Connecting Children with Nature: Why Naturalize Outdoor Learning Environments.* (2012).



D. New Tools for Community Engagement

Emerging methodologies to involve citizens and youth in the community design process are increasingly evidence-based, and effective in evaluating a community's built and natural environments, programs, and policies. Examples of evidence-based tools include GP RED's Surveillance and Management Toolkit (SMT), which examines the role of public parks and recreation as preventative public health providers, Youth Activity and Nutrition Survey (YANS), and Safe Routes to Play (SRTP), a child-centered planning process. Children & Nature Network Toolkits provide resources for



community leaders, teachers, and pediatricians. Participatory research tools such as Photovoice encourage citizen participation by identifying community assets and issues using photography. Walking Workshops use technology to capture document community improvement opportunities for safe walking and bicycling. Statewide information clearinghouses such as Get Outdoors Colorado provide extensive links to outdoor and nature based organizations and activity listings. The recommendations section of this report includes a more detailed description of how these tools may be applied in future planning efforts in Pueblo.



II. Goals, Focus, and Outcomes

It was essential to create shared community goals and purpose to serve as a guide throughout the ***Pueblo Plug in to Nature*** study and to provide focus for decision making throughout the process. Beginning with kick-off discussions, the Advisory Committee identified what the desired change in the target neighborhoods might look like in terms of desired outcomes. As the data collection, assessment, and analysis process unfolded, recommendations were created collaboratively with the Advisory Committee along with success measures.

A. Goals

- Determine the current levels of connection between low-moderate income middle school students and the natural world
- Reveal the gaps and barriers that may inhibit such connections
- Identify opportunities on which to build in order to connect more middle school students to nature and the outdoors

B. Focus

- Education/awareness of the need for middle school students to access nature on a daily basis
- Consideration of students' perceptions of safety
- Target 10-14 year olds based on their ability to make decisions
- Discover what parks, outdoor, and nature facilities attract middle school students, and why they visit them
- Focus needed updates and renovations to trails, parks, and open space to better serve middle school students
- Utilize previous public input and evaluate progress on recommendations from the 2008 *Pueblo Parks and Recreation Assessment and Implementation Plan*

C. Outcomes

- Create a proactive outreach/engagement/education resource for outdoor opportunities
- Encourage information sharing among outdoor program providers
- Shift perceptions from fear and safety concerns to safe, fun, healthy, and desirable activity in the outdoors/nature
- Identify outdoor/nature program and resource service gaps for middle school aged youth in the three sub-areas of Bessemer, Eastside, and Westside
- Tailor program initiatives on what Pueblo middle school aged youth see as barriers and how they see solutions



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III. Methodology and Findings

The methodology for the *Pueblo Plug in to Nature* study included the following steps:

Review, Inventory, and Analysis of Nature Based Opportunities

Design Concepts, along with GreenPlay, LLC, completed a physical asset inventory and level of service analysis as part of the *2008 Pueblo Parks and Recreation Assessment and Implementation Plan* which provided a valuable understanding of access and barriers to physical outdoor recreation opportunities in Pueblo. For the *Pueblo Plug in to Nature* study, the following activities were conducted:

- Existing Geographic Information System (GIS) data was reviewed with City of Pueblo staff to determine accessible public lands as well as lands suitable for future access.
- Existing GIS data was reviewed and re-analyzed with regard to the low-moderate income target sub-areas and the 10-14 year old age bracket.
- Current data on alternative providers was collected by City of Pueblo staff and reviewed.
- Previously identified partners including, federal, state, and local entities were reviewed and recorded to help identify granting possibilities and support mechanisms.

Facilitation and Analysis of Community Engagement

An Advisory Committee was created to initially identify the community's definition of nature and the outdoors and to review findings and recommendations. Public outreach and community engagement was achieved using interactive photo exercises and worksheets, a customized survey tool administered to students and parents at Pueblo Academy of Arts and the Pueblo School of Arts & Sciences, and a digital mapping exercise in which students identified important community destinations and travel modes to these destinations.

Development of Recommendations

Based on documentation and information gathered regarding gaps and barriers separating the target group from nature, six key recommendations and related metrics were identified:

1. Establish a Student Outdoor Council at each of the three target middle schools
2. Continue to Re-establish the Pueblo Natural Resources & Environmental Education Coalition (PNREEC)
3. Initiate pilot programs to fill gaps
4. Promote an Outdoor Providers Clearinghouse
5. Develop Governmental Support and Financial Strategies for the Implementation of a Program to Evaluate the Community's Built, Natural, and Programmatic Aspects that Influence Increasing Physical Activity and Reducing Obesity
6. Implement Targeted Recreation Facility Improvements

Recommendations were based on cumulative findings throughout the project, and highlight the need for further information gathering. Building on the initial student and community engagement efforts, initiating nature based pilot programs, and providing a clearinghouse of nature and outdoor recreation providers ensures a comprehensive, well-rounded approach to improving access to nature and the outdoors for low to moderate income middle school students of Pueblo.



A. Review, Inventory and Analysis of Nature Based Opportunities

The findings for the *Pueblo Plug in to Nature* study included the following:

Review of Parks and Recreation Assessment and Implementation Plan, 2008

A complete inventory, conducted in May of 2008 as part of the *Pueblo Parks and Recreation Assessment and Implementation Plan*, included visiting each property and facility, talking with appropriate personnel, and recording the quantity and functionality of the each component. The inventory assembled for this plan focused only on components at sites that are maintained for public use by the City of Pueblo. It is recognized that other providers exist, and that the facilities they provide are part of the overall level of service (LOS) enjoyed by people in Pueblo. However, the purpose of this study was to analyze the effectiveness of services provided at City-owned facilities and to create a complete inventory of those assets the City provides. The 2008 inventory found that:

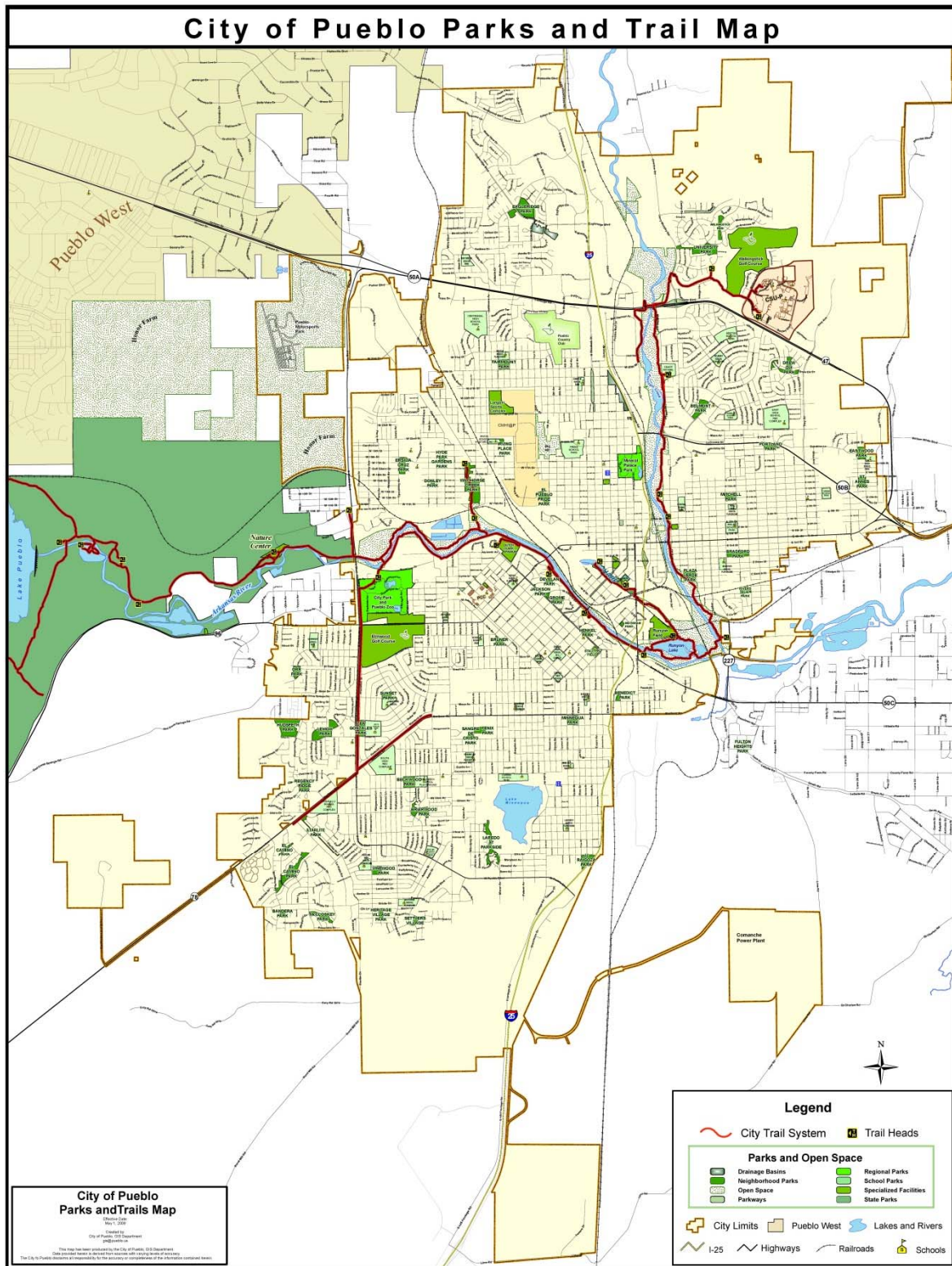


“The City of Pueblo has a variety of park lands, trails, and indoor facilities that form a network of properties that cover the City. Facilities provide a variety of options including opportunities for sports, picnics, nature study, water recreation, and quiet contemplation. The residents of Pueblo use and appreciate the parks, open space, and recreational opportunities that they provide. However, in the last few decades the Parks and Recreation Department has suffered from budget cuts, reducing the Department’s ability to maintain the parks to desired levels. Despite budget constraints, the staff makes significant efforts to keep the parks maintained. Yet, budget constraints have resulted in lower levels of park maintenance. This reduction of maintenance levels is apparent in all parks but is particularly striking in the neighborhood parks where many components are outdated, and turf quality and tree care suffers. In addition to traditional park lands, the Parks Division maintains urban streetscapes, detention and drainage structures, and road rights-of-way. These properties are considered in the inventory, as they affect the resource allocation and operations of the Department, but are not included as properties that are providing recreational value to the residents of Pueblo. Also a part of the Pueblo system but not included in the scope of this plan are two properties: Honor Farm Park and Open Space and the Pueblo Nature Center. These properties are located outside of the City limits and were not included due to the specificity of their uses.”

Figure 1 shows locations of existing parks, trails, and open space, with schools and some landmarks shown for reference. Major barriers to pedestrian access identified in 2008 included: the Arkansas River, Fountain Creek, Interstate 25, Highway 50, and numerous railroad lines.



Figure 1: City of Pueblo Parks and Trails Map, May 1, 2009



Source: City of Pueblo, CO



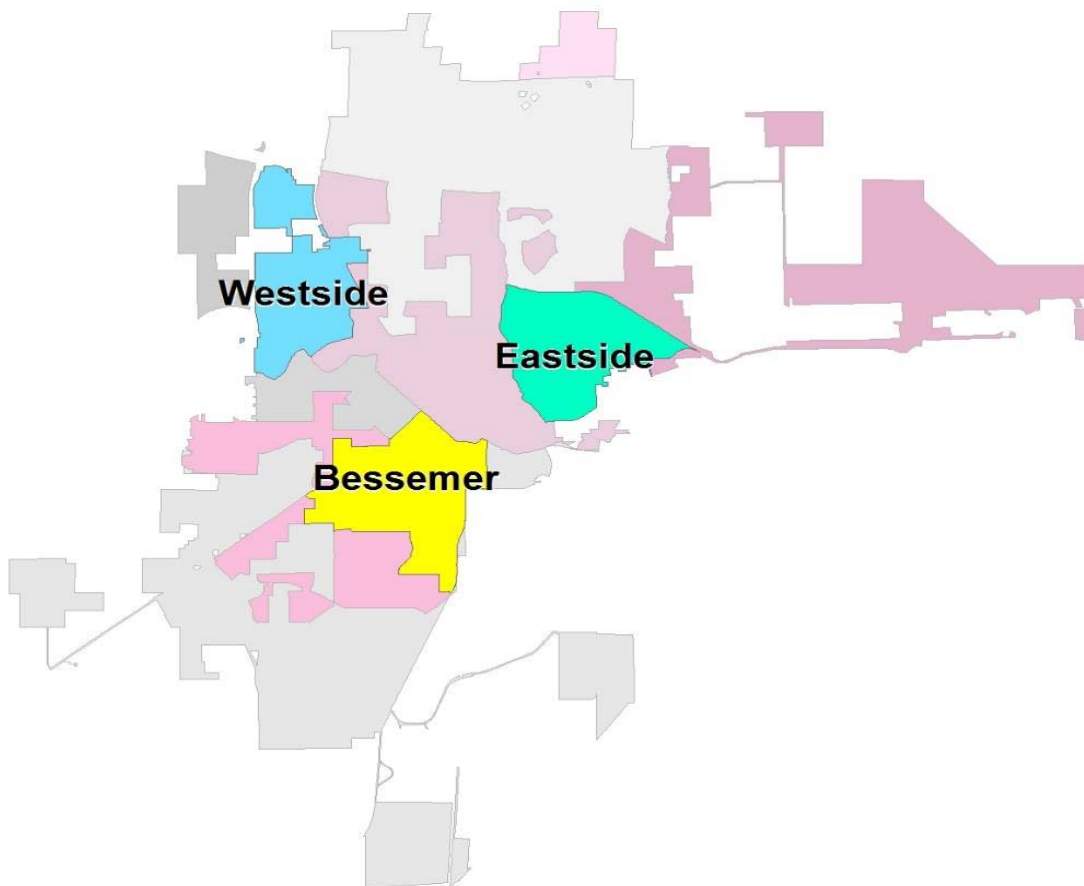
GIS Analysis of Nature Based Opportunities

Extensive GIS based analysis was completed during the *Pueblo Plug in to Nature* project. Highlights of this analysis and findings that are most relative to the scope of this study are included in the following sections. Additional analysis and discussion can be found in **Appendix A: Additional GIS Analysis and Discussion**.

Pueblo Plug in to Nature Sub-Areas

The *Pueblo Plug in to Nature* study looked at three primary low/moderate income sub-areas within the City of Pueblo as defined by the original project scope and grant application. **Figure 2** illustrates the location of the primary sub-areas: 1) Westside, 2) Eastside, and 3) Bessemer. In addition to the primary sub-areas areas in pink tones and gray tones represent other low/moderate income and areas that rise above the income threshold respectively. They are shown for reference and are discussed further in **Appendix A: Additional GIS Analysis and Discussion**.

Figure 2: Pueblo Plug in to Nature Sub-Areas



Demographic Information

Basic demographic information was gathered using Environmental Systems Research Institute (ESRI) software to provide a clearer picture of the demographic make-up of the City of Pueblo. **Table 2** shows that Bessemer has the highest overall population, highest population density, and greatest number of 10-14 year olds, while Eastside has the lowest Median Household Income and Average Household Income of the three target sub-areas.

Table 2: Pueblo Plug in to Nature Target Sub-Area Demographics

Sub-areas	Total 2014 Population	Total Population per Square Mile	10-14 yr. old Population 2014	Median Household Income	Average Household Income
Bessemer	16,411	4,967	1,038	\$26,380	\$33,498
Eastside	12,648	4,365	913	\$25,262	\$32,215
Westside	4,059	1,455	351	\$26,660	\$33,445

Sub-Area Park Acre Analysis

One traditional method to analyze level of service is to consider acres of park land per capita within the boundaries of a sub-area. Using updated GIS data obtained from the city in 2014, **Table 3** shows the acres of park land within each sub-area, as well as total population per acre and the number of 10-14 year olds per acre. Of the three sub-areas prioritized in this study, Bessemer has both the lowest total acres of park land and lowest per capita ratios. At the time these neighborhoods were developing, there were limited parkland dedication requirements in place. The Bessemer neighborhood does have the greatest number of schools, however, but these are not included in the total park acres calculated.

Table 3: Sub-Area Acreage

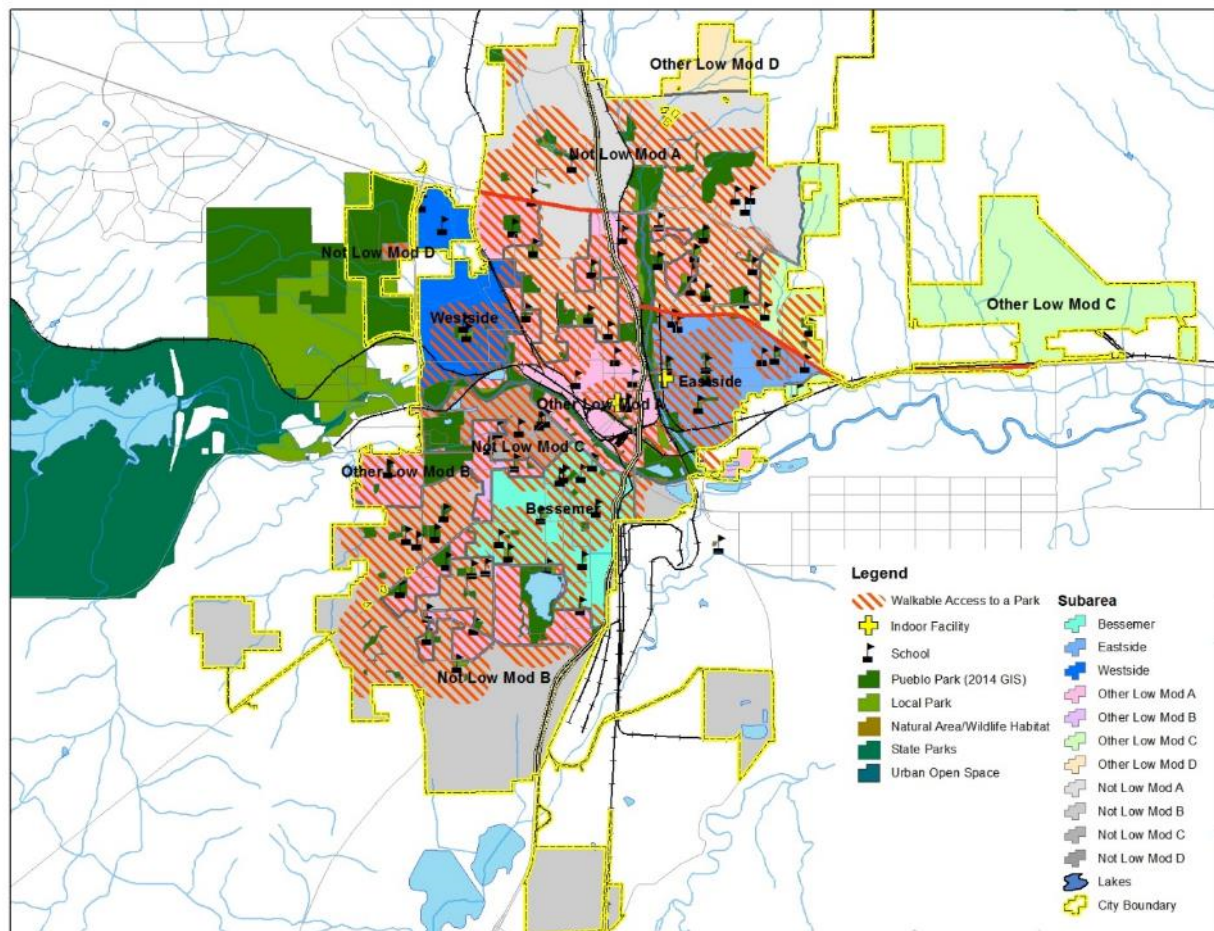
Sub-areas	# Schools w/in Boundary	Acres of 2014 Park Lands w/in Boundary	% of area Park Land	Acres of Parkland/1,000 Population	Acres of Parkland/1,000 10-14 Population
Bessemer	12	36	1.7%	2.2	34.7
Eastside	9	136	7.3%	10.8	149.0
Westside	4	106	5.9%	26.1	302.0



Sub-Area Park Walkable Access Analysis

A limitation of the previous analysis is that it does not account for access to nearby parks that occur outside of the sub-area boundary but within a reasonable service area. Perhaps the most telling GIS analysis done as part of this project is one that was done to address this limitation. **Figure 3** looks at resident access to park land within walking distance of home, regardless of sub-area boundary. Areas shown by an orange hatch indicate access to a park within a 10 minute walk, assumed to be 1/3 mile.

Figure 3: Resident Access to Park Land within 1/3 Mile



Based on this analysis, utilizing GIS data and ESRI demographic values, the number and percentage of residents within each sub-area with walkable access to park land can be determined, as illustrated in **Table 4**. The gray areas labeled *Not Low Mod* are primarily undeveloped areas of the city with some concentrated commercial or industrial uses.

Table 4: Percentage of Residents with Walkable Access to Park Land

Sub-areas	Total 2015 Population	Area in Square Miles	Total Pop. Per Sq. mile	10-14 yr. old Population 2015	Median Household Income	Average Household Income	Population w/Access to Park	% Total w/Access	10-14 yr. olds w/access	%10-14 w/access
Bessemer	16,397	3.3	5.0	1,037	\$26,380	\$33,498	13,298	81%	839	81%
Eastside	12,698	2.9	4.4	919	\$25,262	\$32,215	10,377	82%	769	84%
Westside	4,101	2.8	1.5	356	\$26,660	\$33,445	2,818	69%	242	68%
Other Low Mod A	11,529	6	1.9	605	\$25,781	\$35,331	9,975	87%	558	92%
Other Low Mod B	13,509	3.8	3.6	846	\$35,441	\$42,751	13,244	98%	830	98%
Other Low Mod C	2,489	6.8	0.4	189	\$27,160	\$40,278	2,294	92%	174	92%
Not Low Mod A	24,850	11.8	2.1	1,444	\$44,618	\$58,249	23,163	93%	1,347	93%
Not Low Mod B	17,903	12.4	1.4	1,184	\$54,006	\$70,109	16,498	92%	1,083	91%
Not Low Mod C	3,955	1.6	2.5	175	\$39,039	\$51,615	3,788	96%	167	95%
Total	107,431	51.4	2.1	6,755	N/A	N/A	95,455	89%	6,009	89%
Average		6	3		\$33,816	\$44,166				

From this analysis, it could be concluded that in general, residents of lower income areas in Pueblo tend to have more limited access to a park within walking distance than residents in higher income areas. The three sub-areas, Bessemer, Eastside, and Westside, have the lowest percentages of total residents in the 10-14 year old age group with walkable access to a park. Only 69 percent of Westside residents can walk to a park. This analysis took into account the major pedestrian barriers of I-25, Highway 50, the Arkansas River, Fountain Creek, and all railroads.

GRASP® Analysis

The 2008 planning effort analyzed level of service using the GRASP® (Geo-Referenced Amenities Standards Process) methodology and found that the City of Pueblo provides at least some access to recreational opportunities for approximately 90 percent of the City's total population, with more than 74 percent meeting a minimum target score.

Regarding to walkable access to recreation opportunities, the 2008 study found that, "...68.4 percent of the City has some level of service that is walkable," but only 36 percent of this area is at or above the minimum standard. The study found gaps in service (areas without any walkable access), "...throughout the City, as well as large areas with a level of service below the target minimum score."

The GRASP® analyses done in 2008 do not specifically look at the target sub-areas addressed in this plan. The following analyses use the data produced in the 2008 plan as they apply to the target sub-areas.



Additional GRASP® Walkable Level of Service Analysis

While the 2008 plan looked at the City of Pueblo as a whole, this study targets the three aforementioned sub-areas. A breakdown of the 2008 analysis data by sub-area yields the results presented in **Figure 4** and in **Table 5**. The first analysis looks at walkable access to recreation (10 minute walk) and factors in major pedestrian barriers. In this analysis, areas displayed in gray have no walkable access (the majority of the gray areas are primarily undeveloped areas of the city with some concentrated commercial or industrial uses). Areas shaded in yellow have some access, but the value of those opportunities falls below the minimum threshold which equates to access to a typical neighborhood park. Areas shown as purple are at or above this threshold.

Figure 4: Walkable Access by Sub-Area

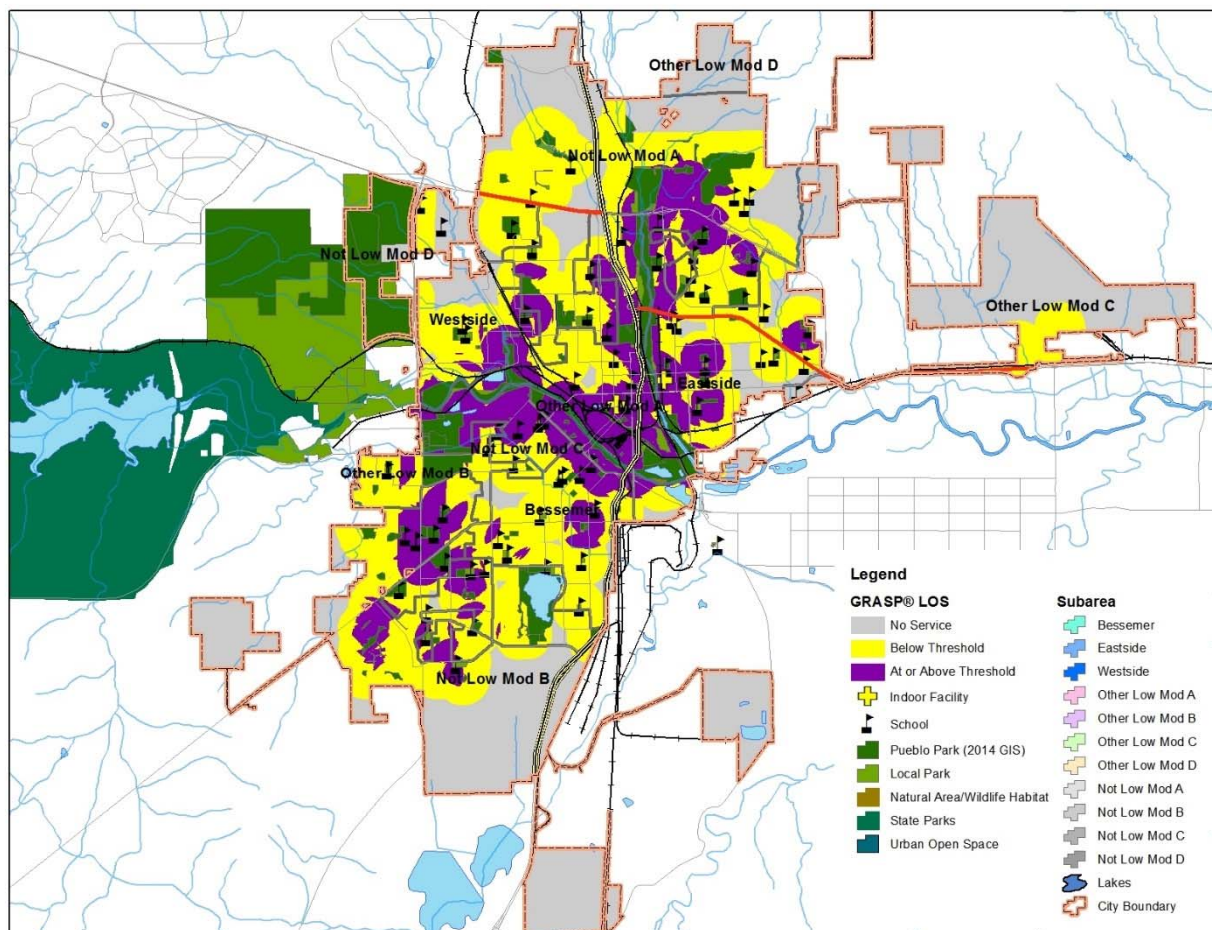


Table 5: Percentage of Area with Walkable Access by Sub-Area

Subarea	Percent of Subarea with LOS	Average LOS per Acre Served	Percent Area with No Service	Percent Area below Threshold	Percent Area with LOS ≥ 67.2
Bessemer	94%	51.9	6%	71%	23%
Eastside	86%	66.7	14%	49%	37%
Westside	69%	50.8	31%	54%	16%
Other Low_Mod A	94%	112.9	6%	34%	60%
Other Low_Mod B	95%	48.1	5%	77%	19%
Other Low_Mod C	23%	27.5	77%	20%	3%
Not LowMod A	69%	46.0	31%	51%	18%
Not LowMod B	40%	54.5	60%	27%	14%
Not LowMod C	100%	151.7	0%	22%	78%
Low Value in Low/Mod Subarea					
High Value in Low/Mod Subarea					



One limitation of the 2008 analysis is the assumption that the population is distributed evenly across the service area; therefore, the percentages of service equate to percentage of population served. Using current technology, further analysis can be done on this map using GIS and ESRI software that more closely analyzes actual population service numbers for each target sub-area. **Table 6** uses data from the 2008 plan in addition to the latest GIS and ESRI software.

Table 6: Percentage of 10-14 year olds with Outdoor Recreation Access by Sub-Area

Subarea	Percent 10-14 Population with No Service	Percent 10-14 Population below Threshold	Percent 10-14 Population with LOS ≥ 67.2
Bessemer	2%	73%	25%
Eastside	14%	53%	34%
Westside	21%	53%	26%
Other Low Mod A	1%	55%	44%
Other Low Mod B	2%	81%	17%
Other Low Mod C	8%	62%	30%
Not Low Mod A	4%	68%	27%
Not Low Mod B	6%	54%	40%
Not Low Mod C	0%	39%	61%

An examination of the 2008 data in this way indicates more positive results. Several conclusions can be drawn from this data for the three main sub-areas:

- Ninety-eight percent (98%) of the Bessemer residents have walkable access to some sort of recreation opportunity.
- Westside has the greatest percentage of its population without walkable access at 21 percent, but this is an improvement from 31 percent of the land area, as indicated in 2008.
- Eastside has the highest percent of population at or above the threshold at 34 percent, just slightly less than the 37 percent of land area in the previous table.

These positive trends indicate that while there are gaps with a low level of service in each of the target areas, parks tend to be located fairly well, and some areas with no service or low service may not be residential. Therefore, these areas may be considered lower priority for improvements or additions.



Level of Service Improvements

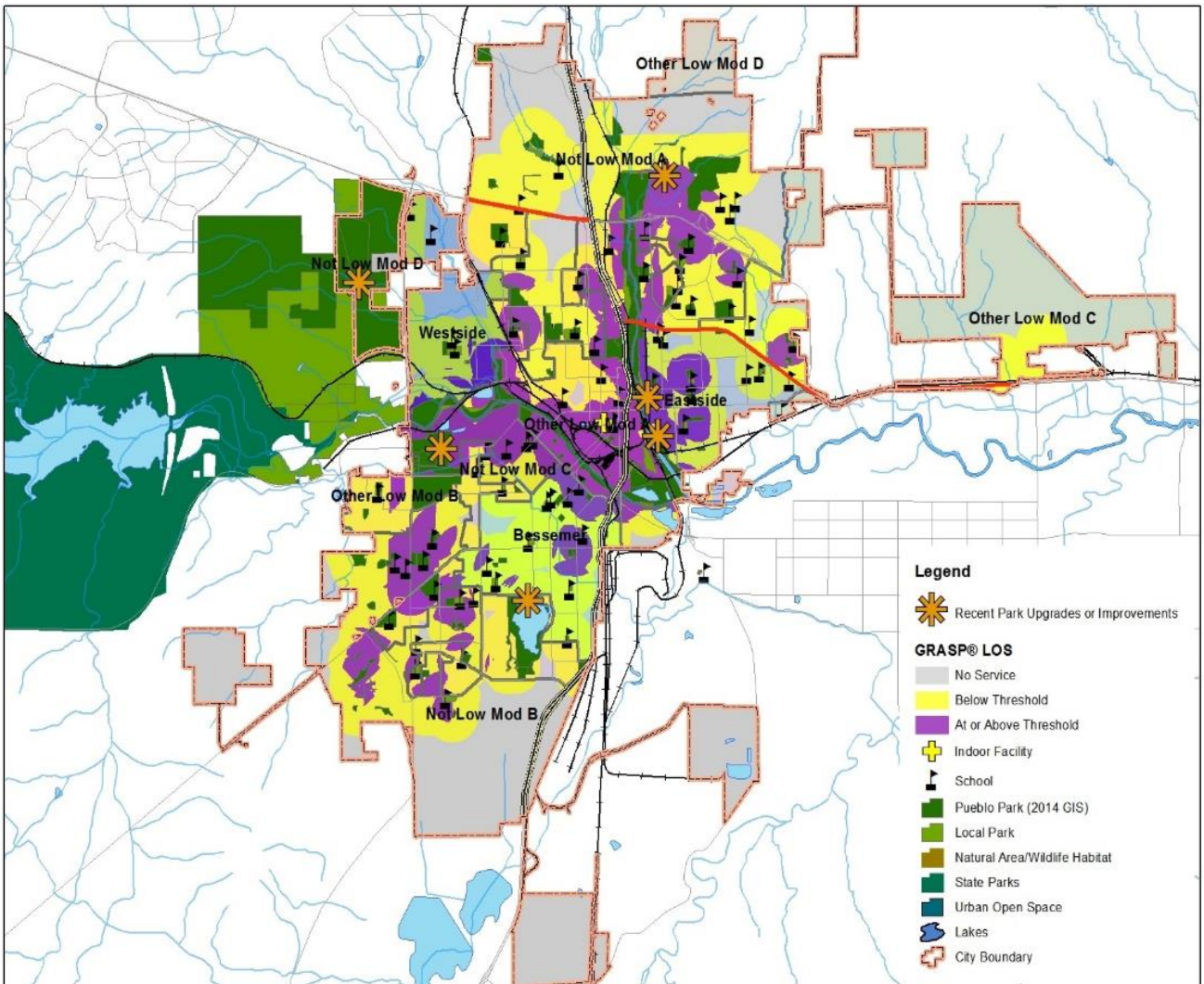
The *2008 Pueblo Parks and Recreation Assessment and Implementation Plan* recommended the addition of recreational opportunities to meet the needs of Pueblo's growing population. It should be noted that to date, the population is basically the same as it was in 2008, and the predicted population growth has not been realized. The City has added recreational amenities in the following locations:

- New playground on the North Side of Lake Minnequa
- New shade shelters at Lake Minnequa
- Soft surface trail around Lake Minnequa, approximately 2.5 miles
- New playground in University Park
- New active sports fields South Side of Lake Minnequa
- New shelters at City Park
- New shelter and trail connection at Plaza Verde Park
- Renovation of Beckwood Park including an active open playfield area
- New plaza and playground at the Arkansas River Whitewater Park
- Honor Farm
 - City finalized the Honor Farm acquisition
 - City has leased out the race track
- El Centro del Quinto Sol
 - Skatepark
 - Trail improvements
 - Park improvements
 - Neighborhood trail connection



These improvements are indicated by an orange asterisk in **Figure 5**. They are overlaid on the walkable level of service map for reference. Several of these improvements positively impact the residents of the three target areas.

Figure 5: Recent Pueblo Park Upgrades or Improvements



Trails Level of Service

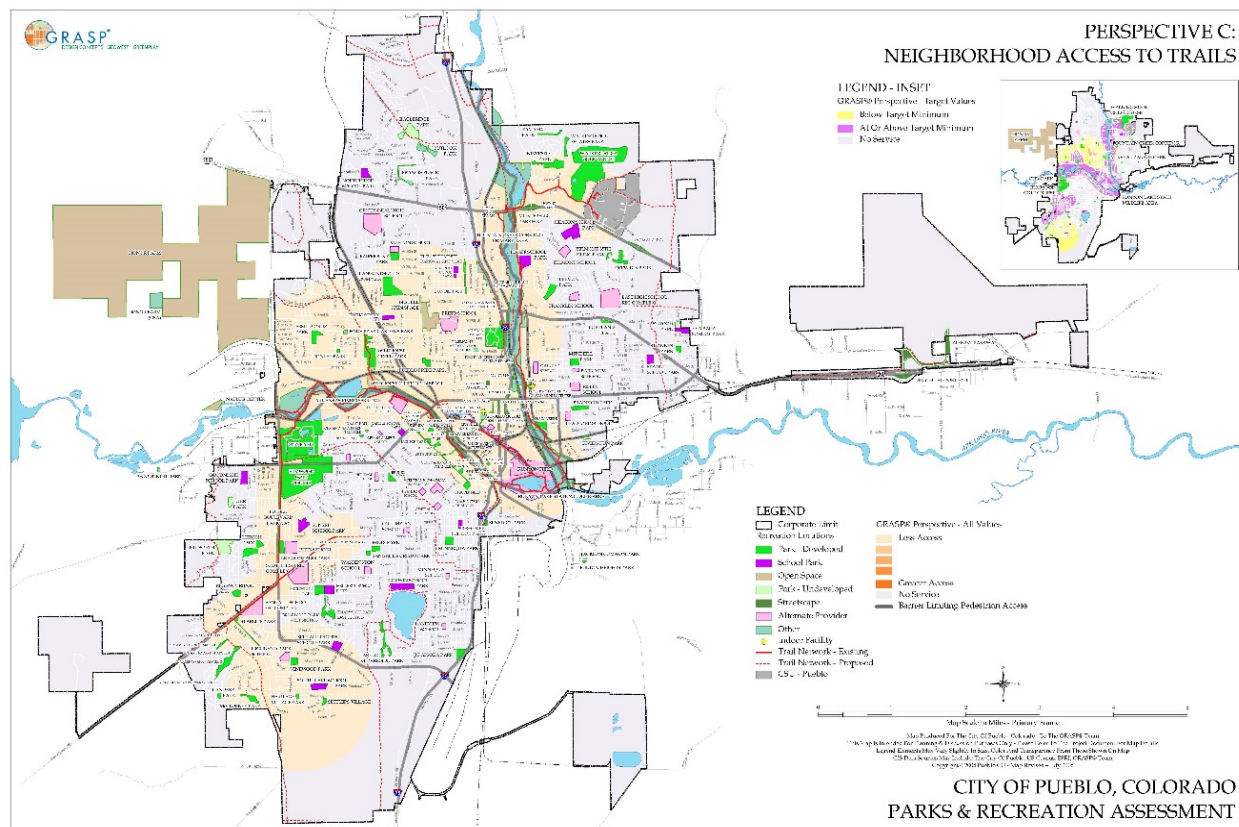
Trails are also an important recreation component of any system. The 2008 study also looked at overall access to trails and included multi-use trails, trails within parks, and loop walks within parks, but excluded general sidewalks, as illustrated in **Figure 6**. Taking into account undeveloped, commercial, and industrial areas, the study further found that:

- “A majority of the City does not have access to a trail (gray shaded areas), or the area has a level of service that is below the target minimum score.”
- “Most trails within the City are accessed by car and have few links to surrounding neighborhoods.”
- “Currently, there are only three loop walks found in the system.”
- “Areas with a high level of trail service are found along the Arkansas River and Fountain Creek. The trails found along these waterways create corridors with a high level of service and in doing so provide a strong framework in which to branch future trails and access points.”
- “Overall, 36.4 percent of the City is receiving some level of service by trails. Within this area, 61.7 percent has service that is above the target minimum score. However, a majority of the city, or 63.6 percent, has no neighborhood access to trails.”

Based on the 2008 trails analysis, the following recommendations were made to the City of Pueblo:

- “Providing links into surrounding neighborhoods would increase the level of service throughout the City and provide bike and pedestrian access to system.”
- “Seeking out opportunities to add loop walks to existing and new parks would also help to increase the opportunities for recreational walking within the City.”

Figure 6: Neighborhood Access to Trails



Using the latest GIS data, the following analysis examines the percentage of sub-area acres, the population, and 10-14 age group with walkable access to trails. Again, a 1/3 mile or 10 minute walk is used as a catchment area.

Assumptions

1. Proximity equates to access. This means that the presence of a trail within a specific distance indicates that trail is accessible from a location. “Accessibility” in this analysis does not refer specifically to ADA accessibility.
2. Walkable access equates to proximity of 1/3 mile, a reasonable distance attainable in 10 minutes walking at a leisurely pace.

While Pueblo appears to have a well-connected major trail spine, as stated in the 2008 study, there is limited access to this trail corridor on foot, with over 70 percent of the residents living outside of a 10 minute walk to a trail, as illustrated in **Figure 7**.

Figure 7: Walkable Access to Trails

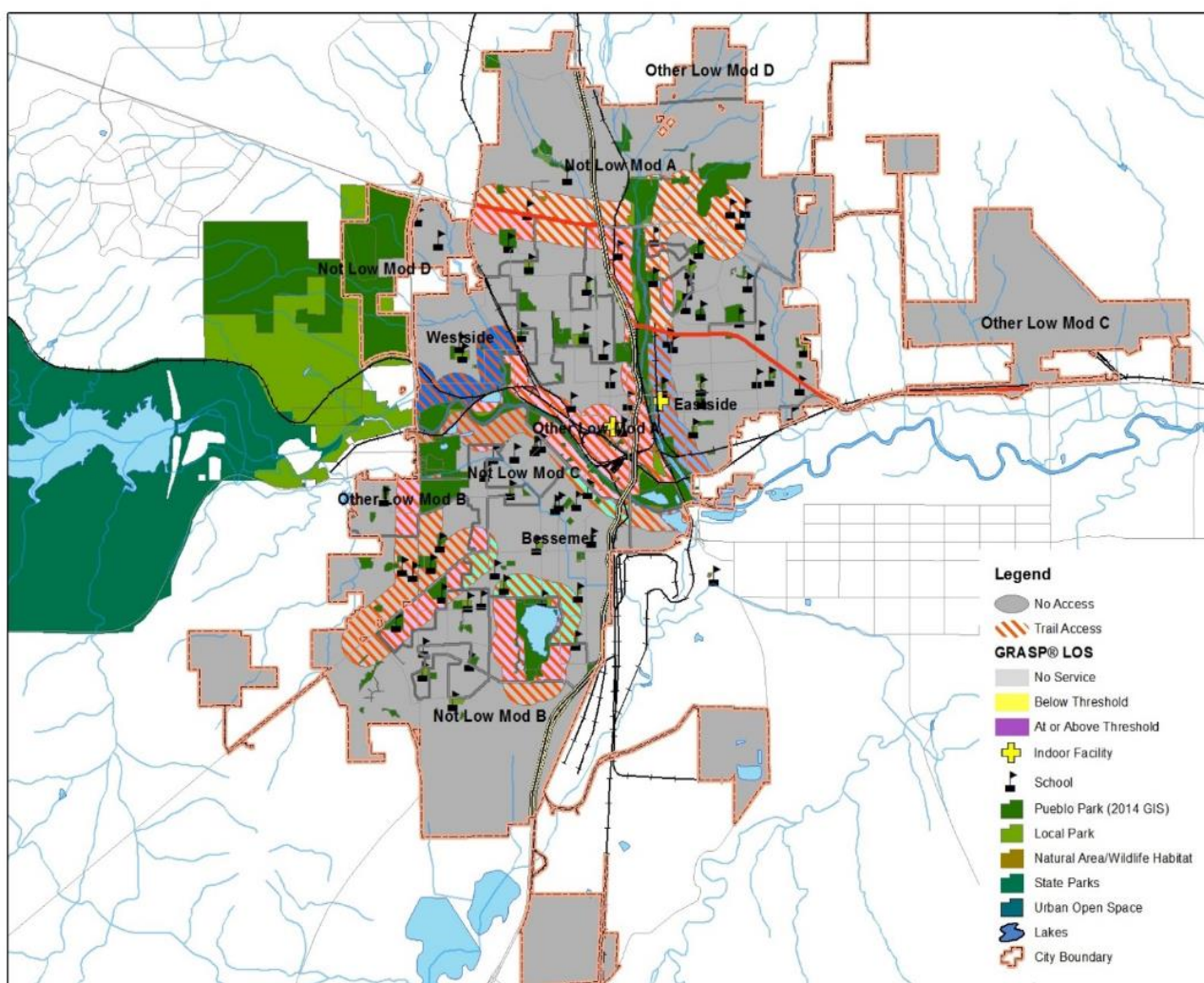


Table 7 shows that Eastside has the most limited access to a trail, with only 14 percent of its population living within a 10 minute walk of the Fountain Creek Trail Corridor.

Table 7: Percentage of 10-14 year olds with Trail Access

Subarea	Percent of 10-14 Population with No Access	Percent of 10-14 Population with Trail Access
Bessemer	79%	21%
Eastside	86%	14%
Westside	65%	35%
Other Low Mod A	66%	34%
Other Low Mod B	51%	49%
Other Low Mod C	100%	0%
Not Low Mod A	76%	24%
Not Low Mod B	74%	66%
Not Low Mod C	66%	34%

Pueblo Trails Planning Efforts

The following planning efforts have been made to address trail linkages to neighborhoods, Union Avenue, and Runyon Lake Wildlife Area:

- I-25 has a trail that links from Runyon Lake Wildlife Area south to Eilers and to the future Abriendo/Santa Fe connection.
- I-25 has a trail that starts at the intersection of Santa Fe and D Street, and connects to Runyon Sports Complex.
 - There is also the existing trail along Thomas-Phelps Creek that links from the Historic Arkansas Riverwalk to Runyon Field and the Runyon Lake Wildlife Area trail loop.
 - Runyon Lake Wildlife Area serves as the hub for the river trail system with the Fountain Creek, Arkansas River, and Thomas-Phelps Trail all connecting at Runyon Lake.
 - CDOT will also be constructing a trail between the Runyon Sports Complex and east of the highway that connects with D St. and the trail from the Santa Fe/D St. intersection.
- City staff is beginning to plan potential access points to the east side of the Arkansas River levee.
 - Possible connections will be at Runyon Lake, Spring Street, Penn Street, Union Avenue, 4th Street, Dutch Clark Stadium, 11th Street, and possibly 18th Street.
 - The levee will have a 20'-40' wide surface for a trail and access points to the Arkansas once the protective levee is reconstructed.
 - There are also plans to bridge across the river between trails at one or two locations and then connect with B Street in the Union Avenue District.
 - There are plans to extend the Wildhorse Creek Trail from 18th Street to the YMCA south of US-50.
 - There are plans to construct a four-mile trail from Purcell Boulevard in Pueblo West across the City's Honor Farm open space connecting with the Wildhorse Creek Trail.
- Current plans are to connect down the bluff side of the Arkansas River to the trail from Spring Street, Penn Street, adjacent to Dutch Clark Stadium, as well as a better connection to City Park.



B. Summary Findings for GIS Review, Inventory, and Analysis of Nature Based Opportunities

- While Pueblo has a well distributed park system, major pedestrian barriers limit walkable access in many parts of the community.
- The Bessemer sub-area has the highest population density of all sub-areas.
- Eastside sub-area has the lowest median household income and lowest average household income of all sub-areas.
- The Bessemer sub-area has the fewest acres of park land and lowest ratio of park land per person within its geographic boundary of any of the sub-areas analyzed.
- School lands may provide important additional outdoor recreation opportunities, especially in the three target sub-areas.
- While overall level of service for most of the City may be above the given threshold, a majority of these opportunities require vehicle access for many citizens. This limits access for the target middle school aged youth.
- Westside and Eastside both have fairly significant gap areas in walkable access to parks.
- Many of the reported park improvements and additions made to the system since the 2008 plan do positively impact the three target areas.
- Since the existing trail system is located along the edges of significant physical barriers, walkable access from many neighborhoods is more than 1/3 of a mile or a 10 minute walk, resulting in limited access.

C. Collection and Review of Organizations Who Manage and Operate City-owned Outdoor Facilities and Nature Programs and other Alternative Providers

The City of Pueblo owns three significant facilities that are contracted to local non-profit organizations for the operation of outdoor and nature programs. While the City provides approximately \$750,000 annually to these organizations, over 50 percent of the operating and maintenance expenses are provided by the organizations themselves. The City-owned facilities include the following:

1. Pueblo Zoo – managed by the Pueblo Zoological Society and located within City Park. The Zoo, established in 1934, is home to more than 400 animals and 120 species.
2. Pueblo Mountain Park – 608 acre Mountain Park that includes the Mountain Park Environmental Center is located southwest of the community of Beulah, 25 miles from the City. The park is managed by the Mountain Park Environmental Association which was established in 2003.
3. Nature and Raptor Center of Pueblo – facility includes 11 acres owned by the City of Pueblo and 100 acres leased by the City from the State of Colorado located three quarters of a mile west of the City along the north side of the Arkansas River surrounded by property managed by Lake Pueblo State Park. The facility includes a raptor rehabilitation center including flight cages, and other educational areas, as well as a yurt, and building shared with a restaurant for hosting outdoor events and other nature activities. The facility is managed by the Nature and Raptor Center of Pueblo, Inc. which was founded in 1981.



These outdoor facilities and natural areas are located outside of the low-mod income designated areas within the City of Pueblo. The Nature and Raptor Center and Pueblo Mountain Park are located outside of the City, and the Pueblo Zoo is located within City Park. All of these facilities are primarily accessible by automobile from the low-mod income areas of the City including Bessemer, Eastside, and Westside neighborhoods.

Other Alternative Providers

1. Boys and Girls Club of Pueblo County - Since 1972, the Boys & Girls Clubs of Pueblo County has been at the forefront of positive youth development, working with young people from challenging economic, social, and family circumstances. The organization is dedicated to ensuring that young people in Pueblo County have greater access to quality programs and services that will enhance their lives and enrich their futures. Clubhouses are intentionally located in areas high in poverty and crime, with limited opportunities for young people. There are two locations within the City of Pueblo at Risley Middle School in the Eastside neighborhood and the Sprague Clubhouse located in the west end of the Bessemer neighborhood.
2. Pueblo County Extension Office – offers 4-H programs for youth 5-7 years of age (Cloverbuds), and for those eight years old and up. The program areas include dog, horse, livestock, shooting sports, and general/consumer science. The 4-H programs are family oriented and many of the programs and activities are conducted in facilities within the Colorado State Fairgrounds located in the Bessemer neighborhood.

D. Facilitation and Analysis of Community Engagement

Youth engagement activities were facilitated in school settings to find out how Pueblo youth feel about nature and the outdoors. A total of 46 students participated in two sessions on May 11, 2015 that included 27 sixth-grade students at Pueblo Academy of Arts, followed by 19 first-fifth-grade students in an after-school program at Pueblo School for Arts and Sciences. Students were engaged with an outdoor/nature description exercise, several digital mapping tables, and an activity and nutrition survey. These exercises were intended to gather information about the activities and resources Pueblo youth use and enjoy, background information on their health and wellness practices, and barriers that inhibit them from participating in outdoor and nature activities.

The original two days of Middle School Engagement were scheduled for February 26th and 27th. An unusual ice and snowstorm caused the schools to close and stranded the consultant team in Pueblo. Efforts to arrange working with middle school students in alternative venues during the snow storm were not successful. Following the snowstorm cancellation, the scope of both the engagement and the report were streamlined. The student engagement experience was limited to one middle school, and time with the students was reduced significantly (by 50 percent). While originally planned, the Pueblo-specific YANS survey offered by GP RED was not implemented due to time constraints.

It should be noted that due to the small sample size, findings from the student engagement activities may be viewed as suggestive of trends, but are by no means definitive or indicative of the community of Pueblo as a whole.



Youth Interactive Photo Exercises and Worksheet

Nature and the Outdoors Description Exercise

To start the nature and outdoors description exercise, each student was given a packet of photographs and a worksheet showing youth engaged in various activities ranging from fishing to video gaming. Most, though not all, photographs depicted activities that might be associated with nature and the outdoors. The students were asked to sort the photographs into three different piles A, B, and C:

- A) Nature and outdoor activities that the student had done at least once (“Is/Do”)
- B) Nature and outdoor activities that the student had never done (“Is/Don’t Do”)
- C) Activities that do not represent nature and outdoor activities (“Is Not”)

After noting the numbered photographs by their chosen pile, each student was then asked to take a closer look at the first two piles, those that they felt represented nature and the outdoors, and to think of five keywords that refer to these activities as well as a definition of “nature and outdoors.” In an effort to determine any common barriers that inhibit youth in Pueblo from connecting to the outdoors and nature, students were then asked to list reasons they felt they had never done some of the activities shown in the photographs using the second pile they made for this purpose. The final input gathered in the outdoor/nature description exercise was a list from each student of other activities they like to participate in that were not shown in any of the photographs provided. This was intended to address any activities not depicted by the given photographs. The key descriptions and photographs used in this exercise are presented in **Table 8**.

Table 8: Key Descriptions and Photo Samples

1	Snowboarding 	4	Soccer Field 
2	Street Basketball 	5	Splash Fountain 



3	Playground Climber 	6 Blacktop Games 
7	Outdoor Cinema 	11 Gardening 
8	Tree Climber 	12 Dog Park 
9	Bird Watching 	13 Mud Puddle 



10	Archery		14	Riverboat	
15	Aquarium		19	Bike to School	
16	Smart Phone		20	Off-Highway Vehicle	
17	Hiking		21	Outdoor Classroom	



18	Houseplants 	22 Fishing 
23	Moss Stone 	27 Family Video Gaming 
24	Skate Park 	28 Circle of Friends 
25	Rifle Shooting 	29 Bike Riding 



26	Horseback Riding 	30 Boy Scouts 
31	Power Boat/Water Tubing 	



Summary Analysis - Nature/Outdoors Engagement Exercise

Results of the student photograph sorting exercise show the activities that students do outdoors and in nature (A, “Is/Do”), which activities they do not participate in (B, “Is/Don’t Do”), and images they do not consider outdoors or nature activities (C, “Is Not” nature and the outdoors). The total counts for each pile in the photo sorting exercise, with a description of the activity in each photo, are illustrated in **Table 9**, and includes a description of the activity shown in each photograph followed by the total number of students that selected the photo for that pile.

Table 9: Summary Analysis of Photographs

Activity	TOTAL A	Activity	TOTAL B	Activity	TOTAL C
Fishing	35	Boy Scouts	33	Smart Phone	45
Splash Fountain	32	Bird Watching	28	Family Video Gaming	43
Hiking	32	Snowboarding	27	Houseplants	41
Street Basketball	30	Moss Stone	27	Aquarium	18
Soccer Field	28	Playground Climber	25	Outdoor Cinema	15
Tree Climber	28	Dog Park	25	Outdoor Classroom	6
Gardening	28	Outdoor Classroom	25	Skate Park	6
Bike Riding	27	Power Boat/Water Tubing	25	Riverboat	3
Archery	25	Horseback Riding	24	Blacktop Games	2
Bike to School	23	Blacktop Games	23	Moss Stone	2
Circle of Friends	23	Mud Puddle	23	Rifle Shooting	2
Off-Highway Vehicle	22	Off-Highway Vehicle	23	Circle of Friends	2
Mud Puddle	21	Bike to School	22	Power Boat/Water Tubing	2
Riverboat	21	Rifle Shooting	22	Snowboarding	1
Rifle Shooting	21	Riverboat	20	Street Basketball	1
Horseback Riding	21	Skate Park	20	Playground Climber	1
Blacktop Games	20	Circle of Friends	20	Soccer Field	1
Dog Park	19	Archery	19	Splash Fountain	1
Playground Climber	17	Bike Riding	18	Tree Climber	1
Skate Park	17	Gardening	17	Bird Watching	1
Power Boat/Water Tubing	17	Tree Climber	16	Archery	1
Bird Watching	16	Soccer Field	14	Dog Park	1
Snowboarding	15	Outdoor Cinema	14	Mud Puddle	1
Moss Stone	15	Aquarium	14	Gardening	0
Outdoor Cinema	14	Hiking	13	Hiking	0
Outdoor Classroom	13	Street Basketball	11	Bike to School	0
Aquarium	12	Splash Fountain	10	Off-Highway Vehicle	0
Boy Scouts	12	Fishing	10	Fishing	0
Family Video Gaming	1	Houseplants	3	Horseback Riding	0
Smart Phone	0	Family Video Gaming	1	Bike Riding	0
Houseplants	0	Smart Phone	0	Boy Scouts	0

The vast majority of students, regardless of age, classified certain photographs as not related to nature and the outdoors:

- Smart phone user in a chair
- Family playing video games on a couch
- Sitting room with dense houseplants

Some students considered activities clearly staged outside as activities not enjoyed outdoors or in nature. This suggests that those students were focused more on nature in the sorting than on the outdoor criterion.

- Aquarium
- Outdoor cinema
- Outdoor classroom
- Skate park



A majority of students reported participation in common youth sports and outdoor adventure as part of their activities outdoors and in nature.

- Basketball
- Soccer
- Splashing
- Tree climbing
- Bike riding
- Archery
- Hiking

Fishing emerged as the activity students most commonly participated in, perhaps resulting from the many opportunities to fish in and around the City of Pueblo. Activities with the least participation included:

- Passive nature pursuits (birdwatching, exploring a mossy stone)
- Activities requiring special resources or access to specific facilities (snowboarding, dog park, outdoor classroom, water tubing behind a power boat, horseback riding)
- Boy Scouts
- Climbing on a custom built playground structure



Figure 8: Outdoor/Nature Activities Participated in by Students



Results for the first-fifth grade participants show more variation, possibly as a result of their enrollment in an outdoor after school program. Gardening, bike riding, and a circle of friends in a park setting were the most frequently reported activities by most of these students. Interestingly, experiences that require greater resources and coordination such as a riverboat ride and rifle shooting were also reported by the majority of this group. Off-highway vehicle use was identified by the majority of this group as an activity that they had not done, likely due to the need for greater maturity to safely participate.

After sorting photographs, each student listed several keywords they felt related to the outdoors and nature. The three most common keywords provided by students of all ages were “fun,” “grass,” and “trees,” and distinct patterns emerged based on the age groups. Keywords expressed by the younger age group related more to wildlife and natural features (“animals,” “mountains,” and “rocks”), while those of the older age group referred more to activities they enjoy and to the outdoors as distinct from indoors (“exploring,” “active,” and “outside”). The importance of friendship and peer involvement emerged as well, indicated by phrasing such as “bonding” and “getting together.” **Figure 9** represents keywords for all student respondents. The size of each word reflects the number of times listed.



Written Definitions of Nature and the Outdoors

The students' written definitions of "nature and the outdoors" follow a similar pattern to the keyword exercise. Sixth-grade students more often equated the outdoors and nature as a place to spend time with friends and family and a place to do various activities. Some examples may help illustrate.

Nature and the outdoors is:

- "To have fun with friends."
- "A place where everyone can have fun or to just enjoy."
- "Where I spend time with family and pets."
- "Playing, going out, and having fun."

The younger group defined nature and the outdoors as relating to insects or wildlife, such as "birds" and "bugs," and nature processes or features including "forests," "living," "environment," "rain," and "rivers." There was also at least one mention of "science," suggesting the relationship between empirical knowledge and the outdoors. Examples of definitions for this age group:

Nature and the outdoors is:

- "A big plain of grass, forests, animals, birds, and plants."
- "Something that is living and non-living environment."
- "I think that rocks and science and grass are nature."

Both groups of students used easier words to describe the complexity of nature and the outdoors, using synonyms such as "outdoors," "outer world," and "opposite of the indoors," which was the result for older students in the keyword exercise as well. Definitions from students of all ages are below and illustrated in **Figure 10** and represent keywords for all student respondents. The size of each word reflects the number of times listed.

Nature and the outdoors is:

- "Somewhere outside where surrounded by things you would find outside."
- "Outside of shelter."
- "A way to go outside and get some time away from inside."
- "Some place where you go and to play and stay away from electronics."



Students were asked to list other activities they might enjoy that were not included in the photographic exercise. Some activities were listed with enough frequency to make them noteworthy, as illustrated in **Figure 11**, representing all student respondents. The size of each word reflects the number of times listed, with the qualification that walking is larger because it was used in combination with other words, such as “walking a horse” and “dog walking.” The list below represents the most popular activities in priority order:

-

A word cloud of outdoor activities centered around the word 'swimming'. The word 'swimming' is the largest and most prominent, written in white. Other large words include 'camping' (blue), 'biking' (orange), 'walking' (orange), 'park' (blue), 'trampoline' (orange), 'water' (blue), 'watching' (blue), 'fishing' (blue), 'going' (blue), 'playing' (orange), 'hunting' (blue), 'basketball' (blue), 'running' (orange), 'tag' (blue), 'soccer' (orange), 'baseball' (blue), 'pool' (blue), 'skateboarding' (blue), 'hiking' (blue), 'dancing' (blue), 'disney' (blue), 'zoo' (blue), 'golf' (blue), 'tennis' (blue), 'volleyball' (blue), 'badminton' (blue), 'table tennis' (blue), 'bowling' (blue), 'fencing' (blue), 'judo' (blue), 'karate' (blue), 'martial arts' (blue), 'yoga' (blue), 'pilates' (blue), 'cycling' (blue), 'horseback riding' (blue), 'sailing' (blue), 'kayaking' (blue), 'canoeing' (blue), 'rafting' (blue), 'rock climbing' (blue), 'bungee jumping' (blue), 'paragliding' (blue), 'skydiving' (blue), 'hot air ballooning' (blue), 'jet skiing' (blue), 'water skiing' (blue), 'wakeboarding' (blue), 'kitesurfing' (blue), 'surfing' (blue), 'bodyboarding' (blue), 'beach volleyball' (blue), 'beach soccer' (blue), 'beach tennis' (blue), 'beach basketball' (blue), 'beach flag football' (blue), 'beach handball' (blue), 'beach ultimate' (blue), 'beach frisbee' (blue), 'beach flag football' (blue), 'beach handball' (blue), 'beach ultimate' (blue), 'beach frisbee' (blue). The words are arranged in a circular pattern around the central 'swimming' word, with varying sizes and colors (blue, orange, white) to create a visually appealing composition.

Barriers to participation in outdoor and nature activities is a central question in this project. For this exercise, students returned to the photographs of outdoor/nature activities they had never done. They were asked if there were any they would like to do, and to identify the reason they had never participated. Student responses varied greatly, and many students did not seem engaged in this exercise compared to the photograph activity. Responses were grouped into several broad categories or “barrier types” with results illustrated in **Figure 12**.

Barrier Type	# of Instances
Lack of Interest	43
Safety/Aversion	31
Resources/Access	30
Other Priorities	23
Skill/Knowledge	9
Technology	2

Examples of responses grouped into the barrier types are as follows:

- **Lack of Interest:** “boring,” “never outside,” “don't like,” “not interesting,” “weird.”
- **Safety/Aversion:** “I'm scared of drowning,” “I think snowboarding is dangerous,” “I would easily break a bone,” “I don't want to be cold,” “weather.”
- **Resources/Access:** “I don't have a bike,” “Don't have materials/money,” “Just never done it,” “I can't go to some of the places,” “Never been to an aquarium.”
- **Other Priorities:** “I don't have time, well my friends don't like outdoors,” “Busy with school,” “Parents are too busy,” “Just don't have the time,” “Sis can't ride bike; no training wheels,” “My mom always has to work,” “Because mom won't let me.”
- **Skill/Knowledge:** “Not used to it,” “Can't skateboard,” “I can't swim,” “I don't like to play games that I don't know how to play,” “hard.”
- **Technology:** “Always on my tablet,” “Always on phone.”

The primary barrier type for limiting activities outdoors and in nature for students in sixth grade was “Lack of Interest,” and for students in grades 1-5 “Safety/Aversion.” This may indicate that the younger students were more open to new experiences in outdoors and nature than the older group, but safety issues were a limiting factor. “Resources/Access,” “Other Priorities,” and “Lack of Interest” drew nearly equal responses from the all students.

Limitations

- The focus on nature as well as the outdoors may have confused some students, making it difficult to facilitate. Some students may have placed greater emphasis on nature, others on the outdoors.
- Boy scouts as a gender-specific image may have limited responses from girls.
- The custom playground was not clearly depicted as playground feature in the image.

Youth LocalData – Neighborhood & Regional SmartTable Mapping

Overview

LocalData is a platform for crowdsourcing map-based data and information. This map-based survey platform was used to create two separate maps and surveys, Neighborhood and Regional, each divided into categories. Once a category is selected, the user is prompted to answer a few more questions about that place and their mode of transportation.

The Neighborhood Mapping exercise focused on local places in the following categories:

1. Fun place that I go
2. Fun place I don't go but want to
3. Problem Place

The Regional Mapping exercise focused on local places in the following categories:

1. A place you LIKE to go
2. A place you WANT to go

Please see **Appendix B: Question List Neighborhood and Regional** for a full text of the survey questions.



PlaceMatters used these surveys to collect data at two schools in Pueblo: Pueblo Arts Academy and Pueblo School of Arts and Sciences. The tools were demonstrated to and used by the students with the PlaceMatters SmartTable, an interactive tool in which the screen is projected down on to a table top and can be manipulated with an infrared pen as a giant touch screen, making it easy for individuals or groups to see, navigate, and input map data. Because of the time constraints of the students, the surveys were only collected in short 15-20 minute time periods with groups of 7-8 students.

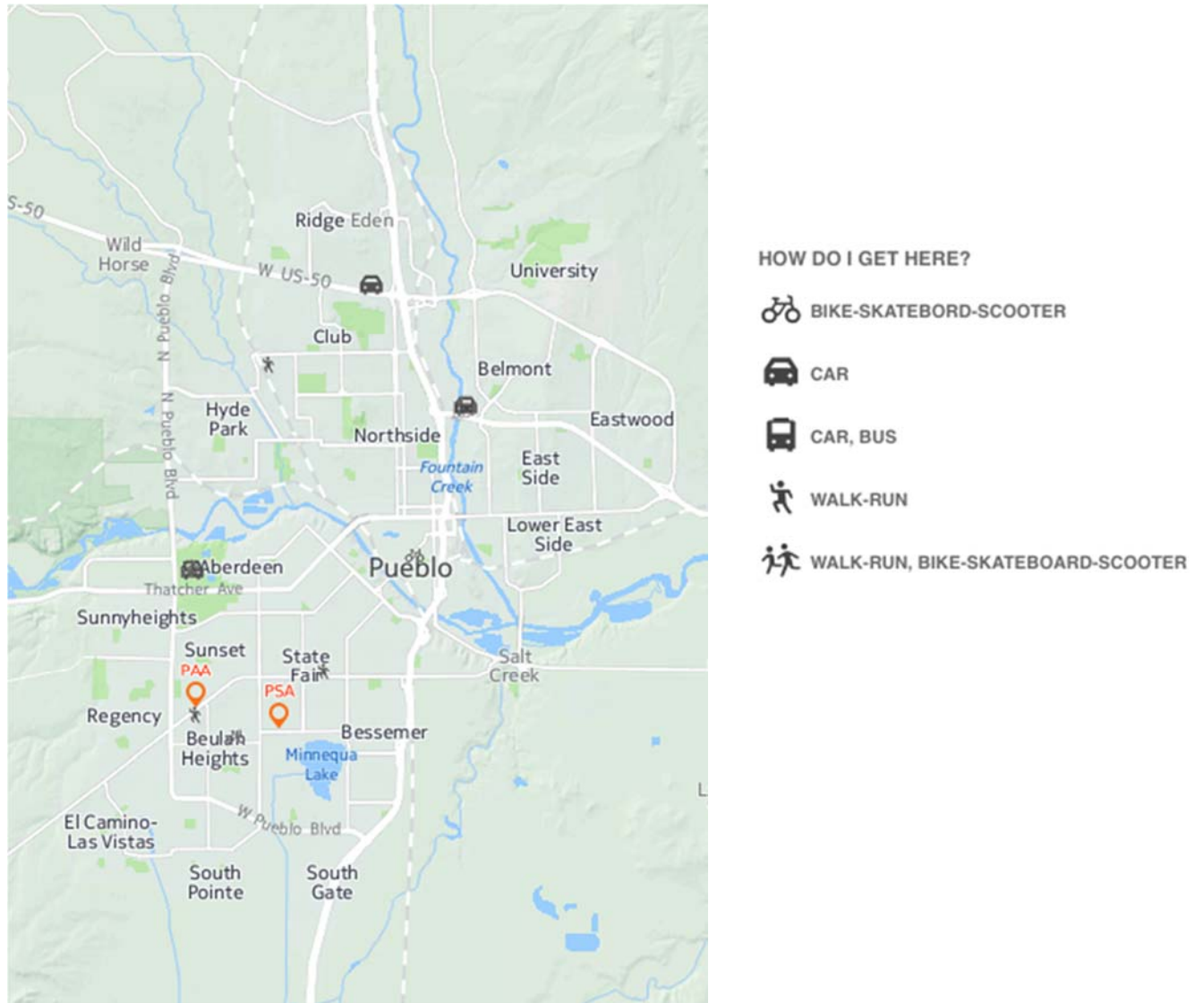
Summary Analysis - Neighborhood Mapping Exercise

Student responses to the Neighborhood Mapping Exercise are illustrated in **Figure 13**. In addition, the following observations were made:

- Twelve students were surveyed.
- Most students wanted to map places they liked to go and went to frequently.
- Most students used a form of active transportation to get to places, including walking, running, skateboarding, and riding a scooter or bike. Only four students identified using a car, and only one identified using the bus.
- Most students said that they liked to have fun outside with their friends.



Figure 13: Neighborhood Mapping Exercise: How Do Students Get There?

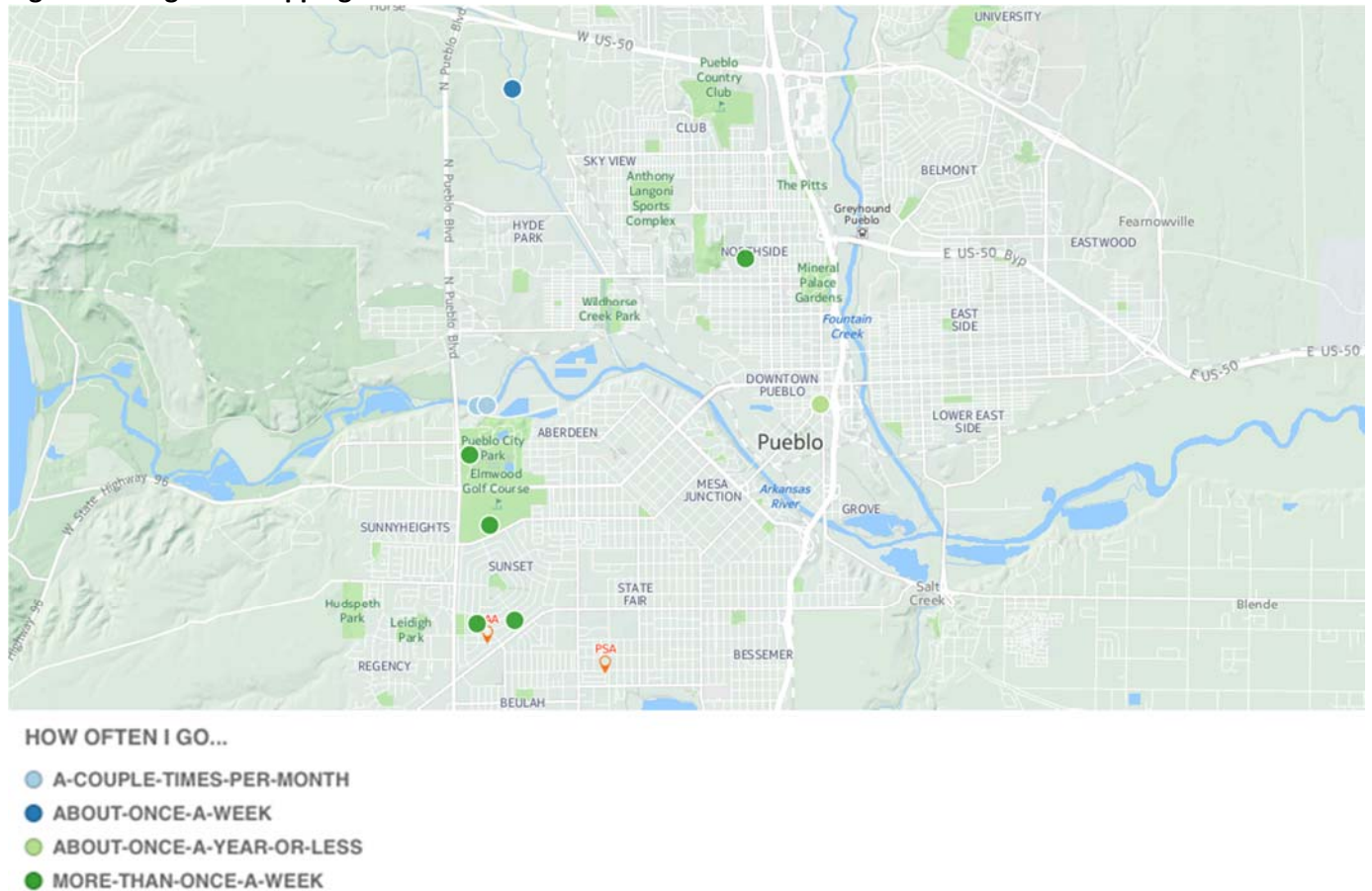


Summary Analysis – Regional Mapping Exercise

In the Regional Mapping Exercise, students were asked to identify how often they visit regional places, as shown in **Figure 14**.

- Thirteen students were surveyed.
- Most students get to school in a car, and students at the charter school don't have a school bus. Only one student said they walked to school.
- Most students (out of 10 responses) get to regional places by either car (4) or walking/running (4). Two noted bike/skateboard/scooter, and one noted the bus.
- When asked why they liked to go to the place the identified, most answered that it was either fun or convenient.

Figure 14: Regional Mapping Exercise: How Often Students Go



Access to Mapping Data

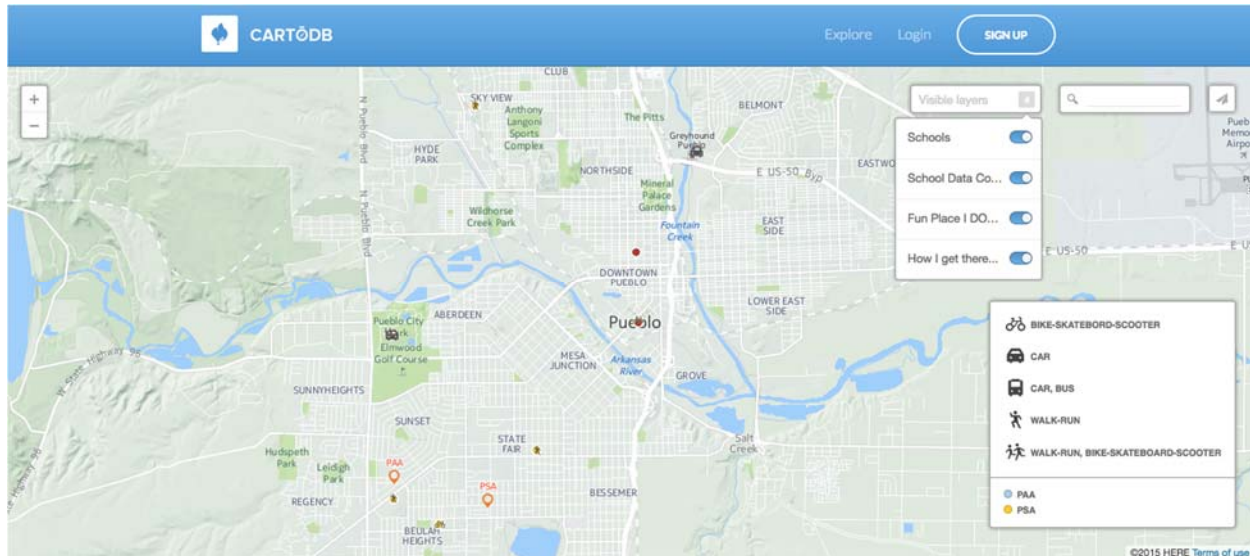
All data collected into the LocalData Neighborhood and Regional Mapping Exercises was then exported into CartoDB, a free online mapping platform. This allows users to actively visualize, navigate, and query the collected data (see below). Once online in CartoDB, each data point can be hovered over or clicked on for more info about the specific survey or question, as illustrated in **Figure 15**.

[Neighborhood Survey](http://bit.ly/PuebloPIN-Nbhd) - <http://bit.ly/PuebloPIN-Nbhd>

[Regional Places I Want to Go Survey](http://bit.ly/PuebloPIN-Rgn1) - <http://bit.ly/PuebloPIN-Rgn1>

[Regional Places I Like to Go Survey](http://bit.ly/PuebloPIN-Rgn2) - <http://bit.ly/PuebloPIN-Rgn2>

Figure 15: CartoDB Online Mapping Platform



Limitations and Considerations for Future Use of Neighborhood & Regional SmartTable Mapping Exercises

Though some good data was collected at the schools, there are improvements that could be made to collect more and higher quality data:

- **Make mapping interface more user-friendly:** Some students had trouble recognizing or navigating to places on the map due to the large amount of information on the map. A customized map with parks and public spaces highlighted would provide for easier viewing, with a pre-survey to avoid bias.
- **Setting agenda and timing to be more student-friendly:** The short 15-20 minute time periods did not allow enough time to collect data from a large group. Surveying students in smaller groups of 2-3 students would allow for each SmartTable facilitator to spend more time with individuals.
- **Have local expertise:** Leaders with local knowledge would help students locate places they want to identify more easily.
- **More activities:** Additional activities could be implemented with more time.
 - Students draw a route from their home or school to some place they like to go. Along the way, identify barriers and opportunities.
 - Involve parents and families in data collection.
 - Engage in a walking audit to nearby parks or public spaces to discuss barriers and opportunities.

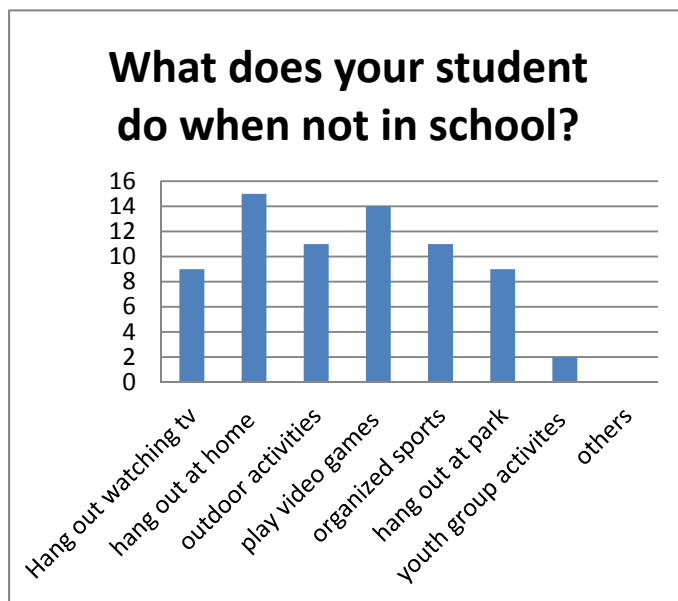
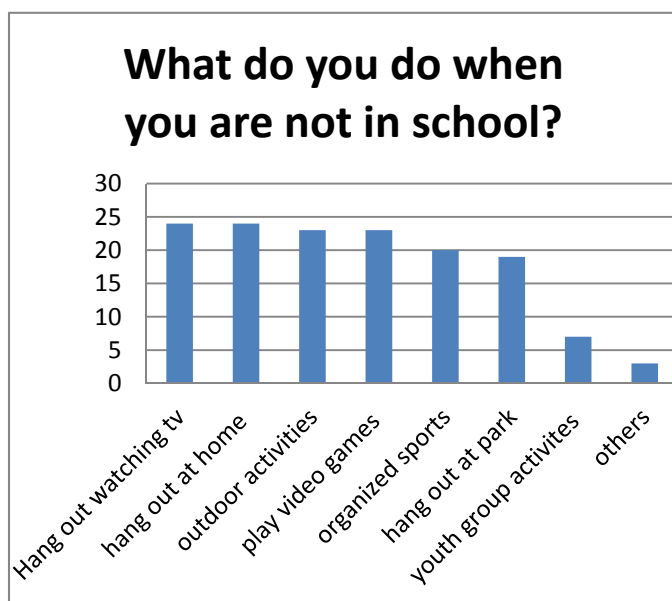


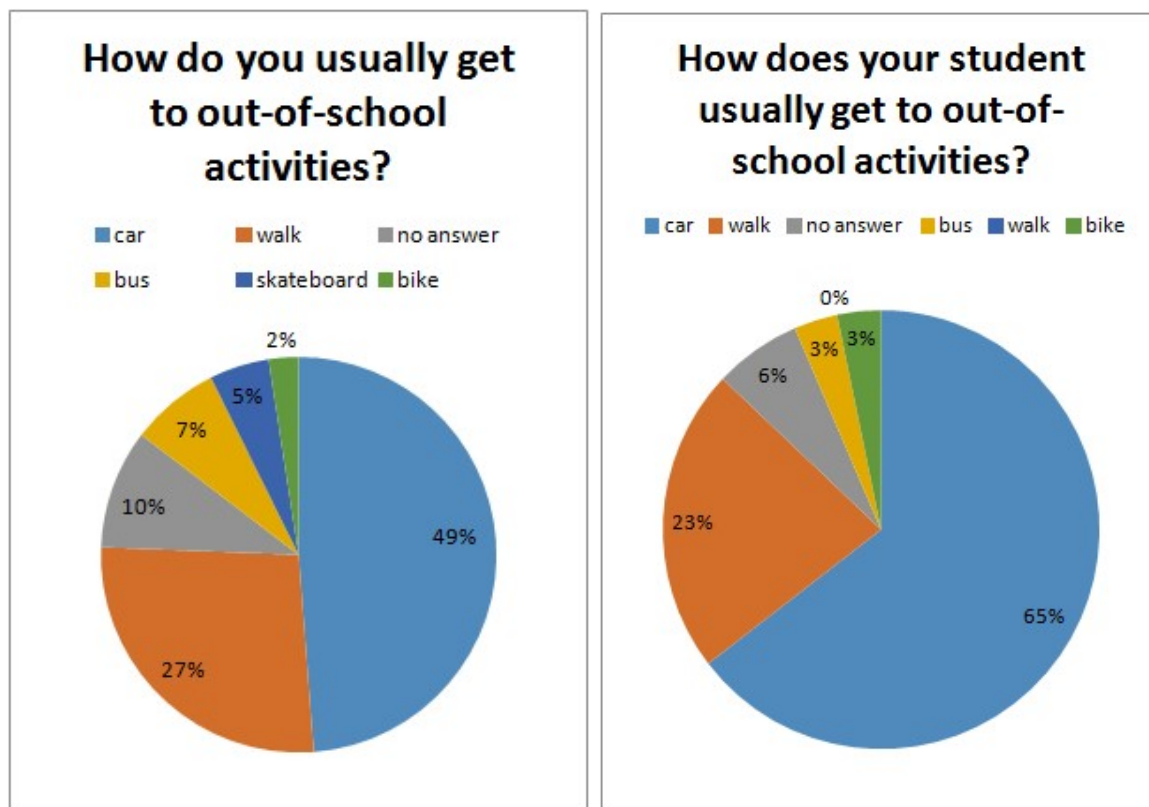
Youth and Parent/Guardian Written Survey

Overview

The City was able to schedule one period at Pueblo Arts Academy and with one elementary-age after-school program at Pueblo School of Arts and Sciences. Both the limited time with the students and the varied participant ages influenced the data collected. The information collected can be seen as informative, but not necessarily representative of the youth in Pueblo as a whole.

A short survey was incorporated into the student engagement activities. The survey focused on how physical activity is incorporated into daily activities, the access, and participation in existing nature and outdoors activities available in Pueblo, and included one question to understand eating habits. A similar parent survey was sent home with all participating students with a return rate of 81 percent (37 out of 46). Copies of both the student and the parent survey are in **Appendix C: Youth and Parent Survey Instruments**. The following graphs illustrate relevant findings of the Youth and Parent Surveys: Outdoor activity ranked third for both students and parents. Passive “hanging out” at home watching TV and playing video games held the second and fourth positions. “Hanging out” at the park and organized sports ranked 5th and 6th for both students and parents. On the above graphs, the vertical axis represents the number of student or parent responses.



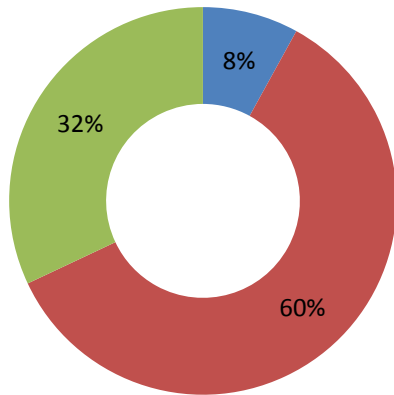


Both students and parents rated transportation to out-of-school activities the same with transportation by personal car accounting for 50-65 percent of transportation followed by walking and no answer.



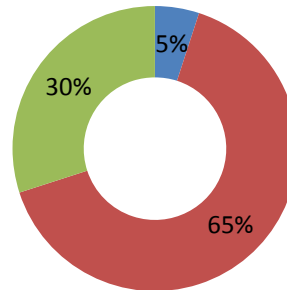
How safe do you feel going to these out-of-school activities?

■ not at all safe ■ somewhat safe ■ very safe



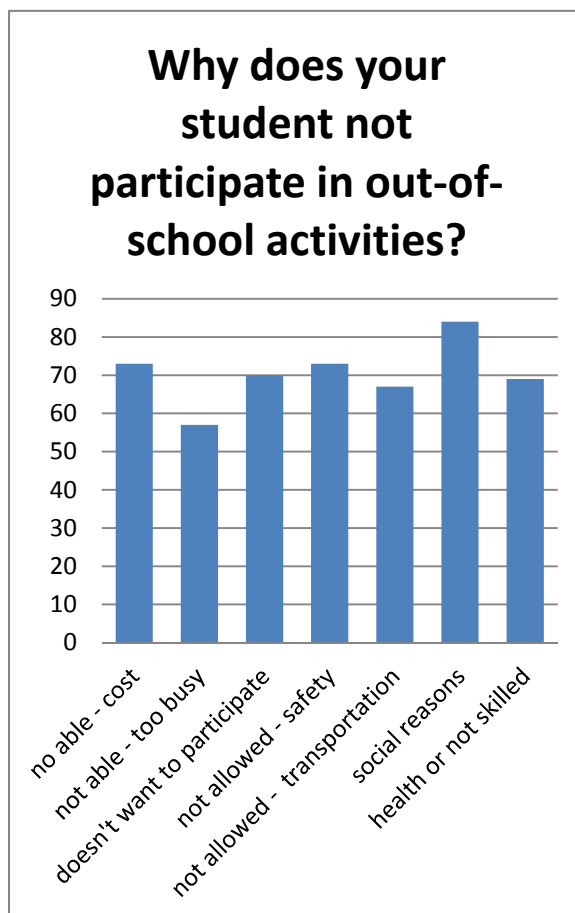
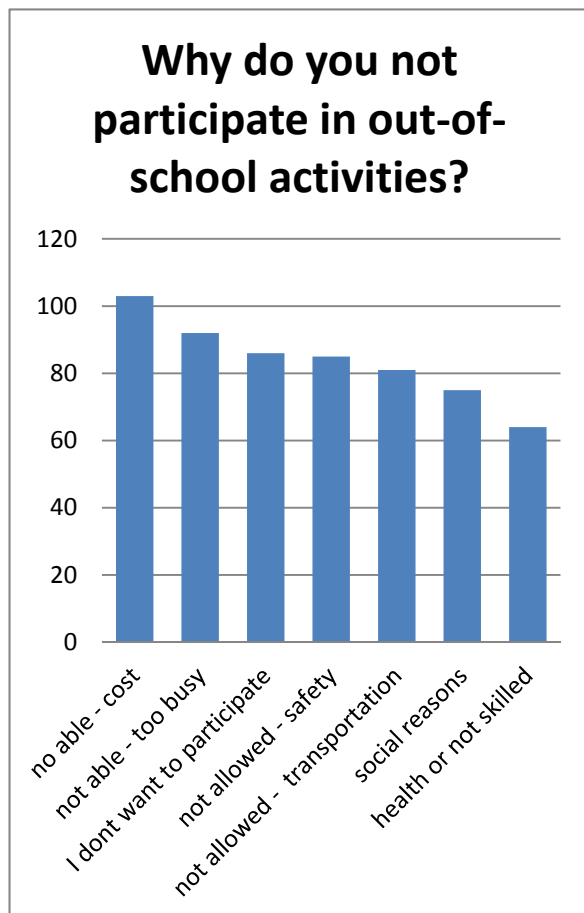
How safe do you feel your student is going to these out-of-school activities?

■ not at all safe ■ somewhat safe ■ very safe



Student and parent sense of safety traveling to out-of-school activities also aligned closely with the majority feeling “somewhat safe” and more feeling “very safe” than “not safe at all.”



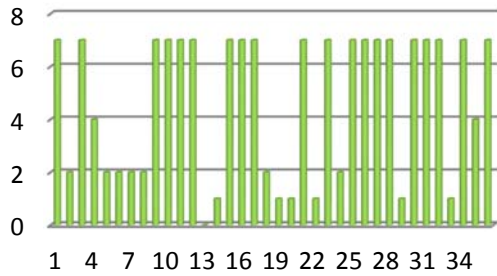


Generally, students and parents evenly rated all reasons for not participating in out-of-school activities. Students cited “cost” and “too busy” as the primary reasons they did not participate in out-of-school activities. Parents cited social reasons primarily and “doesn’t want to” and “cost” as secondary reasons that their students do not participate in out-of-school activities. On the above graphs, the vertical axis represents the number of student or parent responses.

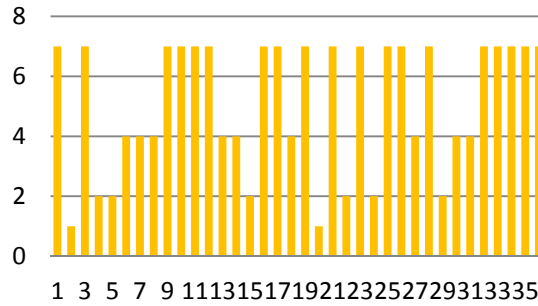
The ability to make healthy food choices in childhood can lead to a healthier lifestyle in adulthood. For the purposes of this study, only students were asked the questions related to their eating habits. The majority of students are eating more fruit than vegetables, 80 percent are served a “homemade dinner” at least four times a week, and half of those are served a homemade dinner seven days a week. Soft drink and fast food consumption did not correlate and was substantially less frequent than the healthier categories of food. In the following graphs, the vertical axis represents the number of days per week and the horizontal axis is one number for each student completing the survey.



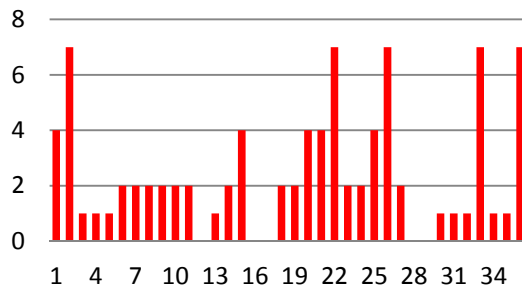
How many days last week did you eat vegetables?



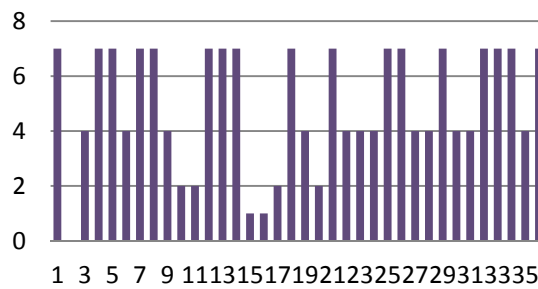
How many days last week did you eat fruit?



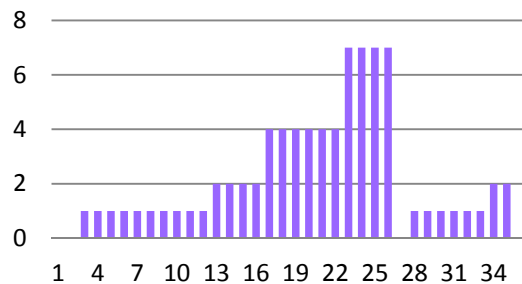
How many days last week did you have a soft drink?



How many days last week did you have a homemade dinner?



How many days last week did you have fast food?



- Participation in organized outdoor nature education and tending a garden drop off significantly in middle school age students.
- Participation in active sports and play and wildlife and wilderness recreation drops off in middle school age students, but not as significantly as the activity categories above.
- Participation in outdoor community events remains about the same for middle school age students.
- Participation in motorized outdoor sports and visiting neighborhood parks increases slightly in middle school age students.

- The final question to both students and parents was "What do you do with your parent/guardian (or student) outdoors?" The frequency of responses is illustrated in **Figure 16**. The most frequent responses in larger type, with camping, fishing, and swimming representing the most popular activities.

camping

swimming

fishing

biking

basketball

hiking

sports

football

roller skating

boating

picnics

gardening

walking

play

baseball

tennis

badminton

volleyball

skateboard

clean yard

mess around

trash cleanup

martial arts

soccer

garden

at

frisbee

picnic

picnics

ball races

movie

tag

concerts

kickball

play fight

swing

horses

shoes

firepit

sit

picnic

ball

running

talk

baseball

hide n seek

skateboarding

coach

tennis

walk dog

touch football

family activity

dig in the dirt

neft wars

skating

zoo

jog

catch

frisbee

sit

firepit

horses

shoes

picnics

ball races

movie

tag

concerts

kickball

play fight

swing

badminton

garden

at

volleyball

skateboard

clean yard

mess around

trash cleanup

martial arts

soccer

garden

at



E. Development of Recommendations

Based on the student engagement and input in the preceding section of the plan and additional GIS analysis, the following is a summary of key findings that guided development of the recommendations. These findings are also informed and guided by the following studies: *2008 Pueblo Parks and Recreation Assessment and Implementation Plan* and *1996 Pueblo Natural Resources & Environmental Education Strategic Plan*.

- Middle school students associated social interactions and being with friends as a key element spending time outdoors. This suggests that capital improvements alone are unlikely to significantly influence participation in outdoor activities.
- Middle school students expressed interest in both consequential activities (win/loss) and non-consequential activities. The City provides recreational opportunities for students interested in sports (consequential activities), and other than at the city-owned facilities managed by the non-profit organizations located outside of the City or in the higher income areas, there are no opportunities or limited opportunities for students interested in non-consequential activities. This suggests that the addition of non-consequential activities could address this disparity.
- Key barriers to participation in outdoor activities identified during the youth outreach process included perceived safety, lack of interest, or lack of knowledge and skill. Programming with qualified leaders to offer instruction and guidance in entry-level activities can address these types of barriers.
- Outreach conducted as part of this study yielded results that were indicative, but not comprehensive. Students should be further engaged to gain definitive input on what they want to do outdoors and in nature to ensure programs and improvements are optimally focused.

Based on the *2008 Pueblo Parks and Recreation Assessment and Implementation Plan*, the quality of recreation services is not as high in the focus sub-area neighborhoods (Bessemer, Eastside, and Westside) of the ***Pueblo Plug in to Nature*** study as the citywide average. This may be addressed by targeted programming, along with strategic capital improvements and partnerships with alternative recreation providers in conjunction with the school district.



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IV. Recommendations

The recommendations in this report reflect the data collected and recognize the limitations created by the challenges in obtaining a larger sample size. Addressing the need to increase awareness of and access to nature and outdoor recreation destinations, the recommendations focus on the three **Pueblo Plug in to Nature** study sub-areas and cover many subjects.

A. Student Outdoor Council

Based on the findings of this report, it is recommended that the City establish a *Student Outdoor Council* at each of the three target middle schools. The goal is to empower students to think about and address the problems they see in their school neighborhood. Through the *Student Outdoor Council*, definitive input on what youth want to do outdoors and in nature will ensure programs and improvements are tailored to address their needs and desires in each specific neighborhood. The *Student Outdoor Council* is envisioned as an after school enrichment program, taking advantage of the gathered students and the school facilities, administered by the City of Pueblo or a partner outdoor provider.

The City should establish a *Student Outdoor Council* at one middle school in each of the three sub-area neighborhoods (Bessemer, Eastside, and Westside) to further explore what students want to do outdoors and the opportunities and barriers in each particular neighborhood.

The *Student Outdoor Council* responsibilities include:

- Identifying special and unique needs for their school neighborhood including connectivity, access, and quality of nearby parks and natural areas. These may include walkability, safety, mid-day activity breaks, awareness of existing programs or facilities, and improvements or programming to make existing parks and outdoor areas more compelling for middle school students.
- Incorporating technology to incentivize fellow students to get and gather outdoors.
- Advocating for infrastructure and programming with government officials and processes.
- Incorporating public speaking coaching in the program.
 - Students attend and speak at City Council Meetings and Budget hearings.
- Inviting political leaders to *Student Outdoor Council* meetings.

Metric: The measurement of success will be determined by each school's *Student Outdoor Council*. Possible metrics may include identifying projects to advocate for and pursue City approval, student participation number targets or measurable increases in outdoor activities, fund raising, community gardens, and others as identified by the students.



B. Continue to Re-establish the Pueblo Natural Resources & Environmental Education Coalition (PNREEC)

Re-establish this formal working group to implement the recommendations in the *Pueblo Plug in to Nature* study. The PNREEC membership would include outdoor and nature service providers working collaboratively with key multi-sector leaders. Consider the possibility of student representation as the Coalition establishes goals, meeting times, and meeting locations. The PNREEC responsibilities include:

- Advocating for prioritization and implementation of study recommendations.
- Supporting all outdoor and nature service and facility providers' efforts in the same.
- Finding funds to implement the recommendations.

C. Initiate Pilot Programs to Fill Gaps

The 2008 *Pueblo Parks and Recreation Assessment and Implementation Plan* recommends that the City of Pueblo "...identify parks and recreation core programs and services. Core programming services should be based around services delivering the greatest community benefit...after school care/summer playground programs with a focus on meeting the needs of those not being served by other agencies, such as the YMCA."¹¹ The City currently provides recreational opportunities for students interested in organized sports (consequential activities) and limited access to opportunities for students interested in non-consequential activities. The following pilot programs focus on addressing the needs and interest of students currently "falling through the cracks." They can be utilized as ideas to spur programs, utilized as prototypes or implemented directly.

- **Walkshops or other Walking, Biking, or Park Audit Programs**

Walkshops are unique "walking workshops" that can be adapted for many purposes and sites. These popular events get people walking around their community, meeting neighbors or fellow students, documenting important features or challenges (e.g., walking/biking infrastructure, kid-friendly access to parks and public spaces), and discussing what they like and want to change as a group. The Walkshop can easily be adapted to look at biking infrastructure, access to parks, or any other important or challenging feature of the community.

 - During a walkshop event, attendees would use a mapping tool, similar to the LocalData tool used for Neighborhood & Regional Mapping Exercises, which can be easily accessed through a browser on any mobile phone, tablet, or a computer with an internet connection. After a quick introduction of the tool and how to use it, attendees would split into pairs or small groups to collect data on different routes or areas. Then, all participants can come back together to look at the data they gathered, discuss barriers or opportunities, and socialize as a community.
 - Walkshops work great to engage communities, as they bring students, parents, teachers, and other members of the community together to engage in documenting, addressing, and discussing important barriers or opportunities for their community. Not only does their hard work collect valuable data that can be used to make the case for improvements for the community, but the work itself creates connections within the community to engage all participants into working on a common goal.

¹¹ Design Concepts and GreenPlay, LLC. Pueblo Parks and Recreation Assessment and Implementation Plan. (2008), p 81.



- Similar deployments of the LocalData tool include:
 - [WALKscope](#), which collects data about pedestrian infrastructure.
 - [Mobility.Report](#), which collects biking, walking, transit, and placemaking data.
 - A school-oriented adaptation of a Walkshop could include:
 - An event or series of events inviting students and their families to document park walkability, access, or other issues in specific areas of their community.
 - An event web page (example) encouraging students and their parents to get out on their own family time to gather data.
 - Small group excursions into neighborhoods and along streets.
 - Discussion, data sharing, and decision-making.
- **After-School Outdoor/Nature Based Program:** A pilot program based on *Outdoor Adventures*, an after-school program developed at Pueblo School for Arts and Sciences. During the spring-term after school class, students spend time outdoors and integrate nature within all of their activities. *Outdoor Adventures* meets two times each week during the spring quarter. Because it is a primary school, field trips and walking to sites off campus is limited; off campus activities could be incorporated in a middle-school program. Learn more by contacting Keli Coffey, Technology Instructor at Pueblo School for Arts and Sciences, 719.404.2680.
- **Safe Routes to Play:** A GP RED initiative, Safe Routes to Play is a child-centered active transportation planning process that helps communities assess the potential to create non-motorized connectivity between neighborhoods and parks, playgrounds, trails, and natural areas for children and their families. Using a mapping exercise called UMap, children identify safe and unsafe places in their community to travel independently, and assesses gaps in the active transportation system. Safe Routes to Play also incorporates the use of PhotoVoice, a photography storytelling tool to share youth perceptions of community safety with policy makers. The focus is on incorporating the youth perspective and identifying opportunities for children to be able to safely make the choice for active transportation to important community recreation destinations. A companion workshop to Safe Routes to Play is the Youth Engagement Workshop (YES), which trains community planners and leaders in how to implement Umap and PhotoVoice in their communities to independently collect information to help inform active transportation planning through policy, infrastructure and community engagement strategies. Learn more at www.gpred.org. Detailed information on Safe Routes to Play may be found in **Appendix F: Safe Routes to Play**.
- **Kids in Gear:** A pilot program based on “Girls in Gear,” an eight-week bicycle training and empowerment program for middle school girls. The goal is to build confidence, self-esteem, and self-reliance, while showing them that they have a voice in how their streets and neighborhoods are designed and cared for. The program focuses on bike safety, bike mechanics, nutrition education, urban design, and public speaking. Since the program began two years ago, there have been 21 graduates, and each girl has found their unique niche in bike mechanics, public speaking, or urban design. Girls in Gear alumni frequently attend and speak at public meetings. All program graduates are awarded a brand new bike. Girls in Gear was developed in Columbus, Ohio by Jessica Mathews, the Safe Routes to School program manager for the Columbus-based bike advocacy organization Consider Biking. Learn more at <http://www.considerbiking.org> then search Girls in Gear.



- **Learning Landscapes for Middle Schools:** A program of the University of Colorado Denver that helps schools design outdoor education, student gardens, and social spaces to encourage exploration into nature and the outdoors, and improve accessibility to outdoor sites for middle school age students. The Learning Landscapes initiative is a proven, low cost way to foster a greater connection between local residents and neighborhood schools. The program engages the nearby community to help redevelop school grounds to include demonstration gardens, yard games, art, shade features, outdoor classrooms, and other features. Volunteers are put to work in the planning and construction of these new facilities alongside emerging professionals and school personnel. The result is a sense of community investment and stronger ties between schools and neighbors. Denver Public Schools and University of Colorado Denver are currently developing new criteria specifically for middle schools with a greater focus on outdoor education and social spaces. For more information, contact Lois Brink, Executive Director, 303.724.9186, Lois.brink@ucdenver.edu, <http://www.learninglandscapes.org/>.
- **Transportation to Nature and Outdoor Programs:** Investigate options for transportation funding for Outdoor Program Providers to improve accessibility to outdoor sites for middle school age students.

Metric: Success of each pilot program will be determined as the programs are further developed.

D. Promote an Outdoor Program Providers Clearinghouse

One of the key recommendations identified through meetings with the Plug in to Nature Advisory Committee was improving the local information on outdoor recreation and education programming and providers in the Pueblo area.

- Consider establishing a community clearinghouse. This may be supporting and expanding an existing partner calendar, such as ActivePueblo.org. The purpose of the Clearinghouse is to:
 - Re-establish the PNREEC group as the coordinating entity for information on outdoor and nature activities and education programming including City, non-profit managers, and alternative providers of recreation and outdoor experiences within the City of Pueblo. There is a need for ongoing communication between these providers so they can analyze their services to identify gaps in the current system and develop strategies for improvement.
 - Empower the PNREEC group to act as a central organizing body that monitors and helps promote access to nature and the outdoors in Pueblo.
 - Provide points of contact for all providers, both in Pueblo and throughout Colorado.
 - Develop marketing and awareness campaigns using social media and web resources.
 - Create a calendar of events.

Metric: Tracking of participation rates especially from within the targeted low-mod neighborhoods by the PNREEC group as the organizing body would help measure the success of each program, the aggregated service to Pueblo's diverse community, and the process as a whole.



E. Develop Governmental Support and Financial Strategies

It is recommended that the City of Pueblo develop governmental support and financial strategies for the implementation of a program to evaluate the community's built, natural, and programmatic aspects that influence increasing physical activity and reducing obesity. Developing community support and financial commitments to measure improvement in access and connection to nature-based policy, program, and built environment strategies is vital. The evaluation program, based on evidence-based tools, will evaluate the community's built, natural, and programmatic aspects, and the role of public health providers, public parks and recreation agencies, and other key community partners play in influencing an increase in physical activity and reduction in obesity. One national program that has been developed is the Surveillance and Management Toolkit (SMT), an initiative of the national non-profit GP RED. The SMT includes step-by-step facilitation, trainings, and dynamic digital templates to guide agencies through a community-specific, systematic assessment of the key factors and indicators that can affect improvements in opportunities for physical activity. The SMT is currently undergoing continual implementation, testing, and refinement in various communities around the U.S. and through validation of research at North Carolina State University. Specific outcomes have been identified for each participating Beta Site, with a goal of verifying and publishing the final proven methods in peer-reviewed academic and practitioner journals for broad adoption. The SMT supports the pursuit of future funding and community health and wellness goals. Detailed information is provided in **Appendix D: Healthy Communities Research Group**.

The Youth Activity and Nutrition Survey (YANS) is research-based survey is designed to find out what middle school aged youth in the community think about how they participate in physical activity during time spent out of school, their weight and height, their nutrition habits, how they get around, participation in outdoor/nature activities, and what activities they could be doing during time spent out of school that might be missing in their lives to help them thrive. Information is collected anonymously with no identified risk to the students. The YANS has been pilot tested with ages 10-14, and takes about 20 minutes on average to complete on school computers with training, demographics summary, survey hosting, and reports provided. YANS is also one primary component of the SMT. Detailed information may be found in **Appendix E: YANS Overview**. Evidence-based tools such as the SMT and YANS provide statistically accurate data and high level analysis by academic researchers for a clear, measurable picture of middle school student and community issues to support the pursuit of future funding and community health and wellness goals.



F. Implement Targeted Recreation Facilities Improvements

While the *2008 Pueblo Parks and Recreation Assessment and Implementation Plan* generally identified Pueblo as having adequate levels of service provided by its current parks and recreation system, the plan also discussed issues with maintenance and identified numerous gaps in the existing system. Some of these gaps impact residents of the three sub-areas included in this project. The Pueblo Plug in to Nature project identified additional implementation strategies to support current efforts:

- Implement Student Outdoor Councils to:
 - Identify any new partners in existing gap areas that may assist in increasing access to outdoor recreation opportunities in the three target subareas.
 - Assist in identifying physical barriers and connectivity issues at the neighborhood level.
- Implement Pilot Programs such as Safe Routes to Play and Walkshops.
- Continue to monitor and evaluate existing assets and identify, as well as prioritize, which assets are the most important recreation components to upgrade or replace.
- Continue with planning and funding strategies for the implementation of recreation connectivity to provide better access to outdoor recreation opportunities especially targeted at the three identified subareas.
- Explore unique opportunities to add facilities that will result in an increase in level of service targeted for identified gap areas or areas that currently fall below the identified level of service threshold.
- Update the existing GIS database to include all improvements and additions to existing level of service provided by Pueblo Parks and Recreation and its key alternative providers.
- Revisit and review the *2008 Pueblo Parks and Recreation Assessment and Implementation Plan* and the *1996 Pueblo Natural Resources & Environmental Education Strategic Plan* for recommendations still relevant in 2015.
- Implement evidence-based tools including the Healthy Communities Research Group Surveillance and Management Toolkit and Safe Routes to Play which are intended to measure improvement in access and connection to nature based policy, program, and built environment strategies.

Metric: Consider updating the *2008 Pueblo Parks and Recreation Assessment and Implementation Plan*, and include methods to evaluate recent improvements and provide a baseline for future planning efforts.



V. Partnership, Funding, and Staffing Opportunities

The formation of the Advisory Committee initiated a reactivation of the PNREEC group and also engaged new partners to maximize shared visions and potential. The Pueblo City-County Health Department, Boys and Girls Clubs, Pueblo Active Communities and Environments Group, and the Pueblo County Extension Office were actively involved as members of the Advisory Committee. The City of Pueblo, through PNREEC's leadership, will be seeking additional partnership opportunities with many entities such as program providers, private businesses, philanthropic and service organizations, schools, and others. All entities will have a role in implementing and funding the recommendations of the ***Pueblo Plug in to Nature*** study; however, specific organizations have not been identified within each recommendation. The City will continue to seek funding (grants, donations, and general fund allocations) to expand non-school youth programming to underserved portions of Pueblo. The Pueblo community should seek additional resources, both locally and from other outside funding sources that will allow for significant additional analysis, plans, and implementation strategies beyond this ***Plug in to Nature*** study.

A. Looking to the Future

The collaborative effort by the Project Team and Advisory Committee in undertaking the ***Pueblo Plug in to Nature*** study established the importance of access to nature and the outdoors as a contributor to individual and community health. Achievable recommendations evolved through a detailed analysis of the availability of nature-based opportunities in Pueblo, and a diverse, high level youth and community engagement process. By concurrently addressing policies, infrastructure, and community engagement, the City of Pueblo and its partners have the potential to create a positive shift in the ability of all citizens, and particularly the youth of Pueblo, to access nature and the outdoors now and for generations to come.



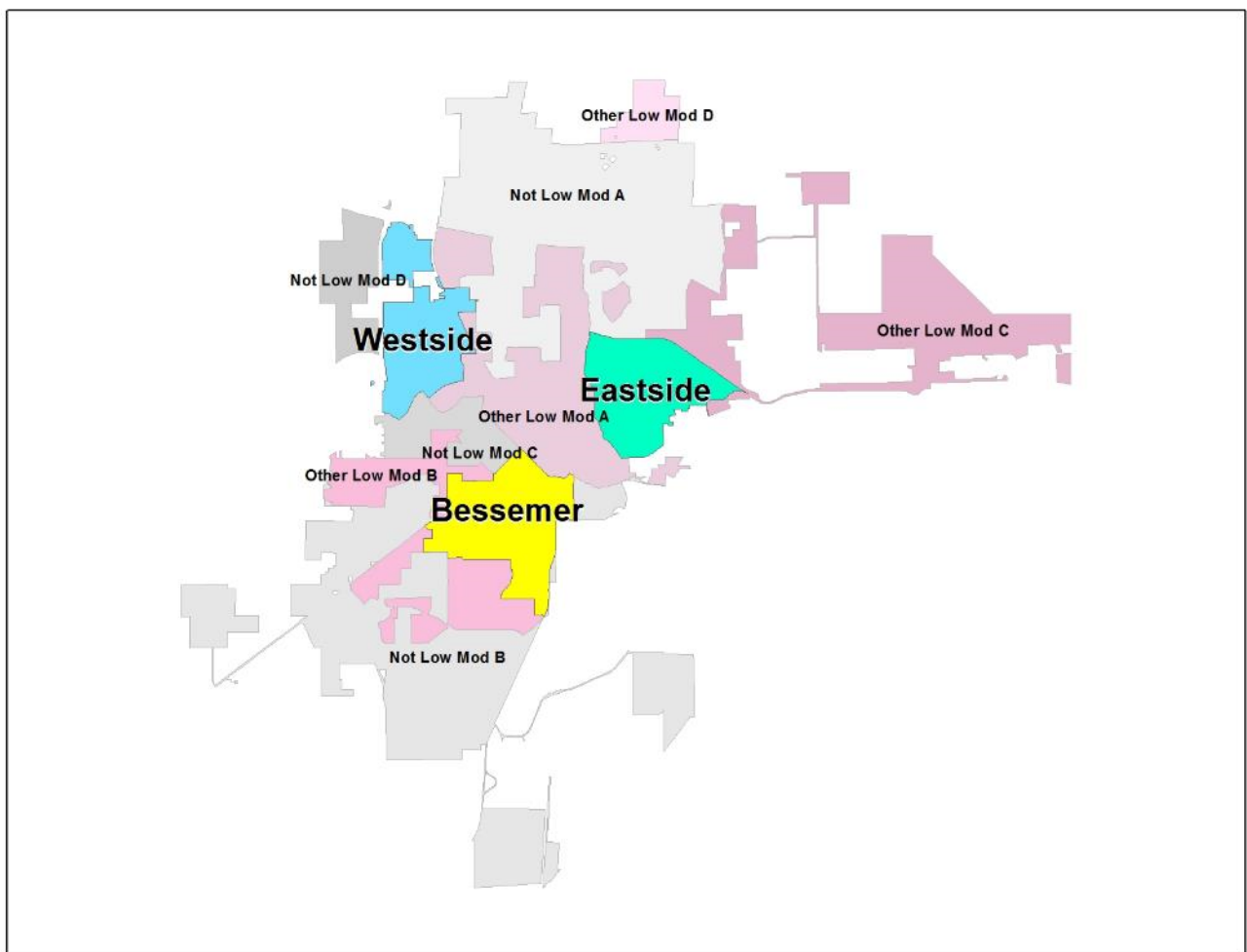
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Appendix A: Additional GIS Analysis and Discussion

Pueblo Plug in to Nature Sub-Areas

Figure 17 illustrates the location of the primary sub-areas: 1) Westside, 2) Eastside, and 3) Bessemer. Several other areas within the city were also identified as low to moderate income areas. These areas are also shown on this map for reference and appear in pink/purple tones. Some areas rise above the low/moderate income level and are also included for reference in gray tones.

Figure 17: Pueblo Plug in to Nature Sub-Areas



Geographic Information Systems (GIS) Analysis

Sub-Area Park Acre Analysis

In **Table 10**, all sub-areas are included for comparison. When compared to the rest of the Pueblo, Bessemer not only is lower than the other two target sub-areas but also is the lowest area in the city in acres of parkland per person.

Table 10: Sub-Area Acreage

Sub-areas	# of Schools within Boundary	Acres of 2014 Park Lands within Boundary	% of Area Park Land	Acres of Parkland/1,000 Population	Acres of Parkland/1,000 10-14 Population
Bessemer	12	36	1.7%	2.2	34.7
Eastside	9	136	7.9%	10.8	149.0
Westside	4	106	5.9%	26.1	302.0
Other Low Mod A	9	705	18.2%	61.6	1,186.9
Other Low Mod B	9	522	21.6%	39.2	620.0
Other Low Mod C	3	10	0.2%	3.9	51.8
Not Low Mod A	16	704	9.3%	28.6	502.1
Not Low Mod B	9	163	2.1%	9.1	134.8
Not Low Mod C	4	235	22.9%	59.7	1,284.2
Average	8.3	290.8	9.9%	26.8	473.9

Demographic Information

Table 11 shows the three primary sub-areas and other areas for comparison. While this project focused on the three sub-areas it is important to note that there are a few other areas designated in the low/mod bracket and a few areas inside the city boundary that do not fall in the low/mod bracket. *Note: Other Low Mod D and Not Low Mod D areas from the previous map were identified as having no current residents and therefore were excluded from this table.*

Table 11: Pueblo Plug in to Nature Sub-Area Demographics

Sub-areas	Total 2014 Population	Total Population per Square Mile	10-14 yr old Population 2014	Median Household Income	Average Household Income
Bessemer	16,411	4,967	1,038	\$26,380	\$33,498
Eastside	12,648	4,365	913	\$25,262	\$32,215
Westside	4,059	1,455	351	\$26,660	\$33,445
Other Low Mod A	11,449	1,896	594	\$25,781	\$35,331
Other Low Mod B	13,332	3,534	842	\$35,441	\$42,751
Other Low Mod C	2,567	378	193	\$27,160	\$40,278
Not Low Mod A	24,616	2,085	1,402	\$44,618	\$58,249
Not Low Mod B	17,842	1,440	1,209	\$54,006	\$70,109
Not Low Mod C	3,935	2,458	183	\$39,039	\$51,615
Average	11,873	2,509	747	\$33,816	\$44,166



Geographic Information Systems (GIS) Analysis

Sub-Area Park Acre Analysis

When compared to all areas within the City, Bessemer still ranks lowest in acres of parkland per person. While area “Other Low Mod C” has few acres, it also has a significantly lower population. **Table 12** shows the acres of park land within each sub-area, as well as total population per acre and the number of 10-14 year olds per acre.

Table 12: Sub-Area Acreage

Sub-areas	# of Schools within Boundary	Acres of 2014 Park Lands within Boundary	% of Area Park Land	Acres of Parkland/1,000 Population	Acres of Parkland/1,000 10-14 Population
Bessemer	12	36	1.7%	2.2	34.7
Eastside	9	136	7.9%	10.8	149.0
Westside	4	106	5.9%	26.1	302.0
Other Low Mod A	9	705	18.2%	61.6	1,186.9
Other Low Mod B	9	522	21.6%	39.2	620.0
Other Low Mod C	3	10	0.2%	3.9	51.8
Not Low Mod A	16	704	9.3%	28.6	502.1
Not Low Mod B	9	163	2.1%	9.1	134.8
Not Low Mod C	4	235	22.9%	59.7	1,284.2
Average	8.3	290.8	9.9%	26.8	473.9

GRASP® Analysis

Overall Level of Service

The 2008 planning effort analyzed level of service using the GRASP® methodology, an asset based system that assesses recreation services. For further explanation and discussion of the GRASP® process, please see the 2008 *Parks and Recreation Assessment and Implementation Plan*. The GRASP® analysis looks at access to recreational opportunities based on the location and quality and location of each individual recreation component and not simply on park boundaries.

Assumptions

1. Proximity equates to access. This means that the presence of a recreational facility within a specific distance indicates that facility is accessible from a location. “Accessibility” in this analysis does not refer specifically to ADA accessibility.
2. General access equates to proximity of 1 mile, a reasonable distance for a drive in a car or bike ride.
3. Walkable access equates to proximity of 1/3 mile, a reasonable distance attainable in 10 minutes walking at a leisurely pace.

The 2008 plan found that the City of Pueblo provides at least some access to recreational opportunities for approximately 90 percent of the City’s total population, with more than 74 percent meeting a minimum target score, as illustrated in **Figure 18**. A one mile catchment area was used during this analysis with a premium placed on access within 1/3 mile. Overall, Pueblo was considerably lower in average level of service per acre as compared to cities of similar size. In this map, areas considered to have the highest level of service have a darker orange gradient. Areas with lower level of service are indicated by lighter orange shading, while areas with no current service are shown in gray.

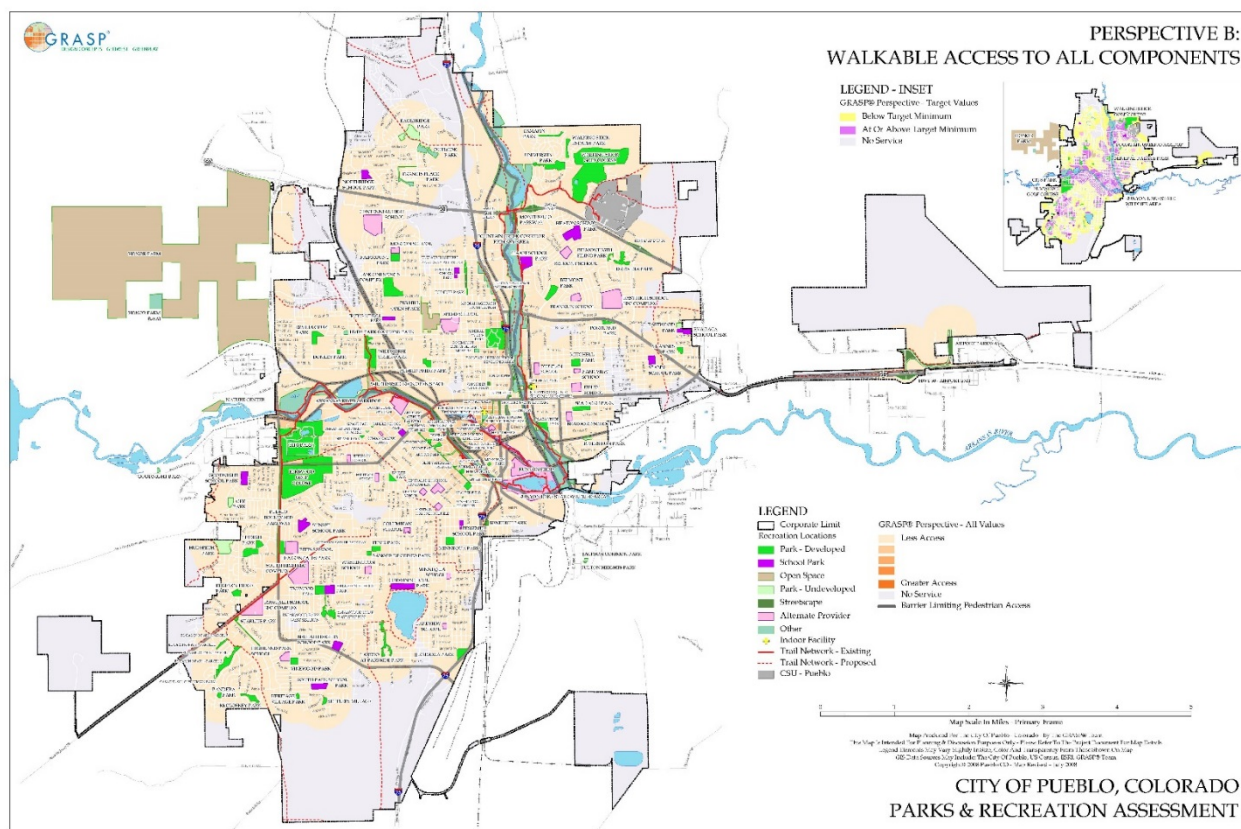


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62

Pueblo Plug in to Nature

Figure 19: Walkable Access to All Components Additional GRASP® Walkable Level of Service Analysis



In addition to the population analysis presented earlier in this study, analysis was also done based on the percentage of a land within a sub-area that meets the threshold level in terms of GRASP® level of service. A breakdown of the 2008 analysis data by sub-area yields the results presented in **Figure 20** and in **Table 13**. The analysis looks at walkable access to recreation (10 minute walk) and factors in major pedestrian barriers. In this analysis areas displayed in gray have no walkable access. Areas shaded in yellow have some access but the value of those opportunities falls below the minimum threshold which equates to access to a typical neighborhood park. Areas shown as purple are at or above this threshold.



Figure 20: Walkable Access by Sub-Area

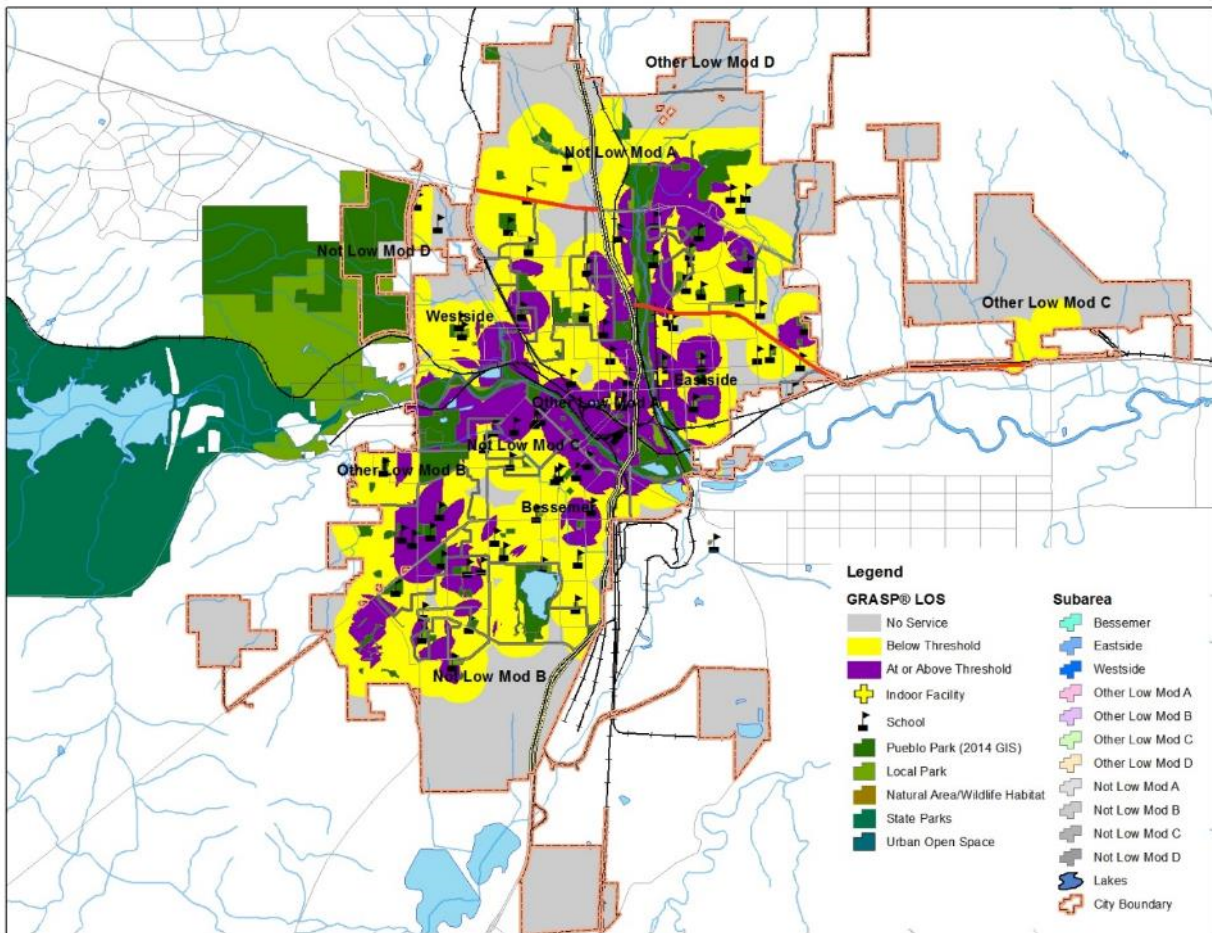


Table 13: Walkable Access by Sub-Area

Subarea	Percent of Subarea with LOS	Average LOS per Acre Served	Percent Area with No Service	Percent Area below Threshold	Percent Area with LOS ≥ 67.2
Bessemer	94%	51.9	6%	71%	23%
Eastside	86%	66.7	14%	49%	37%
Westside	69%	50.8	31%	54%	16%
Other Low_Mod A	94%	112.9	6%	34%	60%
Other Low_Mod B	95%	48.1	5%	77%	19%
Other Low_Mod C	23%	27.5	77%	20%	3%
Not LowMod A	69%	46.0	31%	51%	18%
Not LowMod B	40%	54.5	60%	27%	14%
Not LowMod C	100%	151.7	0%	22%	78%
Low Value in Low/Mod Subarea					
High Value in Low/Mod Subarea					

Summary Analysis

Three conclusions* that might be drawn from this data for the three sub-areas include:

- Westside has the lowest overall level of service with 69 percent of the sub-area having access to some sort of recreation opportunity.
- Westside has the lowest average level of service per acre, the highest percent of acres with no service, and the lowest percent of acres at or above threshold.
- Bessemer has the greatest percentage of the sub-area with access to recreation opportunities but Eastside has the highest percent of the sub-area at or above the threshold.
- **Note: The 2008 walkability analysis did include access to two indoor facilities and may inflate the scores slightly within Eastside and Other Low/Mod A.*



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Appendix B: Questions Neighborhood and Regional



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Question List: Neighborhood

What kind of a place is this?

Fun place that I go

- How do I get here?
 - Walk / run
 - Bike / skateboard / scooter
 - Bus
 - Car
 - Other: Explain...
- Why do I go to this place?
 - It's fun
 - It's convenient
 - My friends are there
 - My parents want me to go
 - Other: Explain...
- Is there anything else you would like to tell us about this place?

Fun place I don't go but want to

- Why do you want to go to this place?
 - It's fun
 - I have heard about it
 - My friends go there
 - My parents want me to go
 - Other: Explain...
- Why don't you go to this place?
 - Too far to bike / walk
 - Too hard to get here
 - No time to go
 - Parents don't allow me to go
 - I don't feel welcome there
 - Other: Explain
- Is there anything else you would like to tell us about this place?

Problem place

- What makes this a problem place?
 - It's a place I avoid
 - Busy street that is hard to cross
 - River or drainage
 - Hangout of kids/adults I don't get along with
 - Barrier that keeps me from getting to where I want to go
 - Place I or my parents don't want me to go
 - Other: Explain...
- Why is this a challenging place?
 - Dangerous
 - Scary
 - Impossible to cross over
 - Other: Explain...
- Is there anything else you would like to tell us about this place?

Question List: Regional

A place you LIKE to go

- How do you get here?
 - Walk / run
 - Bike / skateboard / scooter
 - Bus
 - Car
 - Other: Explain...
- How often do you go?
 - More than once a week
 - About once a week
 - A couple times per month
 - About once a month
 - A few times per year
 - About once a year or less
- How often do you want to go?
 - More than once a week
 - About once a week
 - A couple times per month
 - About once a month
 - A few times per year
 - About once a year or less
- Is there anything else you'd like to tell us about this place?
- How do you get to school?
 - Walk
 - Bike
 - Bus
 - Car
 - Other: Explain...

A place you WANT to go

- What keeps you from getting here?
 - Too far to walk or bike
 - No adult to take me here
 - Barrier that keeps me from getting here
- What is the barrier?
 - Hangout of kids/adults I don't get along with
 - My friends don't go here
 - Too expensive
 - Place I or my parents don't want me to go
 - Other: Explain...
- How often do you want to go here?
 - More than once a week
 - About once a week
 - A couple times per month
 - About once a month
 - A few times per year
 - About once a year or less
- How do you get to school?
 - Walk
 - Bike
 - Bus
 - Car
 - Other

Appendix C: Youth and Parent Survey Instruments



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The City of Pueblo's *Plug In To Nature* Study

Parent/Guardian Input and Ideas

During school today, your student has participated in City of Pueblo sponsored *Plug In To Nature* a study to determine the current levels of connectedness that Pueblo's 10-14 year olds have to the outdoors and nature and to identify opportunities to connect more 10-14 year olds to nature.

We ask you to answer the following questions and have you child return your complete survey to the teacher whose class they participated in their in-class activity.

Think about when your student is **NOT in school** ----- check the boxes for ALL the following kinds of activities they participate in. **Check all the activities that apply to your student.**

- ☐ Hang out at a park, recreation center, youth center, church center or similar place
- ☐ Hang out at home with family, friends or doing homework
- ☐ Hang out watching TV
- ☐ Hang out playing a video game or on social media texting, or on the phone
- ☐ Organized physical activities like sports, gymnastics, dance, swimming, weight lifting...
- ☐ Outdoor activities like playing in a park, skateboarding, walking, running, hiking, biking, climbing, hunting, fishing, and so on
- ☐ Youth group activities like Girl or Boy Scouts, church youth groups, Boys/Girls Clubs, 4H activities, and so on
- ☐ Any others not listed above? Please write in the activity here

How does your student usually get to out-of school actives (walk, bike, car, bus, other). _____

Now we'd like to know how safe you feel your student is on the way to their activity sites. For example, how worried are you of them getting hurt by others or traffic on the way to or from the park where they play basketball?

- ☐ Not at all safe (I always worry that my student might get hurt going to or from my activity sites)
- ☐ Somewhat safe (I worry about what's going on, but I mostly feel my student is safe)
- ☐ Very safe (I never worry about something happening to my student on the way to their activities)

Now think about the **reasons your student DOES NOT participate** in activities when they are not in school. Then **RANK the reasons why they DO NOT** participate in those activities. Number 1 is the **BIGGEST** reason why they do not participate in those activities, and number 7 is the **WEAKEST** reason that your student does not participate in those activities. To help remind you to rank each item, the survey will force you to rank how important each reason is to you.

1 2 3 4 5 6 7

- | | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | My student is not allowed/able to participate (no way to get to the activity) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | My student is not allowed/able to participate (feel it is not safe) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | My student is not able to participate (costs too much) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | My student is too busy (have chores, have to work or babysit, take private lessons) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | My student has no interest in participating (I don't like the activities, I'd rather stay home after school) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Social reasons (friends don't participate, student would rather be alone or does not feel comfortable with others) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | No skills or have health issues (no skills to participate, health conditions limit student or fitness level is too low) |



Think of the opportunities in Pueblo to participate in outdoor and nature-based activities, camps, classes, and so on. We would like to know at what ages your student participated in those programs. So, for each activity listed below, check the boxes that indicate how old they were when they participated. If they participated before they were in school, and currently then check both of those boxes for that activity.

	before kindergarten	grade school	middle school	never participated
Running/ Walking	☐	☐	☐	☐
Biking	☐	☐	☐	☐
Skateboarding	☐	☐	☐	☐
Hiking	☐	☐	☐	☐
Skiing/Boarding/Sledding	☐	☐	☐	☐
Organized sports/baseball/basketball/soccer	☐	☐	☐	☐
Pick-up sports/streetball/basketball/soccer	☐	☐	☐	☐
All Terrain Vehicles (ATV)	☐	☐	☐	☐
Snowmobiling	☐	☐	☐	☐
Boating, Kayaking or Canoeing	☐	☐	☐	☐
Outdoor concerts	☐	☐	☐	☐
Outdoor festivals at the Riverwalk	☐	☐	☐	☐
Camping or RV camping	☐	☐	☐	☐
Wildlife viewing	☐	☐	☐	☐
Archery	☐	☐	☐	☐
Hunting	☐	☐	☐	☐
Fishing	☐	☐	☐	☐
Horseback riding	☐	☐	☐	☐
Gardening	☐	☐	☐	☐
Programs at the Nature and Raptor Center	☐	☐	☐	☐
Programs at the Pueblo Zoo	☐	☐	☐	☐
Programs at the Lake Pueblo State Park	☐	☐	☐	☐
Programs at Pueblo City Park	☐	☐	☐	☐
Programs at Pueblo Mountain Park	☐	☐	☐	☐
Programs at Beulah School of Natural Sciences	☐	☐	☐	☐
Programs at Pueblo YMCA	☐	☐	☐	☐
Volunteering for outdoor activities	☐	☐	☐	☐
Other programs	☐	☐	☐	☐
Playing at the neighborhood park	☐	☐	☐	☐
Playing in the street, alley, or vacant lot	☐	☐	☐	☐
Other activity	☐	☐	☐	☐

list examples _____

What do you do with your student outside? _____

For more information and questions, please contact Beritt Odem, Senior Planner, City of Pueblo at 719.533.2339

The City of Pueblo's Plug In To Nature Study
Student Input and Ideas

Think about when you are **NOT in school** ----- check the boxes for ALL the following kinds of activities you participate in. **Check all the activities that apply to you.**

- ☐ Hang out at a park, recreation center, youth center, church center or similar place
- ☐ Hang out at home with family, friends or doing homework
- ☐ Hang out watching TV
- ☐ Hang out playing a video game or on social media texting, or on the phone
- ☐ Organized physical activities like sports, gymnastics, dance, swimming, weight lifting...
- ☐ Outdoor activities like playing in a park, skateboarding, walking, running, hiking, biking, climbing, hunting, fishing, and so on
- ☐ Youth group activities like Girl or Boy Scouts, church youth groups, Boys/Girls Clubs, 4H activities, and so on
- ☐ Any others not listed above? Please write in the activity here

How do you usually get to out-of school actives (walk, bike, car, bus, other). _____ Now we'd like to know how safe you feel on the way to these activity sites. For example, how worried are you of getting hurt by others or traffic on the way to or from the park where you play basketball?

- ☐ Not at all safe (I always worry that I might get hurt going to or from my activity sites)
- ☐ Somewhat safe (I worry about what's going on, but I mostly feel safe)
- ☐ Very safe (I never worry about something happening to me on the way to their activities)

Now think about the **reasons you DO NOT participate** in activities when you are not in school. Then **RANK the reasons why you DO NOT** participate in those activities. Number 1 is the **BIGGEST** reason why you do not participate in those activities, and number 7 is the **WEAKEST** reason that you do not participate in those activities.

- | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | I am not allowed/able to participate (no way to get to the activity) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | I am not allowed/able to participate (feel it is not safe) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | I am not able to participate (costs too much) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | I am too busy (have chores, have to work or babysit, take private lessons) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | I have no interest in participating (I don't like the activities, I'd rather stay home after school) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Social reasons (friends don't participate, I would rather be alone or I do not feel comfortable with others) |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | No skills or have health issues (no skills to participate, health conditions limit me or my fitness level is too low) |

Now we would like to know what kinds of food you ate this past week. So, during the PAST WEEK how many days did you eat the following foods. Be sure to check just one box for each item.

	never	one day	2-3days	4-6 days	every day
Fresh Vegetables	☐	☐	☐	☐	☐
Fresh Fruit	☐	☐	☐	☐	☐
Fresh made Dinner at home	☐	☐	☐	☐	☐
Soft drink (regular or diet, energy drink)	☐	☐	☐	☐	☐
Fast Food (chicken nuggets, pizza, hot dogs, taco, chips, hamburgers, french fries)	☐	☐	☐	☐	☐



Think of the opportunities in Pueblo to participate in outdoor and nature-based activities, camps, classes, and so on. We would like to know at what ages you participated in those programs. So, for each activity listed below, check the boxes that indicate how old you were when they participated. If you participated before you were in school, and currently then check both of those boxes for that activity.

	before kindergarten	grade school	middle school	never participated
Running/ Walking	☐	☐	☐	☐
Biking	☐	☐	☐	☐
Skateboarding	☐	☐	☐	☐
Hiking	☐	☐	☐	☐
Skiing/Boarding/Sledding	☐	☐	☐	☐
Organized sports/baseball/basketball/soccer	☐	☐	☐	☐
Pick-up sports/streetball/basketball/soccer	☐	☐	☐	☐
All Terrain Vehicles (ATV)	☐	☐	☐	☐
Snowmobiling	☐	☐	☐	☐
Boating, Kayaking or Canoeing	☐	☐	☐	☐
Outdoor concerts	☐	☐	☐	☐
Outdoor festivals at the Riverwalk	☐	☐	☐	☐
Camping or RV camping	☐	☐	☐	☐
Wildlife viewing	☐	☐	☐	☐
Archery	☐	☐	☐	☐
Hunting	☐	☐	☐	☐
Fishing	☐	☐	☐	☐
Horseback riding	☐	☐	☐	☐
Gardening	☐	☐	☐	☐
Programs at the Nature and Raptor Center	☐	☐	☐	☐
Programs at the Pueblo Zoo	☐	☐	☐	☐
Programs at the Lake Pueblo State Park	☐	☐	☐	☐
Programs at Pueblo City Park	☐	☐	☐	☐
Programs at Pueblo Mountain Park	☐	☐	☐	☐
Programs at Beulah School of Natural Sciences	☐	☐	☐	☐
Programs at Pueblo YMCA	☐	☐	☐	☐
Volunteering for outdoor activities	☐	☐	☐	☐
Other programs	☐	☐	☐	☐
Playing at the neighborhood park	☐	☐	☐	☐
Playing in the street, alley, or vacant lot	☐	☐	☐	☐
Other activity	☐	☐	☐	☐

list examples _____

What do you do with your parent/parents/guardian outside? _____

For more information and questions, please contact Beritt Odem, Senior Planner, City of Pueblo at 719.533.2339

Appendix D: Healthy Communities Research Group



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Background

Since 2009, the **Healthy Communities Research Group** of GP RED, (along with associates from North Carolina State University, East Carolina University, GreenPlay, Design Concepts, Indiana University – Bloomington, and various Alpha and Beta Site test communities), has been working to develop and test the **Healthy Communities Surveillance and Management Toolkit™ (SMT)**. The project targets examining the role of public parks and recreation as preventative public health providers working alongside other key community partners to evaluate the community's built, natural, and programmatic aspects that influence increasing physical activity and reducing obesity. The SMT includes step by step facilitation, trainings, and dynamic digital templates to guide community through a community-specific systematic assessment of the key factors and indicators that can affect improvements. The SMT is currently under continual implementation, testing, and refinement in various communities around the U.S., with a goal of verifying and publishing the final proven methods in peer-reviewed academic and practitioner journals for broad adoption and benefit.

What is the SMT Project about?

The SMT helps parks, recreation, and related departments and agencies assess, analyze, document, and evaluate primary relevant elements of their service system:

- **Convening Community Stakeholders and Champions** – Residents? Partners? Providers?
- **Creating a Warrant for Agency Action** – Why? Who? What is the Impact?
- **Evaluating Policies, Laws, and Procedures** – What is influencing active living?
- **Identifying Fiscal Resources and Distribution** – What funds? How should they be allocated?
- **Inventorizing all Assets and Affordances** – Programs? Parks? Facilities? Connectivity? Food?

An analysis of these elements through the SMT process involves key local stakeholders (public health, transportation, schools, for profit/non-profit partners, youth, parents, and other stakeholders) to create a systems portfolio, strategic concepts for improvement, and future modeling for the purposes of articulation, prioritization, management, and surveillance of outcomes over time.

Beta Sites Testing and Involvement

The HCRG is working directly with communities to assess, analyze, document, and evaluate the effectiveness related to the repositioning parks and recreation department as a community public health provider. Currently the SMT process is conducted over a three-year period. **Year 1** is focused on information gathering and partner involvement. **Year 2** is focused on initial implementation of key Action Plan items. **Year 3** is focused on refinement, evaluation, celebration, and future continuity. Each year key deliverables and engagement, and culminates with a written report, executive summary, and presentations suitable for public and web communications. The community is assigned an HCRG Project Manager that works directly with the community leaders and the key stakeholder team. The process is loosely based on standard *Health Impact Assessment* protocols, but all templates and facilitation methods are geared directly towards using parks and recreation as key contributors. While **HCRG focuses primarily on ages 10 -14** (as this is the age when youth begin to make their own personal decisions, and we need a selected cohort for comparisons), all templates and methodologies are designed to be scalable and dynamic, **suitable for any age cohort evaluation**. All work is presented to community decision makers and the public to position facilitating a “healthy community”.

Allied HCRG Organizations:



NC STATE UNIVERSITY

East Carolina University

Opportunities for Public Parks and Recreation Agencies and Related Health Partners to:

- Become a community **SMT Beta Site** for Assessment, Surveillance, and Strategic Portfolio Development in the community – **Become a recognized “Healthy Community”**
- Become aligned with other **Healthy Communities** for ongoing information exchange, beneficial affiliation, and national publication, education, and presentations involvement
- Position Parks and Recreation as a known community health provider in the community

What does an agency need to have in place to start?

There is a necessary agency investment for chosen Beta Sites – in time, staffing, and a matching financial investment to help cover some costs of the project. An involved community provides:

- A **staff person** with the background and authority to be assigned as the “**Healthy Communities Project Manager**”. This person will need to allocate an average of approximately 5-20 hours per month during the Beta Site involvement (higher hours during Year 1, and lower in Years 2 & 3). They will be trained throughout the process, with a focus on assessment, setting desired outcomes, and future implementation strategies.
- **The agency needs to invest matching funds.** This is typically \$25K to \$80K in Year 1, and \$25K to \$40K each year in Years 2 and 3, (depending on community size and complexity) via a contract to partially offset the project costs. A three-year commitment is required to insure the community realizes the full benefit of the affiliation and documented impact. If funding is an issue, as a 501(c)(3) non-profit organization, GP RED’s HCRG may be able to partner for grants or other alternative sources.
- **Basic inventory and assessment reports and materials (training provided)**
 - Gathering of materials and completion of provided templates (affordances, financial, partners, volunteers, stakeholders, policies, procedures, etc.).
 - A digital composite-values method (CVM) inventory and GIS of the relevant assets and programs. *NOTE: if the agency does not have this CVM inventory available, the HCRG can recommend separate services to create the basic level needed.*
 - Financial reports to help assess the allocation of resources going to these activities.
 - **A timeline is customized for each agency.**

As a Healthy Communities SMT Beta-Site, What Do Agencies Get?

- Alignment, recognition, certification, and national celebration of involvement as a **HCRG Surveillance and Management Beta Site for a Healthy Community!**
- Drafted community-specific templates and questionnaires for information gathering, assessment, and monitoring over time.
- Assessment, tools, and strategies for future implementation – Results from the **Healthy Communities SMT Portfolio™**:
 - o Baseline summary of the need, warrants for action, and demographics
 - o Rationale to present to decision makers outlining the potential for repositioning as a catalyst for healthy people in the community
 - o Analysis tools and summaries related to community’s systems, policies, and funding
 - o Analysis and analytical mapping of the community’s relevant assets and affordances
 - o Relevant comparative analysis to show how the agency compares to others*
 - o Identification of community-specific key factors that can affect change
 - o Identification of key elements most appropriate for alternative funding options and partnerships
 - o Action Plan for immediate, short-term, and long-term strategies

**Note, the list of involved communities is growing over time. Ongoing tracking, resources, networking, and comparison services are included for Beta Sites.*

For More Information

Contact Teresa Penbrooke, MAOM, CPRE, HCRG Director

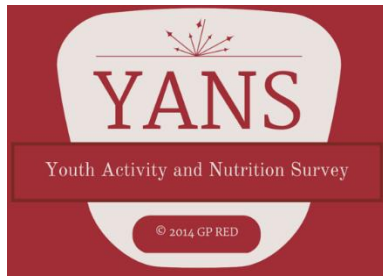
GP RED Healthy Communities Research Group

P: 303-870-3884 E: teresap@gpred.org www.gpred.org

Appendix E: YANS Overview



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Youth Activity and Nutrition Survey (YANS)

GP RED Healthy Communities Research Group (HCRG)

Contact: Teresa L. Penbrooke, Project Manager

Director of GP RED's Healthy Communities Research Group

PhD student and Research Assistant, NCSU

teresap@gpred.org or tlpenbro@ncsu.edu,

303-870-3884 www.gpred.org

What is the Project?

We'd like to help a community's schools, parks and recreation staff, related departments, and other interested partners to find out more specific information about what the youth in the community really think about how they participate in out of school time physical activity, their weight/heights, their nutrition habits, how they get around, and what out of school time activities might be missing in their lives to help them thrive.



How and Why?

- We have a YANS already created for community to use that has been tested on over 4,000 middle school students in other communities. It has been approved by the Institutional Review Board (IRB) for this appropriate use by East Carolina University, and North Carolina State University (NCSU). This survey is more specific than other county or national youth surveys.
- While this tool is often used as part of GP RED's **Healthy Communities Surveillance and Management Toolkit (SMT)**, value of this survey is estimated at **\$8,000** if conducted as a stand-alone project. Financial assistance may be available for qualifying communities as we continue to refine this instrument, test it in other communities, and relay back the information and analyses that are obtained. We'll also use it for national comparative publications, and give credit for forward-thinking participation in this **Healthy Communities** work.
- All information is collected anonymously with no identified risk to the students.
- We need collaboration for schools to agree to facilitate it to happen in schools in **2015**.
- It's only 23 questions and room for any open answers if they'd like, written in language suitable for middle-schoolers. It has been pilot tested with ages 10 – 14. It takes less than 20 minutes on average to complete on school computers. We host the survey online. Parents can "opt-out" of their child's participation, and we provide the parental notification forms, training, demographics summary, survey hosting, and reports back to you.

Typically once we get approval to move forward from schools, it takes about 8 weeks from start to finish, depending on when students are scheduled to take the online survey. We provide all training and handling of the survey hosting and analysis.

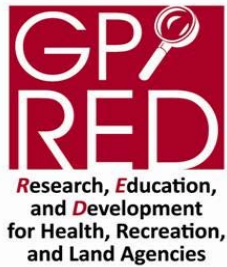


We'll build upon previous planning efforts, and work to gather basic demographics information as available on youth in your specific community, to help provide a more comprehensive look at their needs – from their voices.

Appendix F: Safe Routes to Play



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211 North Public Road,
Lafayette, CO 80026
Direct: 303-501-7697
info@gpred.org
www.gpred.org

SAFE ROUTES TO PLAY PILOT COMMUNITY OVERVIEW

Thank you for your interest Safe Routes to Play! We're excited to work with you to develop a child-centered transportation plan that creates safe, non-motorized pathways to parks, play spaces, and natural areas in your community. We applaud you for taking steps to support the choice for active transportation, and in turn, promote individual and community health.



About Safe Routes to Play

The concept of *Safe Routes to Play* (SRTP) was created in the early 2000's in Lebanon, NH as a strategy for connecting neighborhoods with parks, play spaces, and natural areas to facilitate safe, independent transportation for children and families. Key concepts include a) children as commuters, b) child health and safety-oriented transportation planning, c) active access to community parks, play spaces, and natural areas.

In 2010, the GP RED Operating Board (Research, Education and Development for Recreation, Health and Land Management Agencies) adopted *Safe Routes to Play* as a national initiative.

Safe Routes to Play is currently being used as a guiding principle in community level design projects in New Hampshire and Colorado. GP RED continues to seek pilot communities to test the effectiveness of the planning process, and is exploring relationships with academic researchers whose focus is on the health impacts of the built environment.

Why Safe Routes to Play?

There is strong evidence linking access to facilities like parks, playgrounds and recreation programs with increased physical activity and reduced risk for obesity among children. First Lady Michelle Obama's *"Let's Move"* report concludes that "...active transport should be encouraged between homes, schools, and community destinations for afterschool activities, including to and from parks, libraries, transit, bus stops, and recreation centers." The Safe Routes To School National Partnership and the American Public Health Association have identified key data to support initiatives like Safe Routes To Play in their report, *"Promoting Active Transportation: An Opportunity for Public Health"*, including reduced injuries, increased bicycling and walking activity, a decrease in CO2 emissions, and increased economic vitality.

[GP RED](#) is a 501 (c) (3) established in 2008 to facilitate the creation of inter-disciplinary, innovative, practical management tools and strategies intended to enhance and promote integration of health, recreation, and land management industries through research, education, and development.

The *Safe Routes to Play* Planning Process

The *Safe Routes to Play* Planning Process involves strategic steps:

1. CONVENE & ENGAGE THE COMMUNITY

GP RED convenes leaders from the public/environmental health, parks and recreation, land use planning, media, transportation, public safety and education sectors. We include a youth mapping activity to chart a community-driven picture of a child-centered, active transportation system. Community engagement tools for this step include:

- Community Connectivity and Leadership Forums
- Statistically-Valid Survey
- UMAP Youth Mapping Tool
- Mind Mixer Online Community Engagement

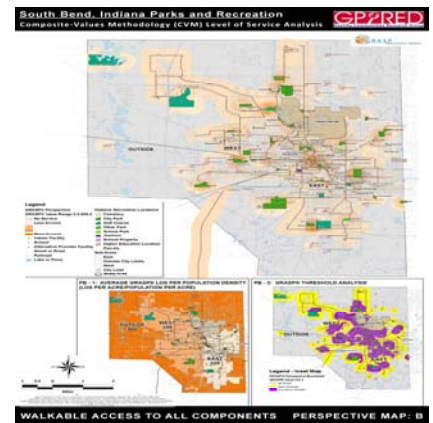


Deliverables: Community Connectivity Forum Report, Survey Report & Analysis, Mind Mixer Report, Youth Mapping Results.

2. ASSESS & ANALYZE RESOURCES

We will work with your team on-site to evaluate your community's 'active access' from environmental, program, and policy perspectives. Using a qualitative and quantitative GIS Level of service analysis, we can show gaps in connectivity, inequitable access to play spaces, and barriers to creating safe routes to play.

Deliverables: 2-3 Active Access analytical maps, Qualitative & Quantitative Analysis, Policy Review Report.



3. CREATE A BLUEPRINT FOR SAFE ROUTES TO PLAY

The *Blueprint for Safe Routes to Play* will be a succinct compilation of the visioning, data gathering and active access analysis, along with implementation strategies, relevant cost estimates, and funding resources. We include an educational component which trains community leaders in facilitative leadership and hosting conversations that are designed to inspire collaboration and resource sharing.

Deliverables: A print ready digital PDF of the Blueprint, (22" x 17", color), training for two community leaders at the Interaction Institute for Social Change, Boston, MA.





OPTIONAL SERVICES

By engaging members of our extended leadership team with specific skills and expertise, GP RED can assist with:

- Design and production of promotional materials
- Grant writing
- Detailed route design and construction management
- Health Impact Assessments
- Executive coaching
- Walkability & bikeability audits
- Healthy Communities Surveillance & Management Toolkit

SAFE ROUTES TO PLAY PARTNERS: International Mountain Bicycling Association, Safe Routes To School National Partnership, GP RED Healthy Communities Research Group.



Is Your Organization Ready for *Safe Routes to Play*?

In a 2012 study by the Coalitions and Networks for Active Living (CANAL) Research Team (University of Colorado School of Public Health), 59 active living collaboratives from around the country were studied to determine what characteristics result in achieving greater policy and environmental change. Successful coalitions:

- Reported more years together as a group
- Secured more financial resources
- Partnered with planners more frequently
- Used social marketing and social media



How to Become Part of the Solution

By participating as a ***Safe Routes to Play Pilot Community***, you can:

- Promote awareness of the importance of developing the built environment based on a child-centered, active transportation model.
- Develop ***Safe Routes to Play*** as an accepted practice in community trails, transportation, recreation facility and park planning initiatives.
- Enhance partnerships and resource sharing to further the *Safe Routes to Play* objectives of creating ***safe, non-motorized pathways to parks, play spaces, and natural areas in your community.***

Safe Routes to Play Investment: \$40,000 - \$100,000 depending on community size

GP RED's Safe Routes to Play Project Team is prepared to guide your community through the pilot phase, developing a values-based approach that complements existing strategies for healthy community design. Together we will refine the process to advance this initiative on a national scale. Contact Cindy Heath, Executive Director, 303-501-7697, cindyh@gpred.org for more information on becoming a pilot community.