

Plug in to Nature



Project Team:



DESIGN
CONCEPTS



Executive Summary

Many community leaders are concerned about the future of their communities and especially the connections that children have to nature. The goal of the **Pueblo Plug in to Nature** study was to reveal gaps and barriers that inhibited 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 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 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.



Introduction

Societal trends including obesity, chronic disease, and behavioral issues are negatively impacting adults and children in communities across the United States. Community leaders are increasingly concerned about the future of children and their communities. 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 (Design Workshop, 2012).

The **Pueblo Plug in to Nature** study was 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 had with the outdoors and nature. The project was funded by Great Outdoors Colorado (GOCO). 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 to explore how to improve access to nature and the outdoors.

Leaders in Pueblo were concerned about the gap between the significant public investments in outdoor opportunities and overall health, especially among lower income residents. Progress to improve health was hampered by the absence of an overarching strategy and coordinated effort to address physical activity and its important relationship to health. The leaders and collaborators believed that the health of residents could be improved by identifying and lowering community barriers to physical activity and access to nature.

The goal of the **Pueblo Plug in to Nature** study was to reveal gaps and barriers that inhibited 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 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

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 years-old age group. Young people in this age group

generally start to make personal decisions, shift from independent to social activities, increase their reliance on friends/peers, and seek independence from parent supervision.

A photograph interpretation exercise and a written survey were identified as the primary means of engaging the students. Efforts were also made to gather feedback from parents to further inform the findings. The project focused on three targeted lower income areas and the 10-14 year-old public middle schoolers in each of the areas. The foundation for the project came from previous research identifying opportunities and barriers conducted by [Children and Nature Network](#), [National Wildlife Federation](#), [North American Association for Environmental Education](#), [Outdoor Industry Association](#), and [Nature Conservancy](#).

Methods

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, had completed a physical asset inventory and level of service analysis as part of the 2008 Pueblo Parks and Recreation Assessment and Implementation Plan. This plan provided a foundation for understanding access and barriers to physical outdoor recreation opportunities in Pueblo. Additional analysis conducted for this study included reviewing existing Geographic Information System (GIS) data with City of Pueblo staff to determine accessible public lands and lands suitable for future access as well as to examine the location of low-moderate income target sub-areas and the 10-14 year-old age bracket. In addition, data on alternative providers and previous identified partners were identified and reviewed to identify grant possibilities and potential support.

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, 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 were identified, which will be discussed in more detail later in this brief.

Findings

Selected Findings for GIS Review, Inventory, and Analysis of Nature Based Opportunities

To begin this project, data were examined and several assumptions guided the analysis of nature based opportunities:

- Although 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 and the fewest acres of park land and lowest ratio of park land per person within its geographic boundary compared to any of the sub-areas analyzed.
- School lands provide important additional outdoor recreation opportunities.
- Although overall level of service for most of the city may be above the given threshold, a majority of these opportunities required vehicle access for many citizens, which limited access for the target middle school aged youth.
- Since the existing trail system was located along the edges of significant physical barriers, walkable access from many neighborhoods was more than 1/3 of a mile or a 10 minute walk, resulting in limited access.

Findings from the Collection and Review of Organizations Who Manage and Operate City-owned Outdoor Facilities, Nature Programs, and other Alternative Programs

The City of Pueblo owns three significant facilities that are contracted to local non-profit organizations including the Pueblo Zoo, Pueblo Mountain Park, and the Nature and Raptor Center of Pueblo. The city provides approximately \$750,000 annually to these organizations with over 50% of the operating and maintenance expenses provided by the organizations themselves. These outdoor facilities and natural areas were located outside of the low-moderate income designated areas and were primarily accessible by auto.

An alternative provider in Pueblo included the Boys and Girls Club of Pueblo County, which had two locations in lower income areas of the city. The Pueblo County Extension Office also offers 4-H programs for youth with activities conducted in facilities within the Colorado State Fairgrounds located in one of the target areas.

Findings from the Facilitation and Analysis of Community Engagement

Youth engagement activities were facilitated in school settings to find out how Pueblo youth felt about nature and the outdoors. A total of 46 students participated in two sessions that included 27 sixth-grade students at Pueblo Academy of Arts, followed by 19 1st-5th 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 survey.

These exercises were intended to gather information about the activities and resources Pueblo youth used and enjoyed, background information on their health and wellness practices, and barriers that inhibited them from participating in outdoor and nature activities.

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. The students were asked to sort the photographs into three different piles and then look at the first two piles representing nature and the outdoors. The students were asked to list reasons they felt they had never done some of the activities shown in the photos. The final input gathered in the exercise was a list from each student of other activities they liked that were not shown in any of the photos provided.

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

Among the activities they identified were: basketball, soccer, splashing, tree climbing, bike riding, archery, and hiking. Fishing emerged as the most common participatory activity, perhaps due to the many opportunities to fish in and around the City of Pueblo.

Activities with the least participation included: passive nature pursuits (e.g., birdwatching, exploring a mossy stone), activities requiring special resources or access to specific facilities (e.g., snowboarding, dog park, outdoor classroom, water tubing behind a powerboat, horseback riding), Boy Scouts, and climbing on a custom built playground structure.

The younger students appeared to be 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.

This map-based survey Platform, LocalData, was used to create maps and surveys divided into categories. The Neighborhood Mapping exercise focused on local places in the categories of a fun place that I go, a fun place I don't go but want to, and a problem place. The Regional Mapping exercise focused on local places by asking about a place you LIKE to go and a place you WANT to go.

Surveys were used to collect data at two Pueblo schools. The tools were demonstrated to and used by the students with the PlaceMatters SmartTable, an interactive tool in which the screen was projected down on to a table top and manipulated with an infrared pen as a giant touch screen. It was easy for individuals or groups to see, navigate, and input map data.

The Neighborhood Mapping Exercise indicated that most students wanted to map places they liked and went to frequently, and that most students used a form of active transportation to get to places including walking, running, skateboarding, and riding a scooter or bike. In addition, most students said that they liked to have fun outside with their friends.

The Regional Mapping Exercise indicated that most students got to school in a car. Most of the students also indicated that they got to regional places by either car or walking/running. When asked why they liked to go to the place identified, most answered that it was either fun or convenient.

Although the Neighborhood & Regional SmartTable Mapping worked fairly well, several improvements were suggested for future administrators to consider. For example, the mapping interface could be 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. Further, leaders with local knowledge could help students locate places more easily. More activities could be implemented such as asking students to draw a route from their home or school to some place they like to go and identify barriers and opportunities. Other improvements might include involving parents and families in data collection, and engaging in a walking audit to nearby parks or public spaces to discuss barriers and opportunities. A short survey also was incorporated into the student

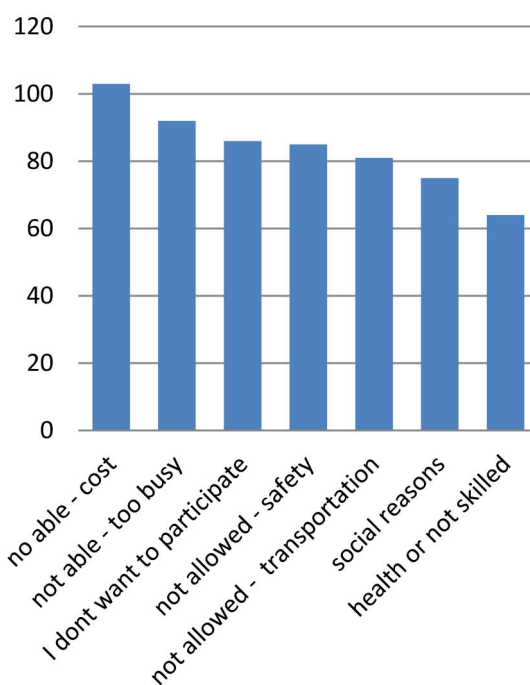
engagement activities. The survey focused on how physical activity was incorporated into daily activities, the access, and participation in existing nature and outdoors activities available in Pueblo. A similar parent survey was sent home with all participating students with a return rate of 81%.

The survey showed that outdoor activity ranked third for both students and parents. Passive *hanging out at home watching TV, hanging out at home, and playing video games* held the first, second, and fourth positions, respectively. *Hanging out at park and organized sports* ranked 5th and 6th for both students and parents.

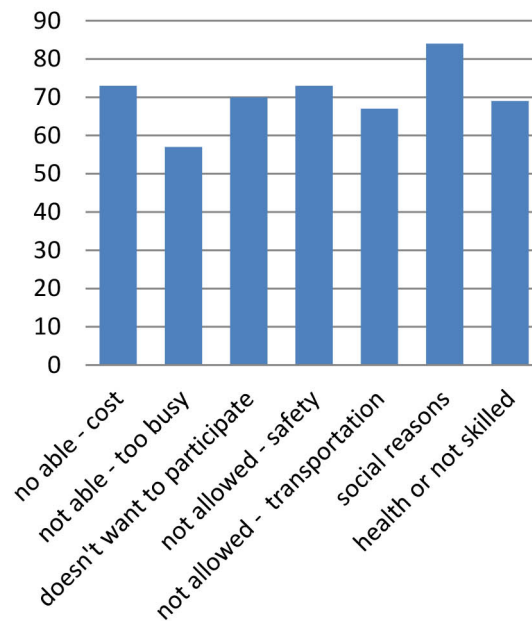
Generally, students and parents evenly rated all reasons for not participating in out-of-school activities. Students cited "cost" and "too busy" as the primary reasons they did not participate in out-of-school activities.

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.

Why do you not participate in out-of-school activities?



Why does your student not participate in out-of-school activities?



The survey asked students and parents at what age they last participated in different activities. The data collected showed:

- Participation in organized outdoor nature education and tending a garden dropped off significantly in middle school age students.
- Participation in active sports and play and wildlife and wilderness recreation dropped off in middle school age students.
- Participation in outdoor community events remained about the same for middle school age students.
- Participation in motorized outdoor sports and visiting neighborhood parks increased 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 most frequent responses showed camping, fishing, and swimming.

Summary of the Findings

Based on the student engagement and input and GIS analysis, several key findings guided development of the recommendations.

- Students associated social interactions and being with friends as a key element for spending time outdoors.
- Students expressed interest in both consequential activities (win/loss) and non-consequential activities. The city provided 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, limited opportunities exist for students interested in non-consequential activities.
- Key barriers to participation in outdoor activities identified included perceived safety, lack of interest, and lack of knowledge and skill.
- 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.

Recommendations

The five recommendations in this project reflected the data collected and recognized 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 focused on the three **Pueblo Plug in to Nature** study sub-areas and covered several subjects.

1. Establish a Student Outdoor Council at each of the three target middle schools

Based on the findings of this project, it was 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.

2. 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 could include outdoor and nature service providers working collaboratively with key multi-sector leaders to advocate for prioritization and implementation of study recommendations, support outdoor and nature service and facility providers' efforts in the same, and find funds to implement the recommendations.

3. Initiate Pilot Programs to Fill Gaps

The following pilot programs focus on addressing the needs and interest of students currently "falling through the cracks" who may not participate in organized sports programs. The ideas can be used as ideas to spur programs as prototypes or implemented directly.

- a. **Walkshops or other Walking, Biking, or Park Audit Programs.** Walkshops are walking workshops that can 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.
- b. **After-School Outdoor/Nature Based Program.** These programs could be based from Outdoor

Adventures, an after-school program developed at Pueblo School for Arts and Sciences. These groups could meet to integrate off campus outdoor trips during the spring. (Learn more by contacting Keli Coffey, Technology Instructor at Pueblo School for Arts and Sciences, 719-404-2680).

- c. **Safe Routes to Play:** As 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. (Learn more at www.gpred.org).
- d. **Kids in Gear** could be a pilot program based on "Girls in Gear," that includes an eight-week bicycle training and empowerment program for middle school students. The goal would be to build confidence, self-esteem, and self-reliance, while showing children that they have a voice in how their streets and neighborhoods are designed and maintained. The program could focus on bike safety, bike mechanics, nutrition education, urban design, and public speaking. (Learn more at <http://www.considerbiking.org> then search Girls in Gear).
- e. **Learning Landscapes** for Middle Schools is a program of the University of Colorado- Denver that helps schools design outdoor education, student gardens, and social spaces to encourage exploration in nature and the outdoors, and improve accessibility to outdoor sites for middle school age students. This program could be implemented in Pueblo. (Learn more from Lois Brink, Executive Director, 303-724-9186, Lois.brink@ucdenver.edu , <http://www.learninglandscapes.org/>).
- f. **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.

4. Promote an Outdoor Program Providers Clearinghouse

One of the key recommendations identified through meetings with the **Pueblo Plug in to Nature** Advisory Committee was improving coordination between and communications about the local outdoor recreation and education programming and providers in the Pueblo area. This concern could be addressed by establishing a community clearinghouse. The purpose would be to re-establish the PNREEC group as the coordinating entity for information on outdoor and nature activities and education. 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, and create a calendar of events.

5. Develop Governmental Support and Financial Strategies

The City of Pueblo can 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.

One example of a 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. A part of SMT is the Youth Activity and Nutrition Survey (YANS) 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 do during time spent out of school that might be missing in their lives to help them thrive. (Learn more at www.gpred.org).

Conclusions Regarding the Future

The formation of the Advisory Committee initiated a reactivation of the PNREEC group and also engaged new partners to maximize shared visions and potential. All entities will have a role in implementing and funding the recommendations of the **Pueblo Plug in to Nature** study. The city will continue to seek funding (e.g., 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 Pueblo **Plug in to Nature** study.

*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.

References

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

Additional Notes

This Research Brief is a summary of the report prepared for Pueblo in November 2015. It can be accessed at: <http://www.gpred.org/wp-content/uploads/2016/02/Pueblo-Plug-in-to-Nature-FINAL-12-3-15.pdf>

GP Board member, Karla Henderson, PhD., summarized this Research Brief with assistance from GP Board Executive Director, Cindy Heath



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