



Plug in to Nature

Finding Connections to the Outdoors
for Youth and Families in Larimer County

Larimer County, Colorado
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Contents

Chapter 1.	PROJECT BACKGROUND, GOALS & PROCESS.....	1
Chapter 2.	RESIDENT BELIEFS & DESIRES	9
Chapter 3.	BARRIERS BETWEEN YOUTH, FAMILIES & NATURE.....	19
Chapter 4.	NATURE & OUTDOOR PROGRAMS	25
Chapter 5.	NATURE & OUTDOOR PLACES & ACTIVITIES	33
Chapter 6.	ACCESS TO LANDS PROVIDING NATURE & OUTDOOR OPPORTUNITIES	43
Chapter 7.	LANDS SUITABLE FOR PARKS & OPEN SPACE	65
Chapter 8.	RECOMMENDATIONS	81

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Project Overview

Plug in to Nature is a pilot project developed to determine effective ways to connect the families and children of Larimer County with nature and the outdoors. The study confirmed that families value time in nature and desire to have their children spend more time in nature than they currently experience. Conversations with families and youth revealed current levels of connection are overall high. The primary impediments to Larimer County youth and families' having a more significant connection to nature were discovered to be time, distance, and cost.

The project includes three major components: program and facilities inventories, analyses of gaps in both access to the outdoors and outdoor programming, and an analysis of the challenges inherent in engaging children in nature. Data collected and analyzed reveals the conditions and locations to target for improvements. The analysis accommodates the diverse communities and geography found throughout Larimer County. In order to account for all perspectives and needs, the team utilized a variety of methods to gather public opinion.

This study includes a broad definition of parks and open space that is inclusive of developed community parks, National, State, and County parks, conservation areas and other land that has been designated for protection or public use.

These park and open space lands vary greatly, from natural areas with virtually no facilities to recreation parks that provide outdoor based experiences.

Chapters 1 to 7 explain the project process, findings, and conclusions to the analysis.

The following generalized recommendations summarize the key findings provided in Chapter 8:

- create opportunities to encourage youth's nature connections through schools and early childhood programs;
- strengthen outdoor programs with strategic partnerships and fill outdoor program gaps such as programs for young children and programs for the entire family;
- increase awareness of parks, open space, outdoor activities, and outdoor programs;
- enhance existing parks and open space management and facilities to increase use;
- plan future land conservation with thoughtfulness for public accessibility;
- structure neighborhoods so that residents live in close proximity to natural settings;
- improve trail connectivity for accessing parks and open space;
- include natural places for education, exploration, and play in developed parks and school grounds;

- incorporate parks and open space as infill in existing neighborhoods; and
- preserve lands with high value natural qualities identified in Chapter 7 prior to development and complete acquisition in advance of growth.

"Nature-deficit disorder is not an official diagnosis but a way of viewing the problem, and describes the human costs of alienation from nature, among them: diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses. The disorder can be detected in individuals, families, and communities."

- Richard Louv, Last Child in the Woods



1

Project Background, Goals, & Process

Project Background, Goals, & Purpose

Nature Deficit and the Concept of Connecting to Nature

Nationwide, citizens and organizations are concerned about the trend in which children are disconnected with the outdoors. Current research confirms this disconnect and demonstrates that kids that interact regularly in the out-of-doors are more mentally acute, physically healthy, socially adept, and more likely to maintain a positive disposition toward the environment and natural resources later in life. Environmental stewardship and citizen health and well-being are both dependent upon regular interaction with nature.

Significant studies suggest that other societal trends -- obesity, chronic disease, and behavioral issues -- can be addressed by fostering healthy emotional, social and intellectual contact with nature. Connections to nature and the outdoors develop through a combination of environmental knowledge (literacy) and affinity for our environment. Outdoor experiences encourage an interest in and awareness of the importance of conserving open lands and natural resources. There is concern that if new generations are raised without significant experiences in the outdoors, later in their lives they may not give priority to conserving land and natural resources or stewarding what has been conserved.



backyard



nature playground



wilderness

Youth can enjoy the benefits that nature provides in an array of places ranging from their backyard to wilderness.

Throughout the study, parents, educators, and youth were asked to express their concept of “nature”. Because the concept is truly subjective, the responses included a spectrum of outdoor places ranging from a child’s backyard to wilderness experiences.

Places that encourage youth and families to connect with nature are not necessarily those with the most impressive wildlife, ecological, or landscape elements. Rather, they may be places that allow for hands-on contact, exploration, contemplation, play, and education. A neighborhood park may be a child’s first introduction to nature and a gateway to future outdoor experiences.

“In the end, we will conserve only what we love; we will love only what we understand; and we will understand only what we are taught.”

- Senegalese Conservationist Baba Dioum

Prior Research and Studies on Connections to Nature

The team completed a comprehensive literature review to inform the overall direction of the study and understanding about children's connection to nature. The research, included a review of more than 400 articles, reports, book chapters and other documents, and was organized into four categories: a) connection to nature, b) benefits of nature-based experiences, c) barriers, and d) current trends and issues. Appendix A contains a summary of the literature review.

Relevant and important trends from the literature review that influenced this project include the following ideas:

- The benefits of experiences in nature and the outdoors are well-documented. Most of the research is focused on facilitated or organized programs, such as adventure or environmental education programs. These benefits include knowledge, skills, self-confidence, risk-assessment and management, environmental stewardship, school achievement, and physical and emotional well-being.
- While an abundance of research exists about recreation behavior, a discussion of barriers to participation in nature-specific activities is a relatively new area of focus and investigation. Researchers are now

beginning to address the need for informal and unstructured time in nature.

- Parents and caregivers generally recognize the value of spending time in nature and the outdoors.
- Concern for safety has resulted in restrictions on the radius children are allowed to venture from home when exploring their environment. This radius is much smaller than that experienced by grandparents and parents.
- Amongst all income levels and races, interest in spending time in nature and the outdoors is high. In spite of high levels of interest, the actual amount of time spent in the out-of-doors is low among some groups due to a variety of barriers.
- A child that experiences nature with an adult mentor is most likely to express a commitment to environmental stewardship as an adult.

The project evaluated these general findings to determine their applicability to Larimer County. The findings from the Plug in to Nature study are similar to the literature research, with the exception of relatively low safety concerns and County demographics were found not to be highly related to youth and parent levels of nature connections.

"According to recent research, kids are spending 50% less time outdoors than they did 10 years ago... During the same decade, per capita visits to national parks have declined. Couple these trends with increasing levels of child obesity, decreasing time of outdoor play in grade schools, and increasing need for support of public lands, and it's clear why reduced time spent outdoors is a national concern. "

*- L.K. Harmon
Parks & Recreation June 2008
"Get out and stay out"*

Pilot Project Area

In its 2010 strategic planning process, Great Outdoors Colorado (GOCO) consistently heard from the public that there is a need for GOCO to “increase participation by youth and families in all areas of GOCO’s mission.” GOCO selected Larimer County to complete this pilot project in an effort to determine better ways to connect youth and families to the outdoors by better understanding the barriers and current facility and program offerings across the County.

The Plug in to Nature project will serve as a template for similar studies across the State of Colorado. GOCO chose to start with Larimer County for the following reasons:

1. Extensive outdoor and nature education programs are offered by municipalities, state agencies and non-profit organizations.
2. Efforts to address children and nature have been undertaken, but a comprehensive analysis has not been completed.
3. Larimer County contains diverse communities including rural areas, small towns, and larger urban population centers. It contains a spectrum of landscape types from mountains to prairies. It also contains a mix of private and public lands.

As a pilot project, the approach and process includes transferable tools that can assist other Colorado communities in measuring success.

Larimer County is the sixth most populated county in Colorado. It includes the incorporated communities of Fort Collins, Loveland, Estes Park, Timnath, Wellington, and portions of Windsor, Berthoud, and Johnstown. Twenty-one smaller unincorporated communities exist within the County.

The County is comprised of rich farmland, vast stretches of ranch lands, forests and high mountain peaks, and many unique resources including the Poudre and Big Thompson Rivers, reservoirs and lakes, wildlife habitat, and scenic vistas.

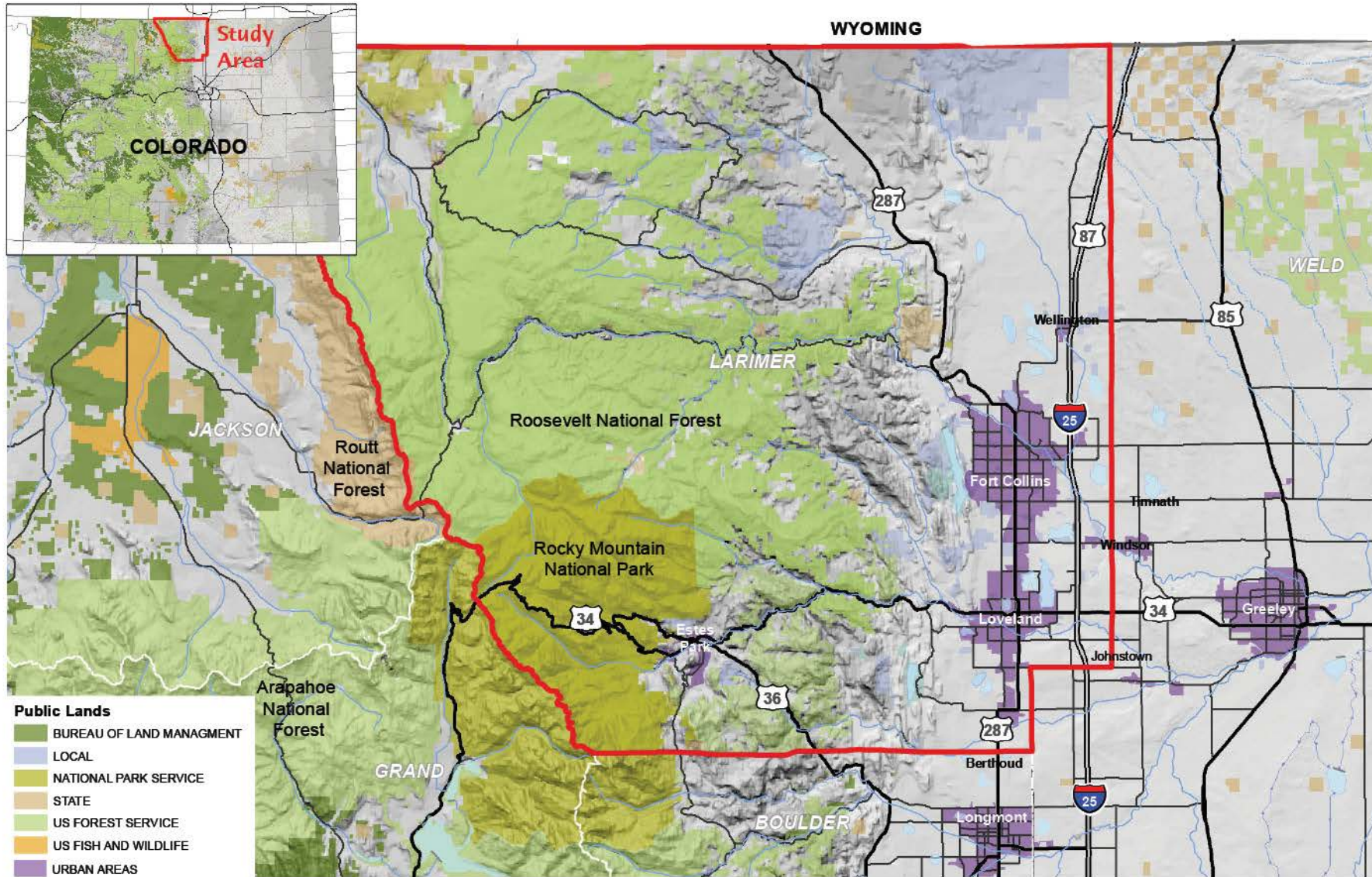
Over 50 percent of the land in Larimer County is publicly owned. The majority of the publicly owned lands are either within Roosevelt National Forest or Rocky Mountain National Park. In addition, Colorado Parks and Wildlife Areas, Larimer County Parks and municipal parks provide a wide spectrum of recreational opportunities.

With plentiful public land, a university, and a culture defined by “the great outdoors,” there are many opportunities for youth and families to experience nature in Larimer County.



The beauty of the natural landscape is a major draw for people moving to Larimer County.

Map 1: Larimer County Context



Current Efforts within Larimer County

Over four percent of the publicly owned lands are managed by the Larimer County Department of Natural Resources (LCNR). LCNR manages county-owned lands and conservation easements for significant natural resource, conservation, recreation, cultural, and scenic values. In 1995, response to rapid growth trends included voter approval of a one-quarter percent sales and use tax to help preserve open space and valued natural resources. Currently, there are over 43,000 acres of open lands in Larimer County's system, along with 9,000 acres of park lands and over 83 miles of multi-use trail.

To date, the County has focused much of its efforts on protecting areas with significant natural, scenic, historic, and archaeological resources balanced with areas of critical wildlife habitat. This project focuses specifically on making nature more accessible to youth and families.

The Plug in to Nature project provides educators - including teachers, child care providers, and environmental educators - with important information and analysis prior to the release of Colorado's Environmental Literacy Plan. The Environmental Literacy Plan is a proposal by the Colorado Department of Education, working with the Colorado Alliance for Environmental Education and the Colorado Department of Natural Resources, to create a statewide environmental literacy plan for pre K-12 learners. The plan encourages and provides funding for environmental education and literacy. The intent is to create programs that educate all Colorado kids on environmental and outdoor issues by taking them outside for hands-on experiences. The plan is under development at the time of this study.



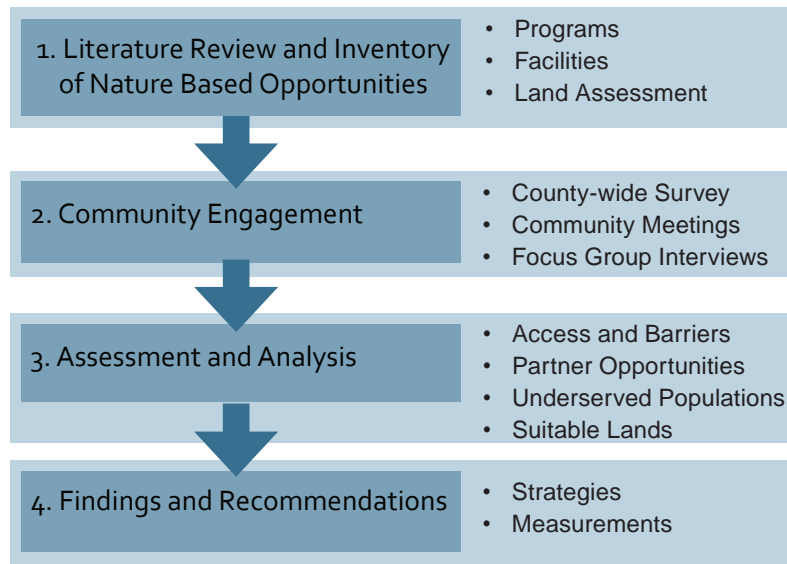
The Devil's Backbone Open Space is a popular place for outdoor recreation and enjoying unique geological formations.

Project Approach

What are the perceived and actual inhibitors to youth and families interacting with nature? The project specifically addresses this question, taking into account geographic differences and community desires.

The study includes recommendations for potential programs, facilities, partnerships, and target areas for conserving land. Using the values articulated by the public, the results inform future funding and prioritization of projects to fill identified gaps and eliminate barriers. The report includes strategies focused on changes that encourage future connections to nature.

The steps utilized in this study include:



Among the topics addressed by this study, these are the key questions identified:

1. How satisfied are Larimer County residents with their connections to nature and the outdoors?
2. What is the current level of youth and family connection to nature in the County, and what barriers exist to discourage interaction?
3. Do current facilities and programs in the region meet the needs of families, schools, and youth program providers?
4. Are the right types of open lands and facilities available and accessible to youth and families?
5. Are there people within the community that have less of a connection to nature than others and could be identified as underserved?
6. How can existing efforts to connect children and families to nature be improved through new partnerships and coordination between organizations?
7. How can we better prepare to provide connections to nature for future residents as development expands?

2



Resident Beliefs & Desires

Resident Beliefs & Desires

The Public Planning Process

Public participation was an important part of the entire study. The team used a variety of engagement methods and meetings to gain representation from various communities, age groups, income levels, minority races, and stakeholders. The feedback from these meetings was critical in analyzing citizens' view of the role of nature in their lives. Citizens were asked to provide input via the following methods:

1. County-wide Survey
2. Community Meetings
3. Interviews Focusing on Youth and Underrepresented Groups
4. Outdoor and Nature Program Provider Meeting
5. Youth/Family Program Provider Meetings
6. Project Advisory Group Meetings

See Appendix sections B, E and F for detailed accounts of the public input.



The community meetings allowed for discussion and expression of stories about residents' experiences with their children.

"I wish we had more time to be outside."

"As a working, single mom, I probably haven't provided enough opportunities for my son to be in nature at a critical time of his life."

"Children MUST be exposed to nature. They must understand its importance to them as individuals, to us as a culture, and to all of us as a species of this planet."

"When my children are in nature, they do not need toys... nature provides entertainment for them."

"My eight month old loves to be outside all the time!"

" I love grassroots organizations like the Fort Collins Nature Tribe and Loveland Naturally Parenting."

"Children in our neighborhood could use a natural park with trails and maybe educational activities."

"We live in the Red Feather area. Being in nature is part of our family's daily life, for which we are very grateful."

"There are a lot of parks and open spaces in Larimer Co, and that's great. However, I would like to see some more WILD spaces available - bushes and trees and streams where the kids could run and hide and climb and build little forts and fairy houses. "

- Anonymous County-wide Survey comments

1. County-wide Survey

The county-wide survey yielded 530 survey responses. See Appendix B for further information about the survey methods, demographic representation, geographic spread, and results.

Survey results suggest that Larimer County residents have a strong connection to nature. Figure 1 illustrates the high levels of connection to nature, segmenting the results by geographic location, race, and age. Parents generally agree that the benefits for children of being in nature far outweigh the risks (Figure 2).

87% of survey respondents reported their child's nature connection as very high.

Figure 1: Larimer County Residents' Level of Connection to Nature

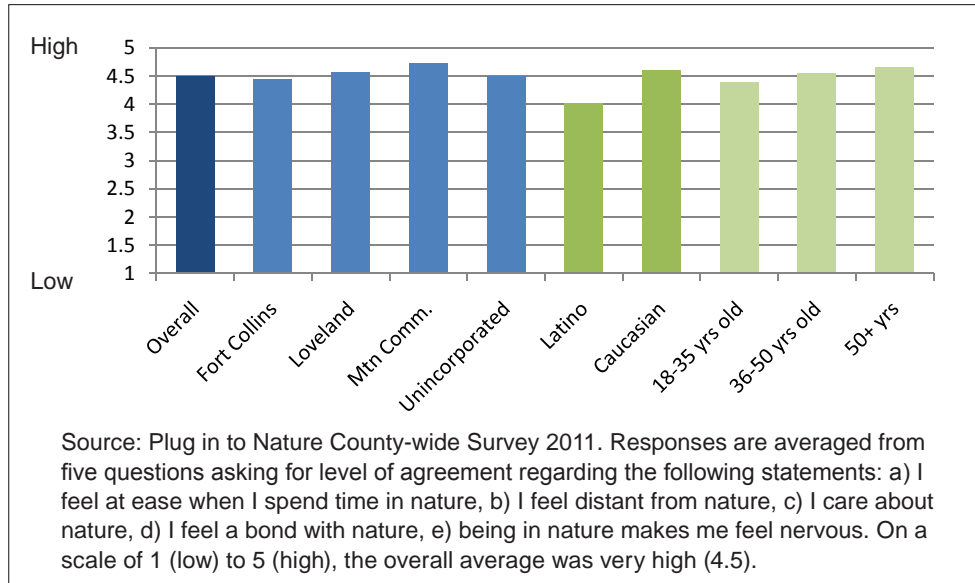
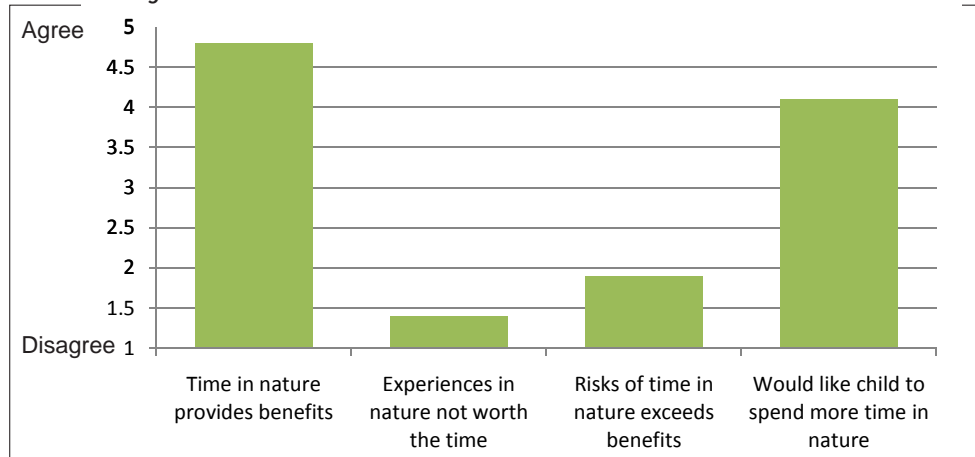


Figure 2: Benefits and Risks of Children's Time in Nature



Organized outdoor program participation also ranks high among residents. Approximately half of the respondents had someone in their household who took part in an organized program in the past year.

A majority of survey respondents expressed a desire to have their children spend more time in nature, suggesting that efforts such as Plug in to Nature address a concern of many parents.

79% of respondents want their children to spend more time in nature than they currently do.

Parents prefer a variety of settings for their families to experience nature and the outdoors. More than 90 percent of respondents thought mountains, a private yard, regional, state, or National park, trails, rivers or streams, or local parks to be very or somewhat important places to be in nature or the outdoors.

Time, location, and cost are the three greatest barriers to families deciding to spend time outdoors. See Chapter 3 for more information about barriers.

Figure 3: Activity Participation

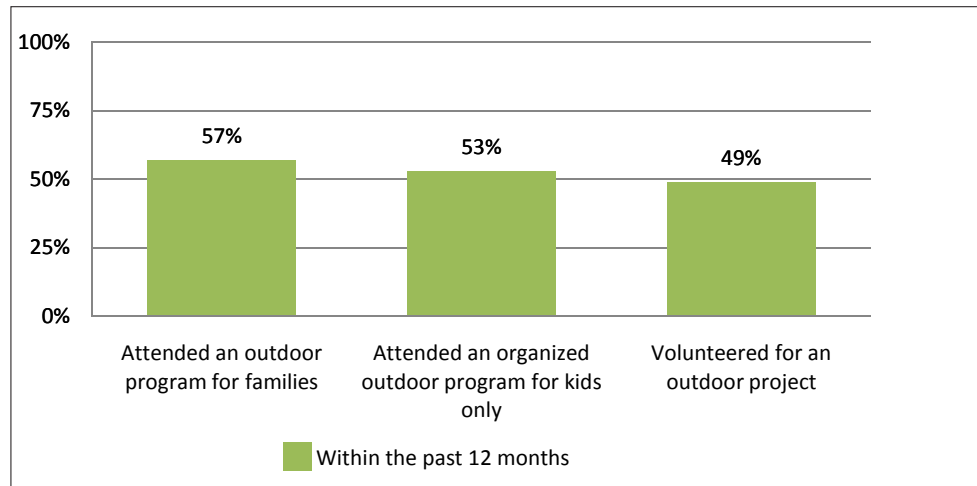
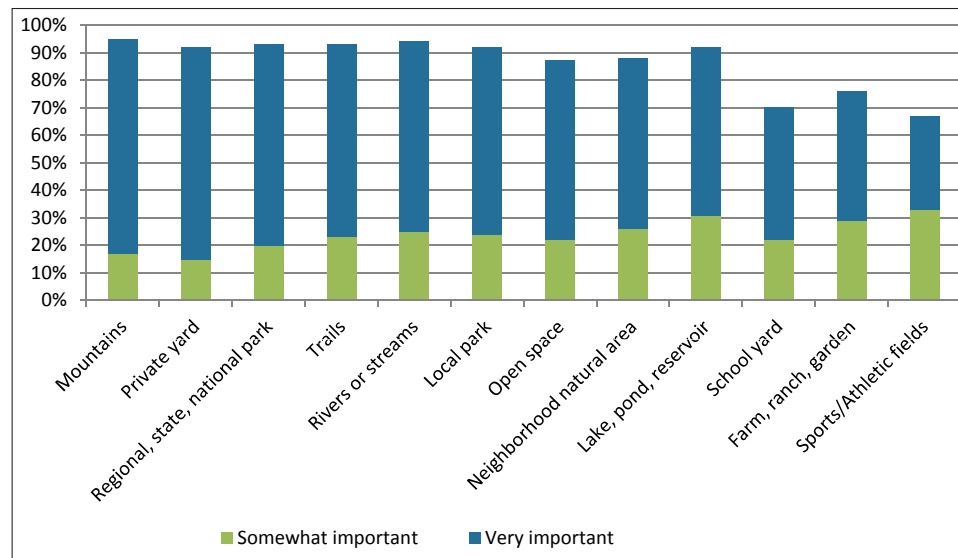


Figure 4: Importance of These Settings as a Place for Families to be in Nature/Outdoors



2. Community Meetings

The team hosted six community meetings in different locations throughout the County at a variety of times. 51 participants answered questions using keypad polling, a technique that engages users with a real-time response. It is important to note the County-wide Survey's high response rate provides an overall picture of the County population's opinions. The intent of the Community Meetings was to serve as a forum to gather additional information about specific opportunities and recommendations. Feedback from the meetings may not be representative of the County population as a whole.



The use of keypad polling technology allowed for instant feedback on a wide-range of questions.

The Community Meetings revealed a generally high satisfaction level with the natural qualities and outdoor facilities in each community. The top reasons for dissatisfaction include:

- insufficient places to partake in the out-of-doors and nature;
- there are not enough trails; or
- the developed parks do not contain enough natural qualities.

Only four percent of respondents' children do not care to visit natural places or outdoor facilities.

Parents indicated the following activities prevent their children from spending time outdoors (listed in order of most selected): playing indoors, electronics, homework, extracurricular activities, housework/chores, and organized sports/athletic practices.

Meeting participants were aware of outdoor places and programs. They were also interested in expanding their knowledge, expressing a need to find more information about activities and places to take their kids.

55% of parents said that a primary focus for connecting families and youth to nature should be increasing awareness of programs and places to enjoy the outdoors.

To encourage connections to nature, parents wanted to focus on providing parks, open space, and outdoor facilities in the following locations:

- areas that have the best natural features to preserve and enhance;
- residential areas with the highest density of children;
- locations without parks and open space within a five minute (quarter mile) walk from schools;
- areas that are projected to have more homes in the next 25 years; and
- areas within a five minute walk from in-town residences.

The Community Meetings also included a mapping exercise that encouraged attendees to identify places they currently visit, and the programs or types of new activities they would like to have available throughout the County. They also pinpointed existing access or physical barriers to connecting with nature. (See Map 2 for a County-wide map and Appendix E for detailed community maps).

The mapping activity revealed the following information:

- Trail and sidewalk connections close to homes are important both for access to nature and to safely support activities like biking, walking, and running.
- More connectivity of parks and open space is desirable.
- Major roadways, railroad tracks, the airport, and other major infrastructure are impediments for people wanting to walk to these locations.
- Short missing links in trails and bike routes have major implications for people accessing outdoor places. The completion of trail and sidewalk networks is important to people.

- Additional activities such as bird watching, hiking, and swimming are desirable at existing parks and open space.
- Outdoor recreation opportunities should be provided on lands within existing neighborhoods or future growth areas.
- While many people appreciate the natural quality of more distant places such as regional and state park systems, there is also an importance placed on natural environments located close to neighborhoods that are convenient and play a role in child development.

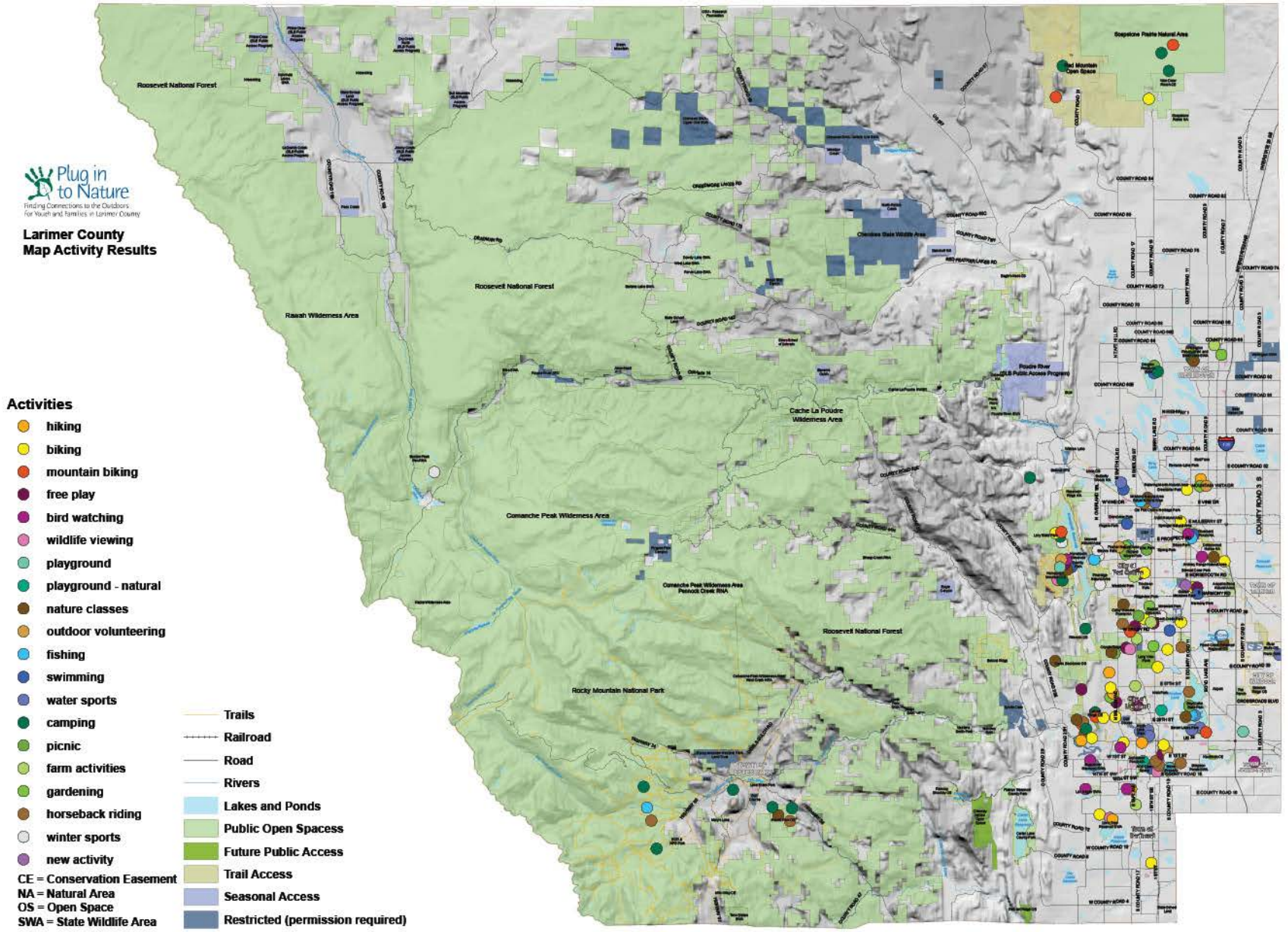


Meeting participants placed stickers on maps to indicate where they would like their children to take part in outdoor activities.



The map activity presented participants with 21 activity choices that they placed on various locations within their city or throughout the county. The activities most frequently desired were bicycling, camping in areas close to urban areas, and nature classes.

Map 2: Community Meeting Map Results: Desired Activities - Larimer County



3. Interviews Focusing on Youth and Underrepresented Groups

Seventy-one people participated in interviews focused on youth and parents. Participants in these underrepresented groups include people from a wide diversity of socio-economic, cultural, and geographic areas. Participants included:

- working parents
- high school youth
- parents of children ranging from pre-kindergarten to six years of age
- parents and preschool children ages 4-6
- parents of children with developmental and physical disabilities
- parents living in rural or mountain communities

Common themes that emerged from interviews with underrepresented groups included:

- The most common outdoor activities that youth and families engage in are biking, hiking, unstructured nature play, and fishing.
- Both youth and parents expressed a strong interest in places that encourage exploration.
- Parents identified water, trees, and rocks the most desirable elements for nature play areas.
- Additional desired activities included winter play (sledding and ice skating), age

and ability-specific programming, and introductory level programs.

- Land management rules, access, and fees are confusing to many people.
- Many parents expressed a desire to connect trails and eliminate the need for transporting children and equipment via automobile.
- All groups expressed a need for a centralized information source that provides specifics on trail accessibility, age and skill appropriateness, trail closure, and fees. Guidebooks and online resources are also desirable.
- High school students suggested implementing nature activities with a strong social element. This would include festivals, group hikes and activities, and student-led clubs.
- Parents of children with disabilities expressed a desire for more nature based programming for children and young adults with disabilities and their families, such as fishing and hiking programs.
- Items that did NOT seem to create significant barriers with any groups of participants included technology, lack of desire, and fear.

Latino participants mentioned that language is a possible barrier and requested more interpretation and signage in Spanish. They were interested in having more areas that could accommodate picnics and large, multi-generational group gatherings that also provide access to fishing, hiking, and other nature activities.



4. Outdoor and Nature Program Provider Meeting

Twenty-five individuals participated in a meeting contributing ideas to the program recommendations. Representatives from nearly all programs available in the County contributed to the discussion, such as the County and City outdoor programs, US Forest Service, Rocky Mountain National Park, Colorado State University, Educo Leadership Adventures, Loveland Youth Gardeners, Rocky Mountain Bird Observatory, and more. The suggestions with the most support and highest rating were:

- Coordinate multi-agency marketing campaigns and awareness initiatives.
- Collaborate with teachers and schools on an eco-literacy curriculum. Support teacher training.
- Recalibrate existing programs done in other seasons to make them appropriate for winter. This could include a large public winter event.
- Conduct programs for Latino families and advertise through communications with key community members.
- Develop an initiative to address logistics for the creation of “wild spaces”, school gardens, and green/nature playgrounds. Lend expertise to address regulations, policies, and processes.

5. Youth/Family Program Provider Meetings

School teachers and administrators, early childhood providers, and youth/family service providers participated in a series of five focus group sessions. Youth/Family Program Providers attending these meetings universally recognize the benefits of connecting children and families with nature. However, these providers feel like they are doing all they currently can, given the perceived barriers. The barriers stem from three general sources:

- organizational culture, policies, regulations, and traditional practices;
- awareness of external opportunities and resources available; and
- a lack of funding and staff.

Some Youth/Family Program Providers are aware of successful efforts to engage participants with nature such as scholarships to Educo Leadership Adventure camps and Happy Heart Farm events. They suggest sharing information about these efforts with other Youth/Family Program Providers. Also, they believe funding and staff should be applied to expand successful efforts.

Partnerships between Outdoor Program Providers and Youth/Family Program Providers are seen as the most effective way to maximize limited resources. There is potential for Outdoor and Nature Program Providers to lend technical expertise and staff support to existing youth/family programs.

6. Project Advisory Group Meetings

An 18-member Advisory Group provided input at four key milestones to direct the project and provide outreach to key constituents. The Advisory Group included representatives from:

- Land-use Planning Staff;
- Recreation/Parks Department;
- Open Space/Natural Resources Staff;
- Environmental Education Program Providers;
- School districts;
- Early Childhood Educators;
- Youth organizations with outdoor missions;
- Youth program coordinators;
- Major employers in Larimer County; and
- Outdoor recreation advocates.

3



Barriers Between Youth, Families & Nature

Barriers that Exist Between Youth, Families & Nature

Common Barriers

Literature about barriers to participation in outdoor recreation activities and nature experiences has identified a number of variables. These includes deeply entrenched barriers such as:

- Lack of interest or unfavorable/ambivalent opinions about a given activity;
- Concern for the child's safety;
- Limited time;
- Expense;
- Transportation; and
- Culturally-rooted barriers such as language and whether one feels welcomed in a given environment.

More recently, much rhetoric has centered around the role of technology and whether children substitute experiences in nature with video games, internet, and similar activities.

All of these possible barriers were evaluated within the project to identify their influence on Larimer County residents. Lack of interest, safety concerns, and culturally-rooted barriers were not found to be prevalent barriers for residents of Larimer County.



Parents' desire to keep children safe and clean can be a barrier to allowing them to explore nature. Research is showing it is important for adults to "remove the bubble wrap" and overcome the fear of nature's risks to encourage their kids to experience nature.

Residents' Challenges to Connecting with Nature

The most common reason residents revealed for being reluctant to spend time in nature and the outdoors is their own time constraints, the inconvenience of finding and/or getting to a location, and the high costs - such as equipment purchases and park fees - associated with these experiences. At the same time, residents suggest that technology is not a distraction nor a significant factor interfering with their child's time spent in nature.

Other major factors that limit the time families with young children spend in the outdoors include parent work schedules and household responsibilities. Families with teenage children are more limited by homework, athletics, and social schedules.

Examination of these barriers points to four key findings:

1. Programs about nature and the outdoors should be held at times that are convenient for families, such as weekends, after school, and in the summer.
2. Centrally locate trails and other outdoor experiences in order to reduce travel time and transportation cost.



Trails are a healthy travel alternative and, if centrally located, offer an opportunity to enjoy the outdoors on a busy day.

3. Educate the public about the opportunities for enjoying nature and the outdoors. While many residents have favorite locations, others would like more information about the variety of options available.
4. There is not a compelling need to address technology as a perceived hindrance to connecting to nature, but rather to harness technology as a means of encouraging outdoor activity.

“Biophilia hypothesis refers to the connection that human beings subconsciously seek with the rest of life. The deep affiliations humans have with nature are rooted in our biology. Unlike phobias, which are the aversions and fears that people have of things in the natural world, phylas are the attraction and positive feelings that people have towards certain habitats, activities, and objects in their natural surroundings.

- Edward O. Wilson, Biophilia (1984)

Physical Barriers to Accessing Nature

Barriers to accessing nature exist in both man-made and natural environments. In Larimer County the physical barriers vary greatly by geography. Some urban environments, for example, lack trees and green space. In mountain communities a fear of snakes and mountain lions discourages parents from taking their children to certain natural places. Parents in rural communities sometimes find that distance to parks and open space and a lack of interactive play areas are disincentives to visiting these places.

Conversations with parents lead to the identification of the following most common physical barriers families experience throughout the County:

- High traffic roads separate residential areas from parks and open space. Vehicle speed and noise also detract from walking or biking to places with natural features.
- Lack of sidewalks or sidewalks in poor condition deter potential users from walking to parks and open space.
- Residential subdivisions sometimes contain natural features but access is sometimes not allowed or limited.
- Rugged appearance and intimidating terrain is unappealing for some families with young children.

- There are lakes and reservoirs that people would like to visit. However, lack of trail connectivity, fishing access, or swimming areas make these places less interesting than they could be. The pond at Fossil Ridge in Fort Collins and Barnes Park in Loveland are two examples of locations that do not allow fishing or swimming. In addition, some waterbodies are private and do not allow public access such as Bee Lake and Demmel Lake near Wellington.
- Some parks and open space are perceived as being crowded and/or have insufficient parking.

- Parks and open space without public restrooms are inconvenient for families.
- Locations with poor water quality or parent's perception of poor water quality limit interest in water activities.
- Long travel distances to parks and open space can limit the frequency of visits.
- Places with restrictions on dogs limit some family's visits.

Appendix E provides a listing of more specific physical barriers expressed by parents.



Roadways with high traffic volumes, speeding cars, or difficult crossings can separate neighborhoods from parks and open space.



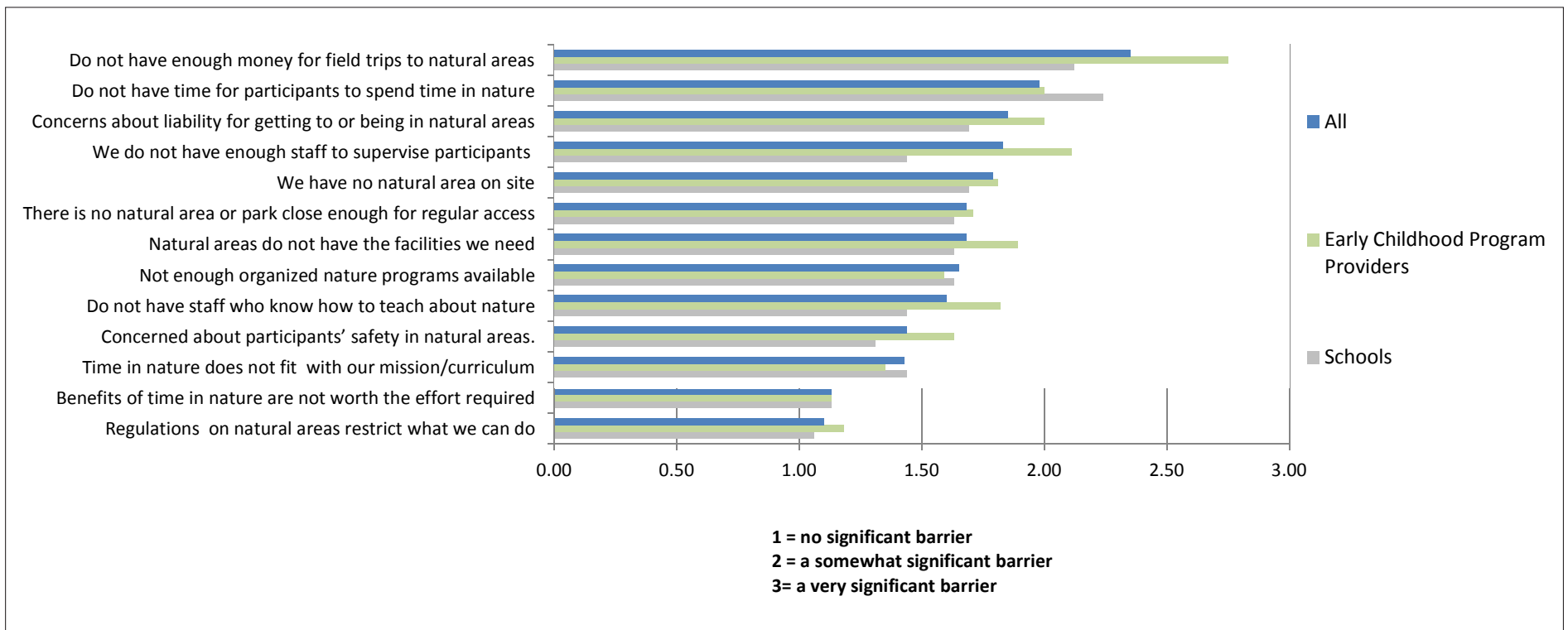
Updates need to be provided to the public about water conditions at recreation areas.

Barriers for Program Participation

Lack of time and high costs constitute the most significant barriers to Youth and Family Program Providers to participate in nature-based programs. These program providers described the challenges inherent in taking groups to places by bus. These include liability issues, time and distance to destinations, and an overall lack of group facilities.

Some early childhood education providers expressed concern about having enough developmentally-appropriate outdoor programs for young children. Additional barriers identified by teacher focus groups include organizational culture, policies, and regulations.

Figure 5: Youth and Family Program Providers' Barriers to Increasing Time in Nature



Cultural Barriers

The study examined if there were any cultural groups that might experience nature differently or have unique needs. Latinos are a significant user group, comprise approximately 12 percent of Larimer County’s population.

Figure 6 shows the survey results comparing Latino and non-Latino parent responses. Time, cost, transportation, and awareness of programs emerge as primary barriers for both groups. Specific cultural barriers such as general discomfort or a lack of Spanish-based programs emerge as secondary issues.

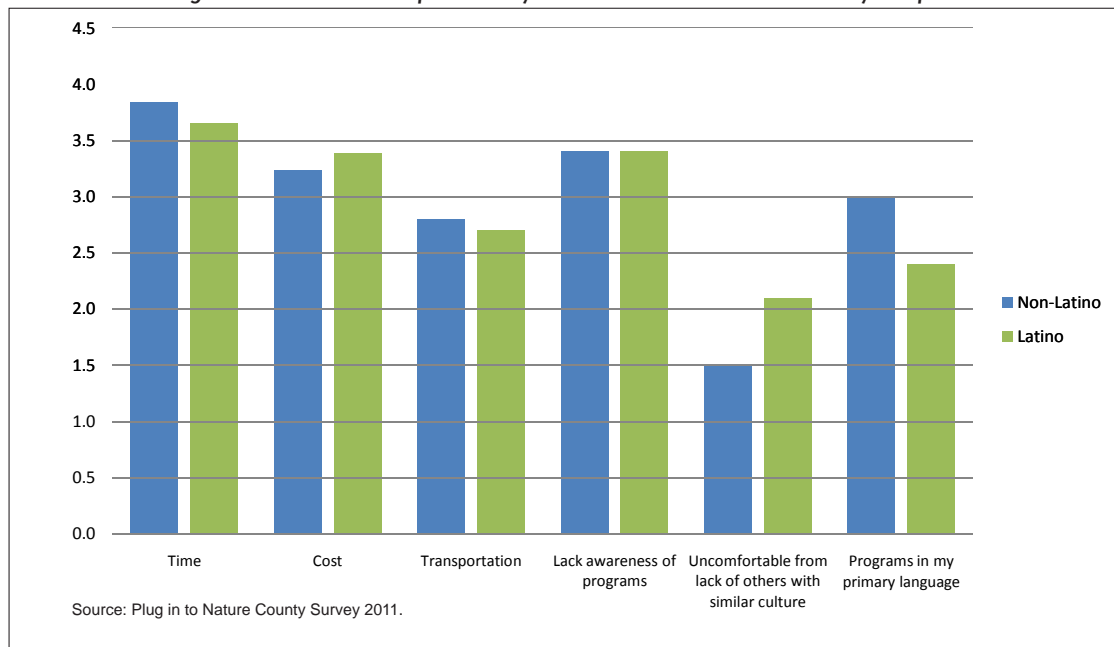
Awareness as a Barrier

Parents, youth, and program providers cited lack of knowledge of places to go and program availability as a challenge. Other challenges include confusion about the various land management agencies, natural area regulations, fees, and sources of information.

Residents primarily receive information about nature and outdoor programs from advertising and websites. The top three ways parents were likely to learn about nature programs or places to go are:

- Daily local newspaper;
- Child’s school, clubs, or day care in the form of a flyer, e-mail, or mailing; and
- Friends or relatives.

Figure 6: Barriers Comparison by Latino and Non-Latino Survey Responses



The majority of Nature and Outdoor Program Providers advertise via:

- Word of mouth (100%);
- Websites (94%);
- E-mail lists (80%);
- Print posters or flyers (74%); and
- Newspapers (69%).

Parents consider flyers, mailings, or e-mail from schools, clubs, or daycares to be an effective way to receive information about activities and events. However, Nature and Outdoor Program Providers seldom advertise in this way because school

districts place limitations on outside information that may be included in packets from schools.

Many Youth/Family Program Providers and teachers expressed a general lack of awareness about what outdoor and nature programs and places are available. As a result, many of their programs do not take advantage of existing resources.

4



Nature & Outdoor Programs

Nature & Outdoor Programs

Inventory Summary

Larimer County has a rich array of structured opportunities for participating in outdoor and nature programs. Programs cover a large variety of interests, age groups, and educational topics.

Outdoor and nature program availability and opportunities for program coordination were evaluated through an inventory process. Responses to a questionnaire from thirty-five Outdoor and Nature Program Providers were compiled into an electronic database, the results of which are detailed in Appendix C. This inventory allowed for the analysis of existing programs and identification of program gaps addressing youth and family needs.

It is estimated that roughly 67,000 people participated in Larimer County based outdoor/nature programs in 2011.



Boyd Lake State Park, Colorado Youth Outdoors, and the Poudre Learning Center provide programs for the entire family to participate together.

Audience Age Groups

There are significantly fewer providers offering programs for young children (ages 0-5) than for other age groups. Relatively few providers offer programs specifically for the entire family to attend together or specifically for seniors. Figures 7 and 8 provide further information regarding the programs offered to different age groups.

Figure 7: Cumulative Number of Entities Offering Programs for Each Program Type by Age Group

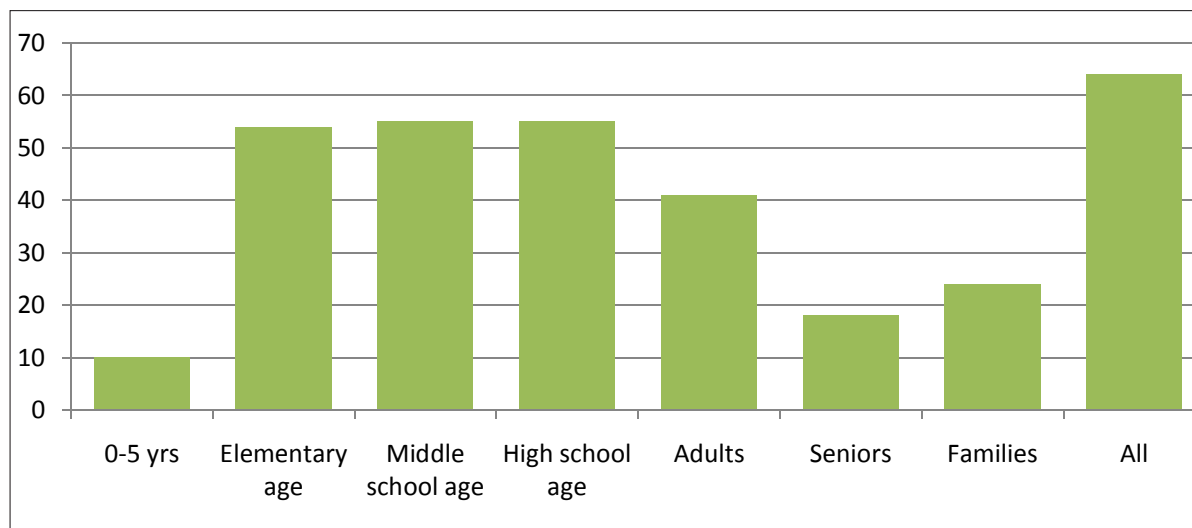
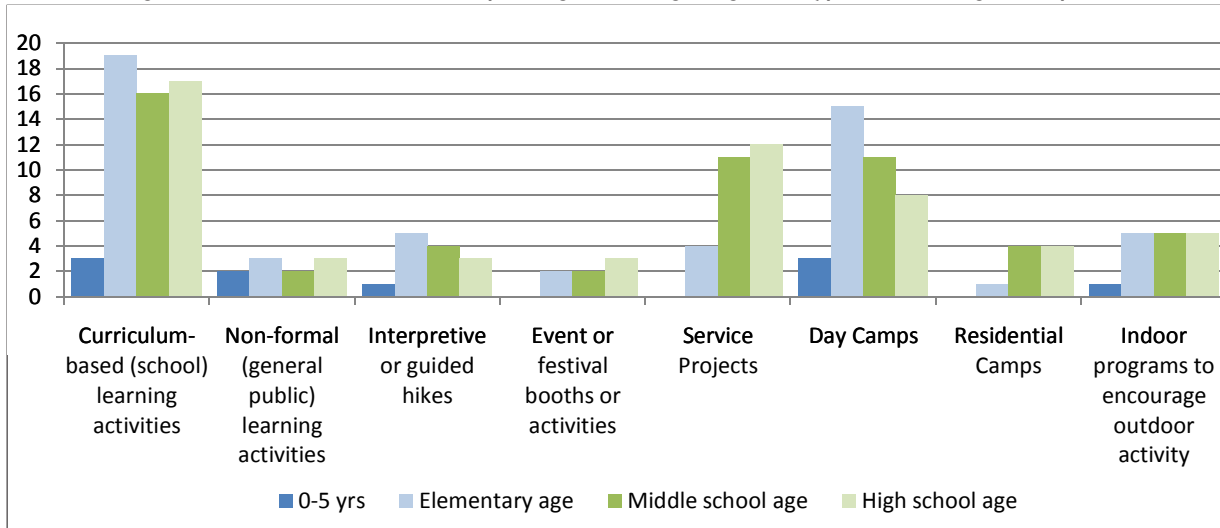
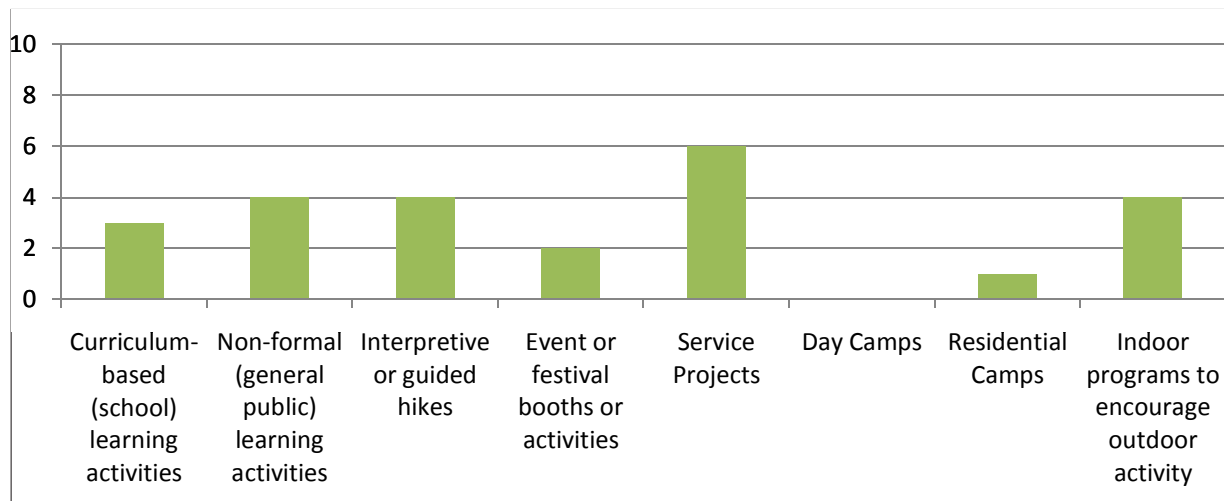


Figure 8: Number of Providers Reporting Providing Programs Types to Each Age Group



Volunteer and service projects encourage a life-long connection with the outdoors.

Figure 9: Number of Program Providers Reporting Programs Specifically for Families by Type



Program Topics

The most common topics of programs are wildlife, human interactions with nature, ecosystems, environmental stewardship, plants, and nature observation. The least common topics were geocaching, how-to-fish, geology, how-to-camp/backpack, and history/archaeology.

Reaching Underserved Populations

Groups identified as underserved by Outdoor and Nature Program Providers include Latinos, at-risk/underserved youth, low income, high school age youth, and K-12 students. 18 of 35 Outdoor and Nature Program Providers make efforts to reach groups they consider underserved. Figure 10 shows the number of entities that reported efforts to reach each audience.

Figure 10: Number of Outdoor and Nature Program Providers Reaching Out to Underserved Audiences (as Identified by Outdoor and Nature Program Providers)

PROVIDER IDENTIFIED UNDERSERVED POPULATIONS	
Audience	Number of entities servicing
Latino	7
At-risk/underserved youth	5
Low income	3
High school age youth	2
K-12 schools/students	2



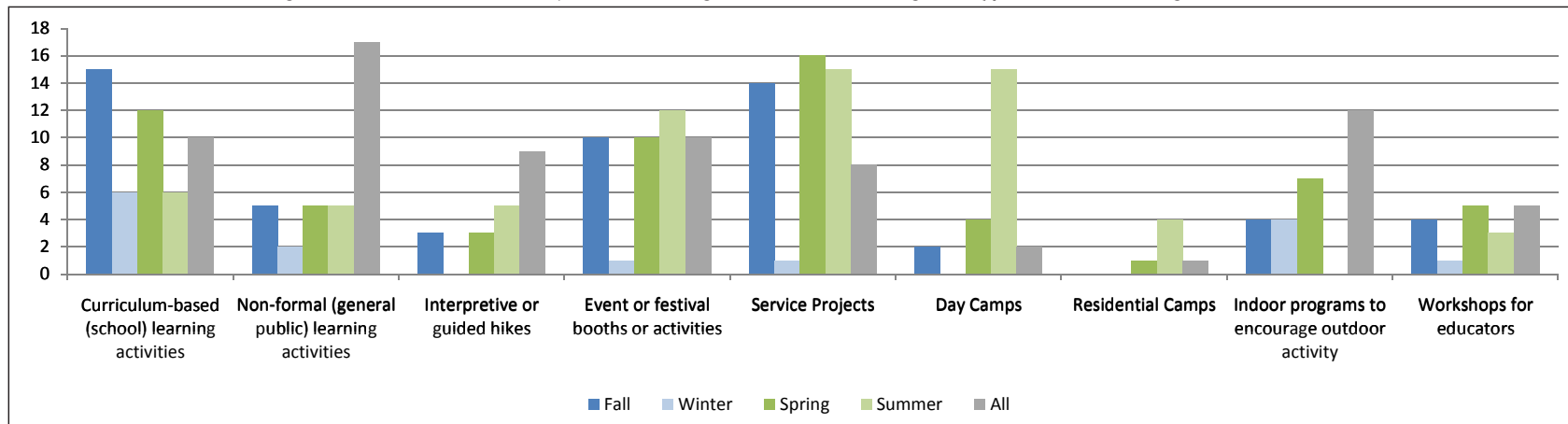
Picnic on the Poudre is one event that specifically engages Latinos in outdoor activities.

While there are seven entities that specifically engage Latinos, other programs are successful in engaging this population as well. The most common methods to reach underserved audiences are partnering with other organizations and agencies and utilizing contacts within the community to advertise, coordinate, and recruit for programs. Latino specific outreach includes distributing Spanish marketing materials, going door-to-door, sending flyers home from school, and providing transportation to programs.

Seasonal Program Offerings

Figure 11 shows fewer programs are offered in the winter than other seasons.

Figure 11: Number of Nature/Outdoor Program Providers - Program Type Offered During each Season



Partnerships

Outdoor and Nature Program Providers listed the partners they work with to deliver programming. This list includes partnerships ranging from those collaborating on a single event to those with long-term and/or formalized agreements.

Outdoor and Nature Program Providers noted that they partner with more than 120 nature and outdoor entities. This indicates high numbers of collaborations are already taking place, although providers recognize the value of creating additional strategic partnerships.

Youth/Family Program Provider Practices

A questionnaire about program offerings was completed by 85 Youth/Family Program Providers. Responses were collected from 41 early childhood providers, 30 schools, and 33 youth/family services. The primary purpose was to determine the extent to which these program providers include outdoor programming or opportunities to experience nature. They also identified barriers to spending more time in nature. The majority of Youth/Family Program Providers report conducting learning activities in a natural setting. 61 percent incorporate free play in a natural setting as part of their program.

Less than 40 percent of Youth/Family Program Providers take participants into nature on a daily basis. For many of the others, the season, weather, or child's needs or behavior influence the frequency with which children spend time in

nature. The most common amount of time spent outdoors is between 21-45 minutes a day, which corresponds to a standard recess time, as well as a standard school class period.

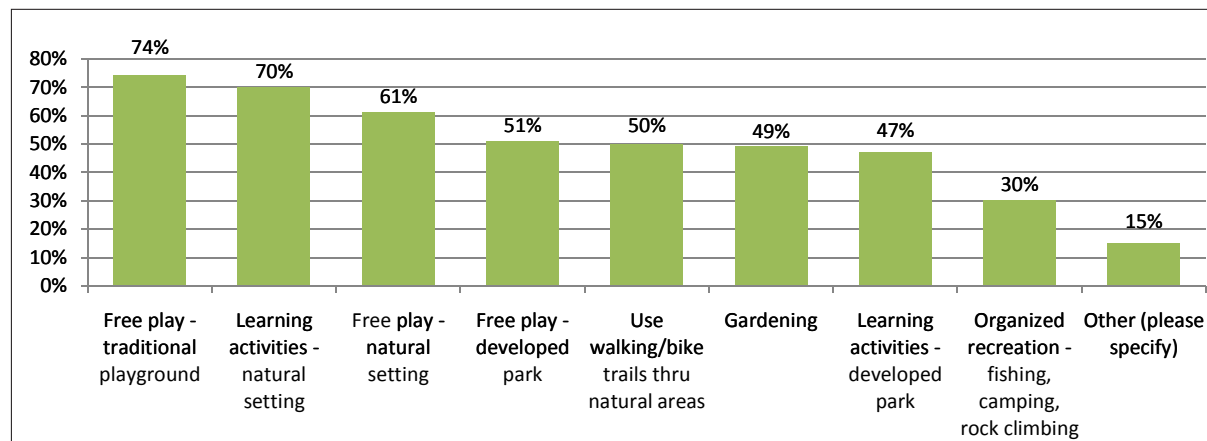
Youth/Family Program Providers most commonly use their school or facility grounds to take children into a natural setting. Other places commonly visited are neighborhood or city parks, trails, and city or County open space.

The program inventory established that 70% of Youth/Family Program Providers conduct learning activities in a natural setting. 56% of Youth/Family Program Providers reported taking children into nature more than once a week.

Figure 12: Summary of Outdoor and Nature Program Provider Partnerships

PARTNERSHIPS	
Number of partnerships	120
Number of partners located within Larimer County or nearby	91
Number of partners involved with more than one program provider	29
Number of program providers with nine or more partners	11

Figure 13: Percentage of Youth/Family Program Providers Offering Each Type of Outdoor/Nature Activity



Program Desires

Resident Program Desires

Parents are primarily interested in additional nature programs on Saturdays, after school, and on summer weekdays. Parents provided input that the types of programs they are likely to have their children attend are:

- organized outdoor competitions like scavenger hunts;
- day camps;
- guided hikes or tours;
- events or festivals about or in nature;
- programs with a focus on wildlife track identification or wildlife watching;
- programs with a focus on outdoor skills;
- programs with a focus on fishing; and
- programs for the entire family.

Youth/Family Program Providers' Desires

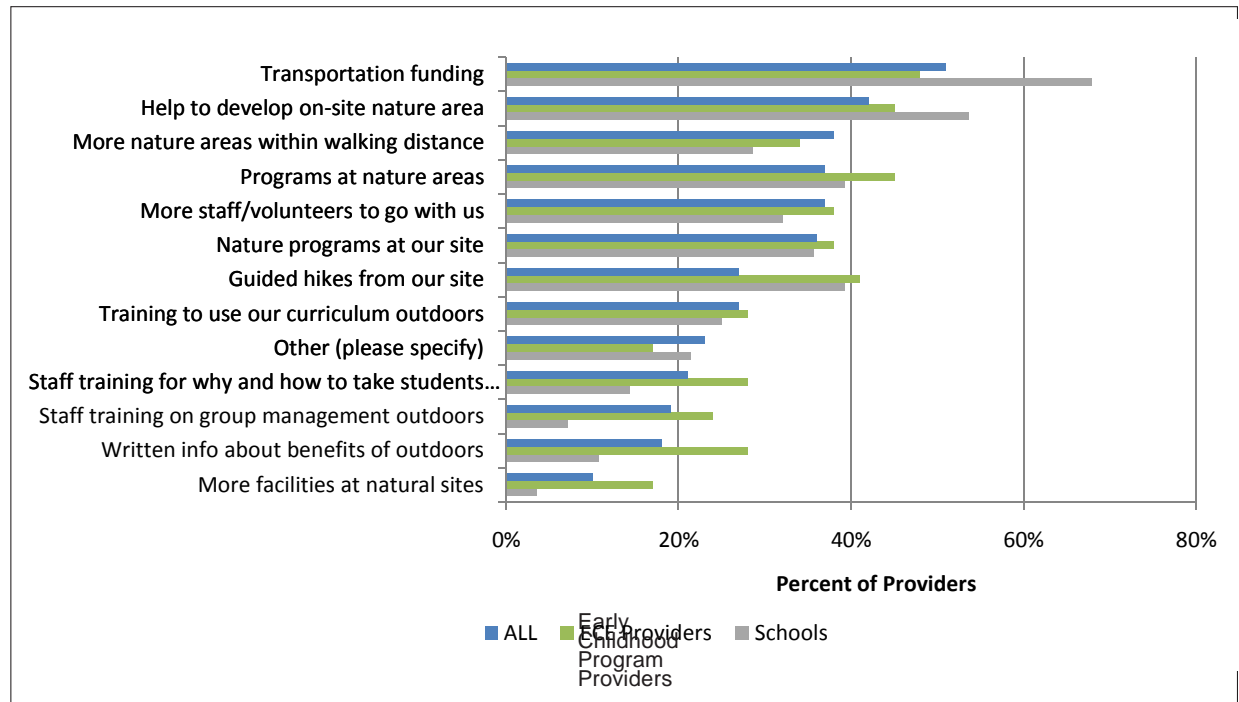
Youth/Family Program Providers identified their three highest priorities for increasing their participants time in nature: funding for transportation, on-site natural settings, and more parks and open space within walking distance. Within the Youth/Family Program Providers group, Schools and Early Childhood Education Providers have different ideas of what would be most

beneficial, as shown in Figure 14. For example, one of the differences in needs is that schools are much more interested in receiving funding for travel to nature places, while early childhood providers are more interested in having natural places within walking distance.



Research has identified improvement in concentration as one benefit of time spent in nature. Educators may find this to be a good reason to hold classes outdoors.

Figure 14: Top Three Priorities for Youth/Family Providers to Help Increase Time in Nature for Children



Conclusions: Gaps and Needs

The following conclusions are based on comparing the desires expressed from parents and Youth and Family Program Providers with the availability of programs.

Gaps

- **Programs for young children:** Programs that would fill the gap for young children include curriculum-based (school) learning activities, day camps, and interpretive/guided hikes. Early childhood providers are interested in learning activities that are related to the Colorado Academic Standards for Preschool. They are also interested in less formal learning activities for mixed-age groups. The best locations to offer these programs are on or within walking distance of early childhood facilities. Programs for both parents and their children are also desirable.
- **Programs in winter:** Across the board, there are fewer programs offered in winter than in other seasons. Youth/Family Program Providers are also much less likely to take participants outdoors in winter. Reasons for this gap in activity level include requirements for equipment and clothing, additional time, and participant safety and comfort. Parents were interested in informal outdoor winter activities that could be enjoyed as a family, such as sledding and ice skating.
- **Programs on outdoor skills:** Many outdoor skills programs, such as learning how to camp or fish, are currently offered on a limited basis. In particular, camping is a skill that families and youth both want to learn. Youth/Family Program Providers indicate that their participants enjoy learning a specific skill, such as plant or animal track identification.



Larimer County averages 90 days per year of one inch or more of snow on the ground. However, the number of days with snow over one inch is much less in populated areas. Within Fort Collins, for example, the average number of days in which more than one inch of snow falls is 14. The lack of significant snowfall creates a challenge to meeting the interests of having additional snow-based winter sports activities close to cities in the Eastern part of the County.

Needs

- **Professional development for teachers and education leaders:** Training is a key component of any successful initiative for schools or early childhood providers. Specific training needs include incorporating outdoor learning into existing school curricula, field equipment use and procedures training, and integrating ideas from existing successful nature-based projects.

Examples of local programs that successfully integrate outdoor education and schools:

- *City of Ft. Collins Utility Department's WaterSHED program;*
- *Poudre River Ecology Partners program in the Poudre School District's mountain schools;*
- *Poudre Learning Center in Weld County; and*
- *A project in Boulder County to integrate summer school gardening programs into the Full Option Science System curriculum.*

- **Nature places on-site, close to existing schools, and/or early childhood centers:** Many Youth/Family Program Providers cited the need to develop a higher awareness of nearby sites and/or develop on-site natural places or school gardens.
- **Increased awareness of opportunities:** All program providers identified the need for additional knowledge about opportunities and resources for nature and outdoor programming.
- **Partnerships:** Youth/Family Program Providers suggest that partnerships with Nature and Outdoor Program Providers are critical to establishing new initiatives and to expanding existing programs. Partnerships can provide advice, technical expertise, support, and mentoring. Collaboration and coordination is imperative for building on existing successes. However, partnerships are not easily developed or maintained; they take investments of staff time and may require additional staff.
- **Funding for transportation:** Providers see a tremendous value in taking participants to Larimer County's special parks and open spaces. Securing funding for travel will ensure that these opportunities exist. A greater awareness of the transportation subsidies offered by Larimer County and the City of Fort Collins may be needed.



Partnerships between outdoor education programs and schools reduces the burden on school teachers to develop curriculum.

5



Nature & Outdoor Places & Activities

Nature & Outdoor Places & Activities

Inventory and Overview

Larimer County contains spectacular and diverse parks and open space lands and includes a wide range of landscape types from high alpine tundra to grasslands and prairies. Areas range from rugged, wild, and natural with no facilities, to more developed parks with trails, restrooms, and structures. There are many natural settings outside of cities and many within neighborhoods. These lands and facilities play a significant role in connecting families and kids to nature.

The County contains parks and open space that are managed by federal, state, county and municipal governments. There are also privately managed facilities such as land owned by homeowners associations, school properties, privately conserved land, outdoor education facilities, and recreation sites.

This chapter summarizes the full inventory provided in Appendix D. The inventory identifies the properties and their primary natural characteristics, the type of access they allow to the public, the managing entities, signage, and facilities located on the properties.

Federal Facilities

Federal areas - those owned by the United States Government and open to the public - include Rocky Mountain National Park and the Arapaho and Roosevelt National Forests.¹ These federal lands contain both wilderness and developed sites with access for all users. Parking, trailheads, trail systems, outdoor meeting areas, interpretive signage, camping, and restrooms are widely available for use at many of these areas.

State Facilities

Boyd Lake State Park and Lory State Park are managed by the Colorado Department of Natural Resources through Colorado Parks and Wildlife.² Both parks have parking, trailheads, trail systems, indoor and outdoor meeting areas, interpretive signage, restrooms and camping (Lory State Park has backcountry primitive camping).

Colorado Parks and Wildlife also manages State Wildlife Areas where the main focus is hunting, fishing, and boating. Facilities at the State Wildlife Areas vary.³ Some have restrooms, parking, hiking trails, camping, and restrooms while others offer only limited seasonal public access.

¹ <http://www.nps.gov/romo/index.htm>
<http://www.fs.usda.gov/main/arp/home>

² <http://www.parks.state.co.us/Parks/boydlake/Pages/BoydLake-Home.aspx>

³ <http://www.parks.state.co.us/parks/lory/Pages/LoryStatePark.aspx>

⁴ <http://wildlife.state.co.us/LandWater/StateWildlifeAreas/Pages/swa.aspx>



Within Larimer County, 12 public parks and open space currently provide campground facilities.

Colorado State University runs the CSU Environmental Learning Center which offers a managed natural setting, parking, trailheads, a trail system, indoor and outdoor meeting areas, interpretive signage, and restrooms.⁴

⁴ <http://warnercnr.colostate.edu/elc-home/>

County Facilities

Larimer County Department of Natural Resources manages a number of parks, reservoirs, open space, and trails throughout the County. These areas are diverse in location and type, but all the publicly accessible areas have natural settings, parking, trailheads, trail systems, interpretive signage and restrooms. Some also have indoor or outdoor meeting areas and camping. While the majority of these areas are free, camping and park areas have associated user fees.

Municipal Facilities

City agencies such as Fort Collins Natural Areas, the City of Fort Collins Utilities, and the City of Loveland Open Lands and Natural Areas, oversee a variety of lands in their cities. The local parks and recreation departments manage local city parks and some with areas left in a natural state.

Developed parks are part of the continuum of children accessing nature and play an important role within communities. Many have parking, trailheads and trail systems, and restrooms. Some have indoor or outdoor meeting areas and interpretive signage, but generally there is no camping allowed at these areas.

There are a number of city parks that contain “natural” features within the parks. These parks are easily accessible to the public and may have undeveloped areas, water, trails, rocks, and wildlife habitats.

Other Facilities

Other groups and organizations maintain parks and open space lands and facilities around Larimer County. Most of these are non-profit organizations, many offer nature programming on these lands. Examples include High Plains Environmental Center, the Girl Scouts and Boy Scouts, Colorado Youth Outdoors Swift Ponds, and The Nature Conservancy’s Phantom Canyon Preserve.

These facilities are as varied as the organizations that run them. Most have parking, restrooms, trails, and meeting areas. Many have developed camping sites and activity areas. These areas are generally open to the public with reservations.



Rivers, creeks, wetlands, reservoirs, ponds, and lakes are all popular attractions within Larimer County.



Playing in a natural setting can provide benefits to kids that outdoor organized sports do not.

Lands with Public Access

56 percent of the County's total land area, 944,551 acres, is parks and open space with public access. Much of this land is located in the western part of the County, including Rocky Mountain National Park. Not all open space lands allow for public access. A little over five percent of the County, 89,659 acres, is open space that is not available for public use. Much of this land lies is privately conserved or government agency managed land. See Map 3.

With 646,680 acres under its management, the U.S. Forest Service (USFS) is the largest manager of publicly accessible land in Larimer County. The National Park Service (NPS) has the second largest management area, with 143,091 acres. For a complete summary of parks and open space ownership, see the Parks and Open Space Management Map 4.

The per capita calculations of parks and open space in the communities are detailed in Figure 15. The municipal boundaries of Estes Park, Fort Collins, and Loveland have the greatest amount of public parks and open space per capita as compared to the other jurisdictions in the County.

Figure 15: Parks and Open Space Per Capita

GEOGRAPHY	TOTAL POPULATION 2010 CENSUS	PARKS AND OPEN SPACE (ACRES) WITH PUBLIC ACCESS	PUBLIC PARKS AND OPEN SPACE PER CAPITA (ACRES)
Fort Collins	143,986	6,695	.05
Loveland	66,859	1,396	.02
Estes Park	5,858	618	.11
Berthoud	5,105	.68	.00013
Wellington	6,289	.001	0
Windsor (calculation based on total population of Windsor)	18,644	270 (within Larimer County)	.01
Timnath	625	.38	0
Johnstown (calculation based on total population of Timnath)	9,887	.69 (within Larimer County)	0
LARIMER COUNTY	299,630	944,551	3.15

It should be noted that the calculations of parks and open space per capita for Windsor and Johnstown are calculated based on the acreage of parks and open space within Larimer County and the total population, therefore skewing these calculations.

Figure 16: Future Potential Demand for Parks and Open Space Acreage

GEOGRAPHY	PROJECTED POPULATION (SOURCES VARY)	2010 PUBLIC PARKS AND OPEN SPACE PER CAPITA (ACRES)	ADDITIONAL PARKS AND OPEN SPACE (ACRES) NEEDED TO MAINTAIN 2010 RATIO OF POP: ACRES
Fort Collins (Mason Corridor Economic Analysis, Ft. Collins)	204,780 (2030)	.05	2,414
Loveland (Population and Housing Unit Estimates and Projections, City of Loveland, 2008)	110,438 (2030)	.02	608
Windsor (2011 Community Profile, Town of Windsor)	27,704 (2030)	.01	7
Berthoud (2007 Comprehensive Plan)	16,320 (2025)	.00013	1.5
Larimer County (State Demographer)	433,148 (2030)	3.17	422,695

*Population projections not available for other towns in Larimer County.

There are 3,152 acres of publicly accessible parks and open space per 1,000 people in the County, or 3.15 acres per capita. According to the 2008 Statewide Comprehensive Outdoor Recreation Plan (SCORP), the regions of Colorado vary from 0.6 public acres per capita in the Front Range to 30.3 acres per capita in the Southwest.

Future Parks and Open Space Needs

The population of Larimer County is projected to increase by 133,518 people in the next twenty years. Planning now to provide enough publicly accessible parks and open space to accommodate the increasing number of residents is important. In order to provide the same amount of parks and open space per capita in the future as is currently provided, Fort Collins would have to add 2,414 acres of parks and open space within its municipal boundaries. Loveland would have to add 608 acres. Figure 16 provides more detail regarding future potential demand.



Rocky Mountain National Park had 3,128,446 visitors in 2010.

Map 3: Parks and Open Space with Public Access



Finding Connections to the Outdoors
for Youth and Families in Larimer County

Larimer County includes 1,685,490 Acres
Public Access to Parks and Open Space =
944,551 Acres (56% of county)
Parks and Open Space without Public Access =
89,659 Acres (5.3% of county)



Acreage of Open Space per 1,000 people:
Larimer County total population = 299,630
Public Access to Parks and Open Space =
3,152 acres per 1,000 people,
or 3.15 acres per capita

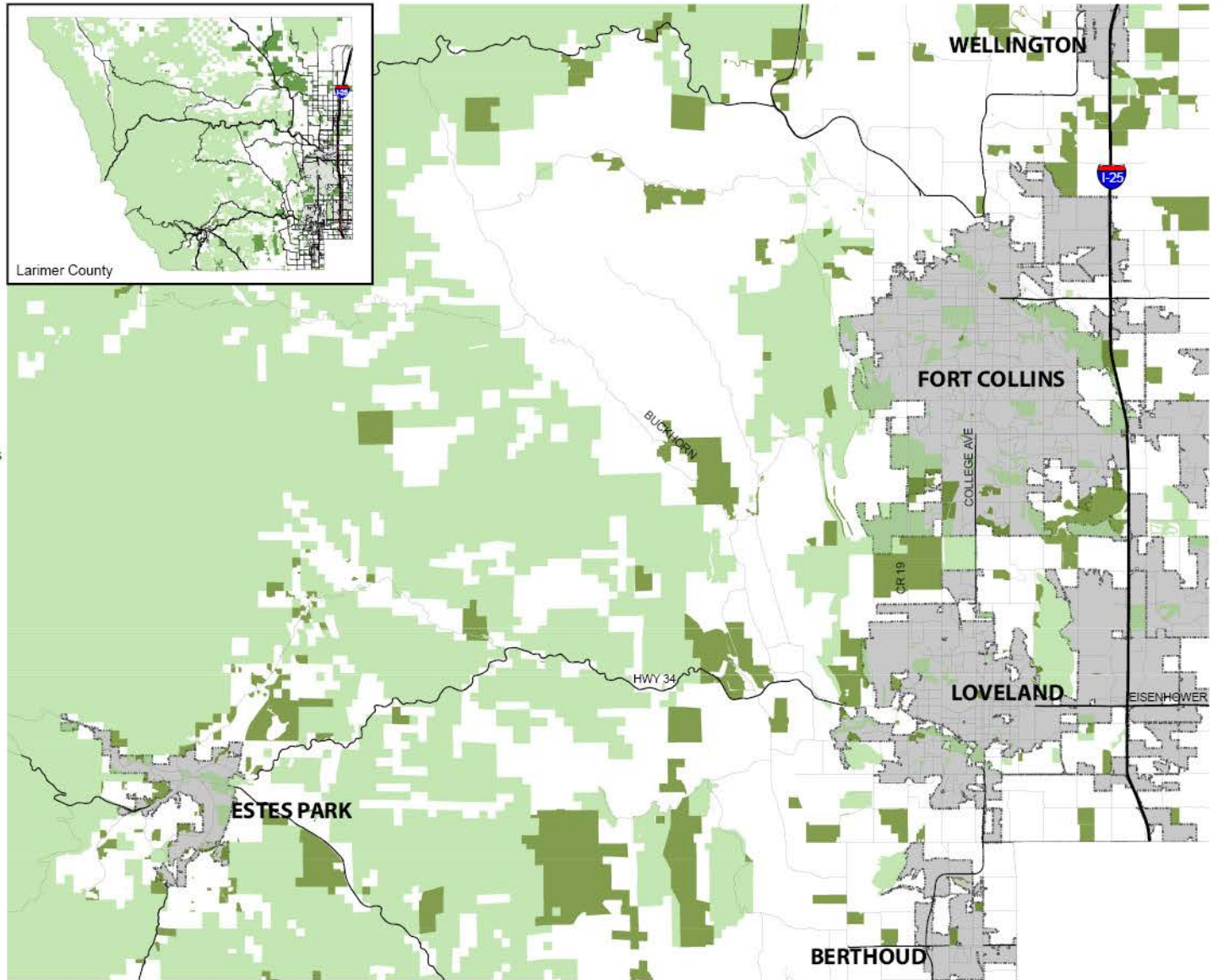
**TOTAL (Public Access and No Public Access)
Acres of Parks and Open Space by City Limits**

- Fort Collins: 7,825.2 acres
- Loveland: 1,601.6 acres
- Estes Park: 943 acres
- Berthoud: 136.4 acres
- Wellington: 2.97 acres
- Windsor (in Larimer County): 270 acres
- Timnath: .43 acres
- Johnstown: 1.1 acres

**Public Access Acres of Parks and
Open Space by City Limits**

- Fort Collins: 6,695 acres
- Loveland: 1,396 acres
- Estes Park: 618 acres
- Berthoud: .68 acres
- Wellington: .001 acres
- Windsor (in Larimer County): 270 acres
- Timnath: .38 acres
- Johnstown: .69 acres

 Parks and Open Space without Public Access
 Public Access to Parks and Open Space



PUBLIC ACCESS TO PARKS AND OPEN SPACE

Map 4: Parks and Open Space Management



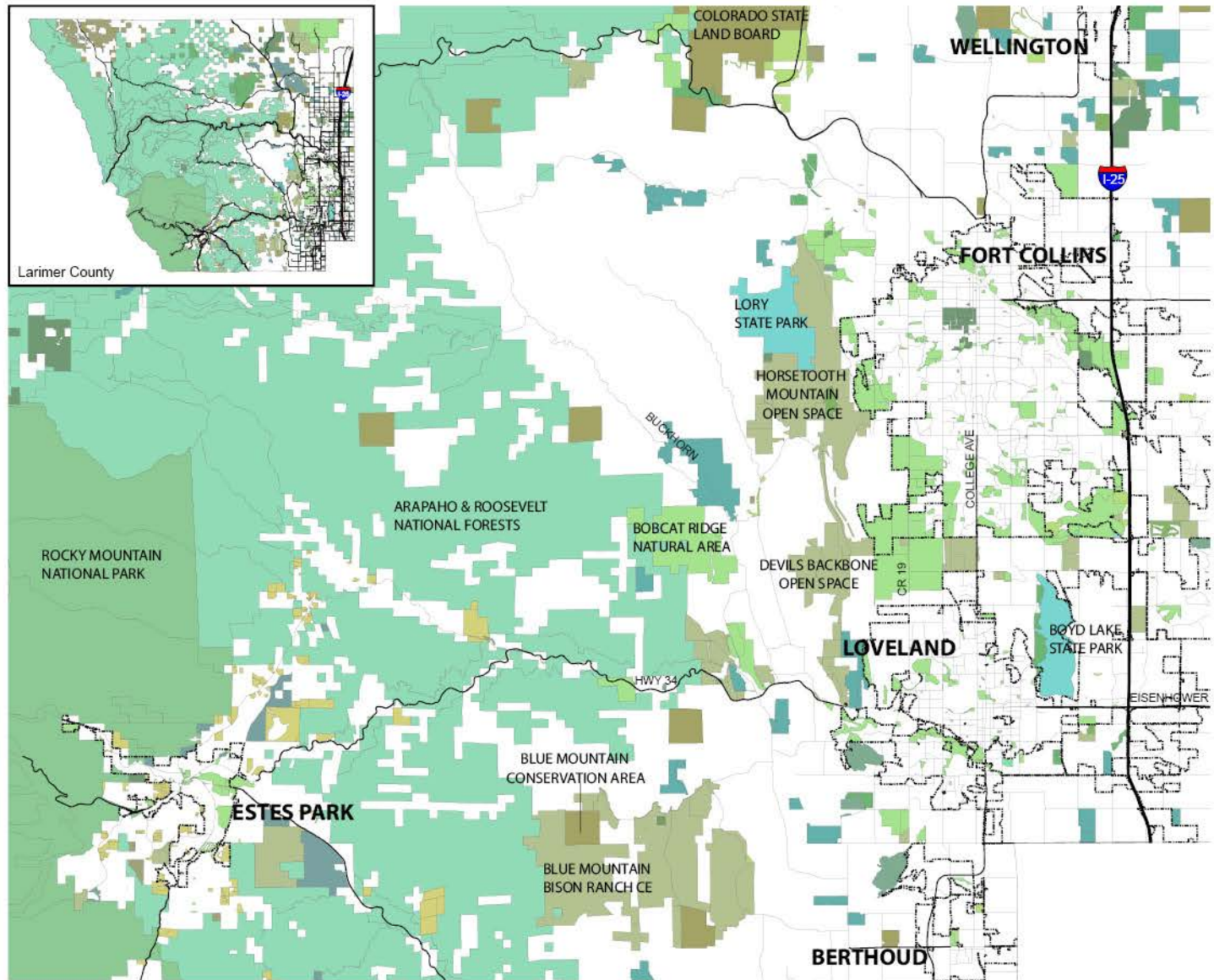
Finding Connections to the Outdoors
for Youth and Families in Larimer County

Open Space Acreage by Manager:

- USFS = 646,680
- NPS = 143,090.7
- County = 44,783.4
- City = 42,373.6
- SLB = 31,595
- CPW = 29,481
- BLM = 27,538.4
- Land Trust = 23,044.6
- State = 12,805.6
- Rural Land Plan = 11,296.8
- ST Parks = 6,384.3
- Estes Valley Land Trust = 4,793
- CDOW = 3,491.5
- Special District = 3,462
- Private = 2,346.5
- Girl Scouts of Colorado = 721
- Joint = 65.3
- School District = 45.8
- FWS = 40.1
- Federal = 39.4
- NGO = 19.7
- High Plains Foundation = .31

All Open Space

- MANAGER**
- BLM
 - CDOW
 - CITY
 - COUNTY
 - CPW
 - Estes Valley Land Trust
 - FEDERAL
 - FWS
 - GIRL SCOUTS OF COLORADO
 - HIGH PLAINS FOUNDATION
 - JOINT
 - JOINT CITY/COUNTY
 - LAND TRUST
 - NGO
 - NPS
 - PRIVATE
 - Rural Land Plan
 - SCHOOL DISTRICT
 - SLB
 - SPECIAL DISTRICT
 - STATE
 - STPARKS
 - USFS - ARNF
 - USFS - ROUTT



PARKS AND OPEN SPACE MANAGEMENT

Outdoor Activities Overview

Many people equate outdoor sports and activities with a nature connection. According to public feedback gathered throughout this process, active sports are popular outdoor recreation activities for County residents.

Outdoor Recreation Trends

Coloradans enjoy a full spectrum of recreational opportunities. A recent statewide survey indicated that “large parks with a wide range of camping, trails, boating, and fishing” is preferred by most users. However, half of the respondents ranked wilderness areas defined as “forests and/or lakes with limited trails, camping, boating, and fishing opportunities” that include little to no development are also desirable.

Hiking, Walking, and Trails

National, State of Colorado, and Larimer County surveys indicate that hiking and walking consistently rank as the most popular outdoor activities. The Plug in to Nature County-wide survey found that 95 percent of households hiked or walked on trails in the last year. The recent City of Fort Collins Natural Areas Survey reported 71 percent of residents hike on a regular basis. Connecting existing trail systems and linking biking and walking/running trails are extremely important to the public and to recreation organizations.

Water

Swimming or water play is one of the most popular activities. Water activities available in the County including swimming, boating, fishing, water skiing, tubing, kayaking, personal watercraft use, sailing, and wind surfing.

Access to water is highly desirable for Larimer County families. The Nature Program Providers Inventory indicates that water is included as a key feature in most nature and outdoor programming.

Winter and Year-Round Activities

Residents expressed a desire for more year-round outdoor activities close to home. However, winter weather that is conducive to sledding, skating, and other snow related activities is rare in the eastern portion of the County. As a result, recreation managers have chosen to devote resources to facilities that receive use throughout the year.

Unstructured Free Play

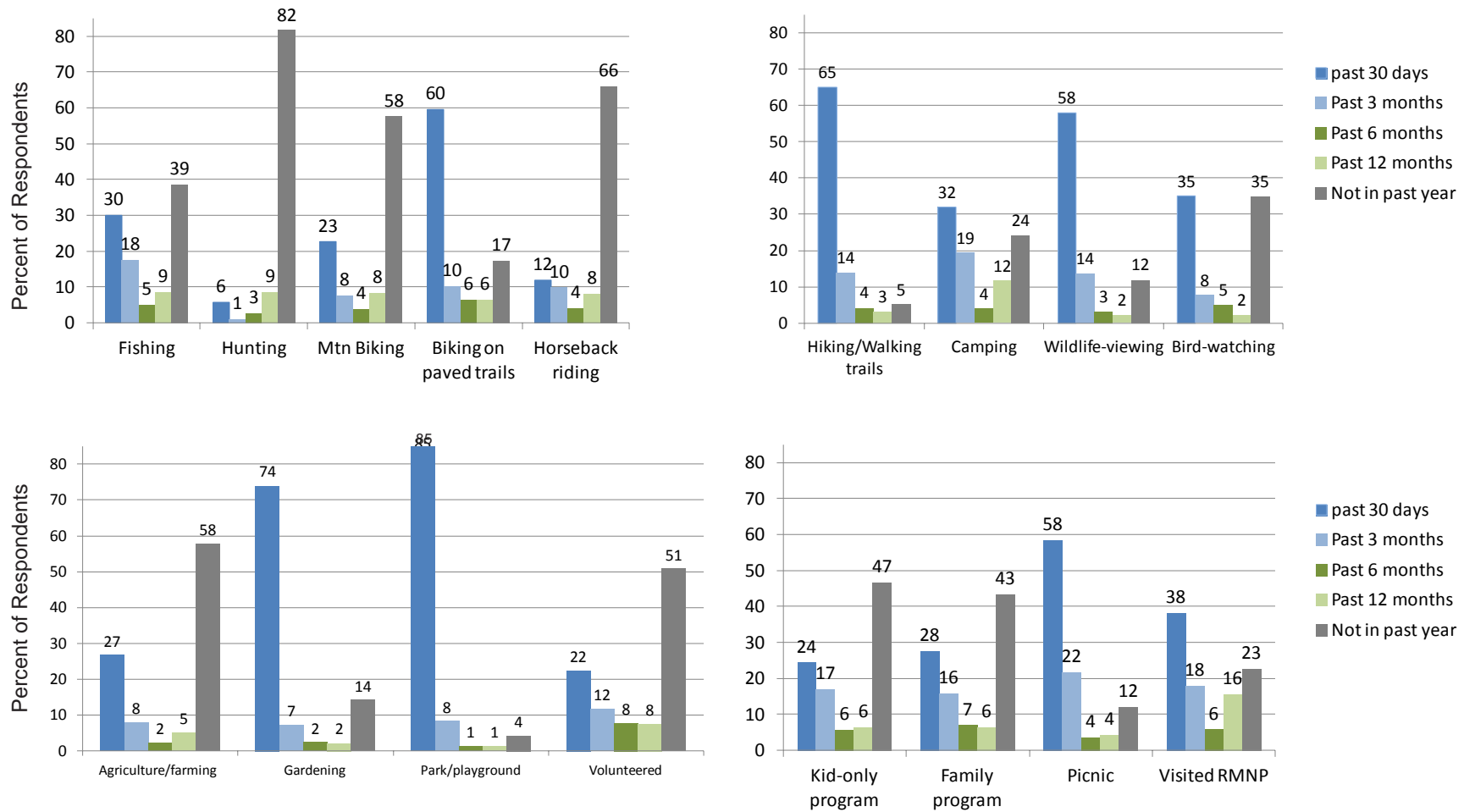
Many parents interviewed expressed a desire for free, unstructured play areas in neighborhood playgrounds. Some of the city parks do have “natural settings” for play. These areas may include woodlands, wetlands, rivers, and other undeveloped areas.



Many natural areas within the County contain wildlife and sensitive vegetation that restrict public access to trails.

Figure 17: Plug in to Nature County-Wide Survey Results: Resident Activities in Nature and the Outdoors

Frequency of household members participation in various nature and outdoor activities:



The activities that the greatest number of households participated in the last year are:

- Hiking or walking on trails: 95% of households
- Park/playground: 95% of households
- Picnic: 88% of households
- Gardening: 85% of households
- Biking on paved trails: 82% of households
- Visited Rocky Mountain National Park (RMNP): 78%
- Wildlife-viewing: 77% of households



Conclusions

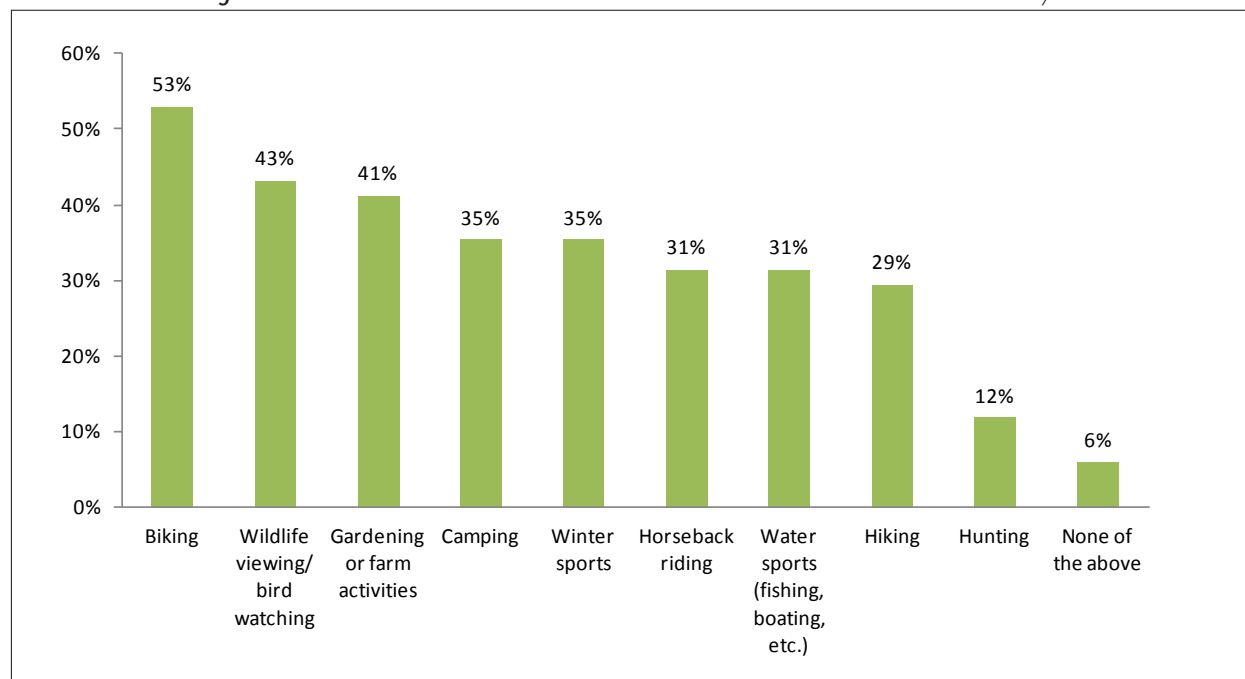
General

Larimer County residents are satisfied with existing natural areas and facilities, particularly those with high value natural resources. However, they are interested in learning more about available opportunities and programs.

- **Limitations:** Restrictions on public lands, such as requirements to stay on trails, rules against climbing on rocks, etc. can inhibit a child’s connection to nature.
- **Access:** New residential developments sometimes place restrictions on the parks and open space they provide, limiting access to the residents or members of private clubs/associations.
- **Costs:** Park and open space entrance fees and equipment costs (either rental or purchase) for recreational activities can be prohibitive to some users.
- **Facilities at Existing Sites:** Enhance playgrounds and play areas by adding natural features. Adding restrooms and parking may encourage more use by families.
- **Future Planned Facilities:** Few land managers have plans for adding new facilities in the next few years. Exceptions include the High Plains Environmental Center, Larimer County Natural Resources, and Colorado Youth Outdoors.

- **New Facilities:** Facility managers and public comments both indicated a need to provide nature centers and additional educational facilities.
- **Places to Host Activities:** Public comments suggested a desire for outdoor/nature activities in additional places. The most common activities desired included biking, wildlife viewing and bird watching, gardening or farm activities, camping, and winter sports.
- **Trails:** Trails should be designed to promote exploration. A destination is not always necessary; scenery and connectivity are preferable. Missing connections within existing trail systems should be completed.

Figure 18: Community Meeting Results: Are more Places Needed within Larimer County to do any of the Following Activities that Would Better Connect Youth and Families to the Outdoors/Nature?



6



Access to Lands Providing Nature & Outdoor Opportunities

Access to Lands that Provide Nature & Outdoor Opportunities

Measuring Access

National studies suggest that the longest duration children may be willing to travel to places they connect with nature is anywhere from two-minutes to half an hour. This range varies based on the age of the child, challenges to reach the destination (lack of sidewalks, safety, etc.), if they are traveling with an adult, and the mode of travel.

Plug in to Nature asked parents to describe how their children typically visit natural places in Larimer County in order to gain insight into preferences and habits. Findings include the following:

1. Lack of time to visit natural areas is a major barrier to nature connections. Therefore, lengthy travel times impede visitation.
2. On a daily basis, youth and families mostly access natural areas and facilities that are just outside of their homes or up to a five minute walk. 35 percent are willing to walk 15 minutes.
3. On weekends longer family trips are common. In fact, nearly 60 percent of families polled were willing to travel a half-hour or more by car.
4. Children typically access nature by walking from home or driving with their parents. Biking or taking a public bus is a less common means of travel. Travel from school or childcare to these places is also not typical.
5. Families want safe and convenient walking or biking routes to access natural areas.

Figure 19: How Long is Your Family Willing to Travel to Access Outdoor Facilities, Natural Places or Programs During the Week/Weekend?

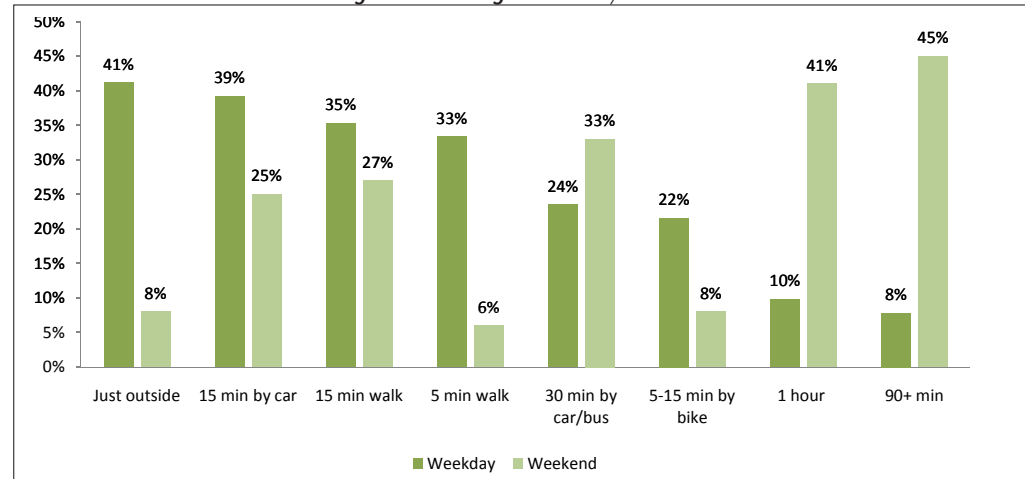
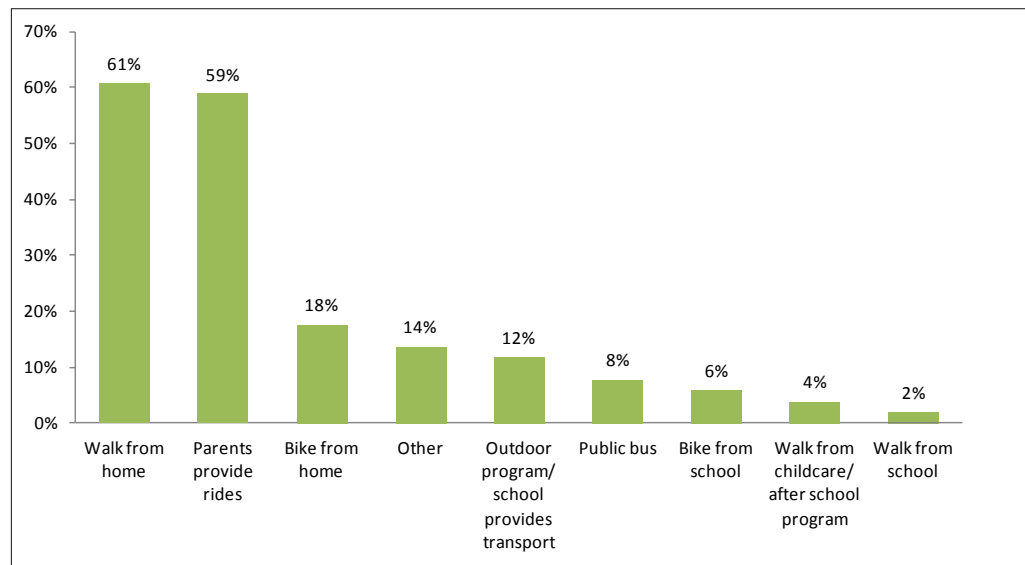


Figure 20: How Does your Child Typically Access Nature and the Outdoors?



Proximity Analysis

Most parents polled have a nature place they believe is appropriate for their child to play at within less than a five minute walk of their home. However, 39 percent believe that the closest natural place appropriate for children is more than 15 minutes away. Therefore, a quarter mile distance, which translates to a five minute walk, is a threshold utilized in the analysis.

Since families are willing to travel further on the weekends, the study does not preclude areas beyond this travel time. Families with older children (ages 11-18) are more willing to travel further distances than those with younger children. This may imply that weekend activities for older children can be located farther from urban areas and still attract interest, whereas parents of younger children still value areas close to home for weekend activities though they are also willing to travel farther from their homes.

Parks and Open Space Accessible by Public Transportation

The bus is not commonly used to reach parks and open space. However, families without cars may choose this mode of travel to reach distant destinations. Approximately six percent of public parks and open space is accessible within a five minute walking distance of a transit line. The public transit routes and their proximity to parks and open space is displayed on the Proximity to Transit Map.

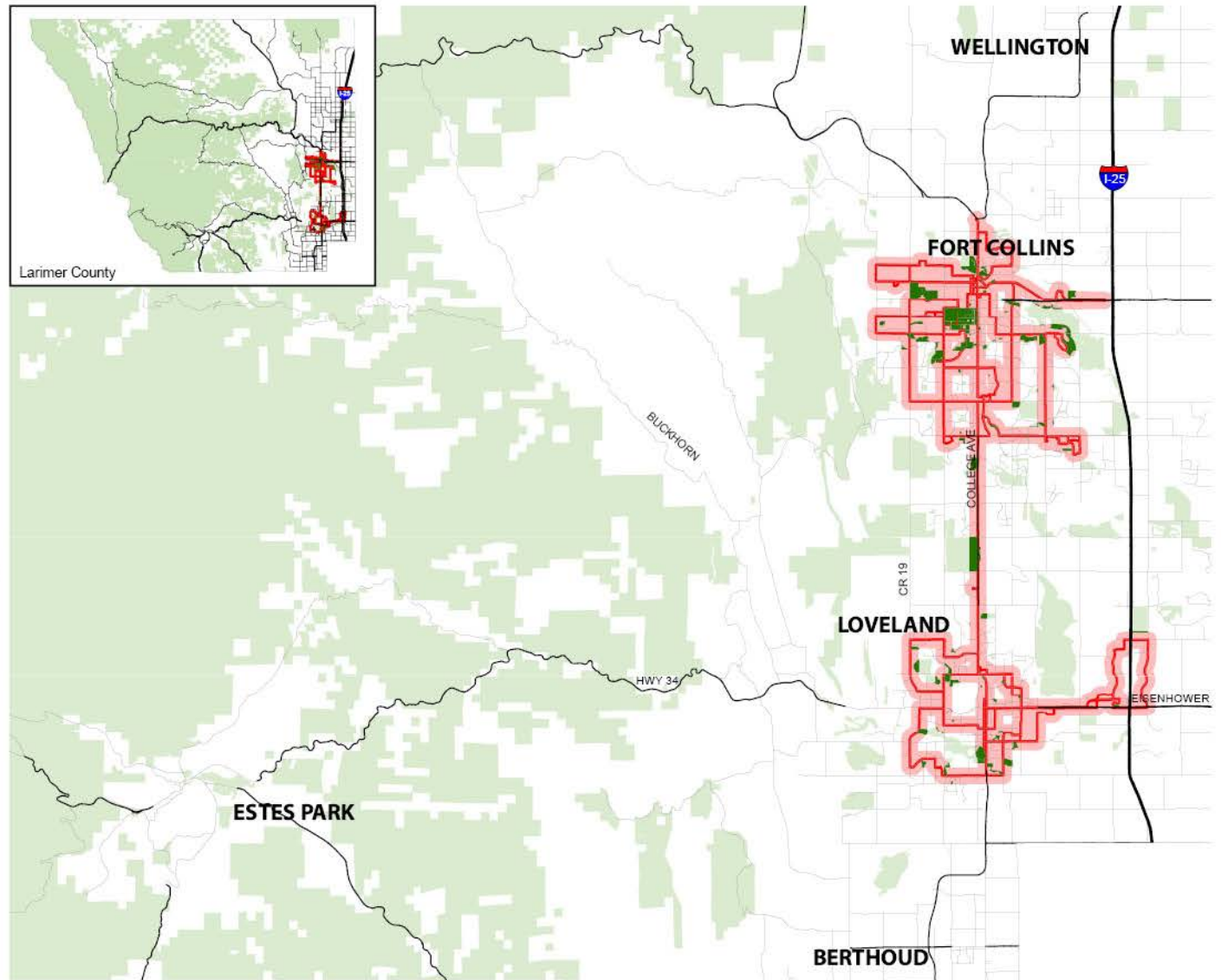


Map 5: Proximity to Transit



There are 1,742 acres of parks and open space within 1/4 mile of transit lines. 6.2% of County-wide public parks and open space is accessible by transit.

- Parks and Open Space within 1/4 Mile of Transit
- Public Access to Parks and Open Space
- All Bus Routes
- 1/4 Miles to a Bus Route



PROXIMITY TO TRANSIT

Route data rather than bus stop locations was determined best to utilize for this analysis because additional bus stops can be added to these routes in the future.

Distance from Residences to Parks and Open Space

The analysis found that 51 percent of residences located within incorporated areas are within a five minute walking distance of publicly accessible parks and open space. Map 6 and Map 7 and Figure 21 provide an evaluation for each incorporated area. The light purple areas on the map show residences that do not have publicly accessible parks and open space within a five minute walk.

Figure 21: Percentage of Residences within a Five Minute Walk of Publicly Accessible Parks and Open Space.

COMMUNITY	RESIDENTIAL UNITS WITHIN A FIVE MINUTE WALK
Fort Collins	59%
Loveland	49%
Estes Park	64%
Berthoud	0%
Wellington	2%
Windsor	53%
Timnath	2%
Johnstown	7%



A group of studies reviewed in the American Journal of Preventive Medicine showed that “creation of or enhanced access to places for physical activity combined with informational outreach” produced a 48.4 percent increase in frequency of physical activity.

Map 6: Public Parks and Open Space within Walking Distance of City Residences - County View



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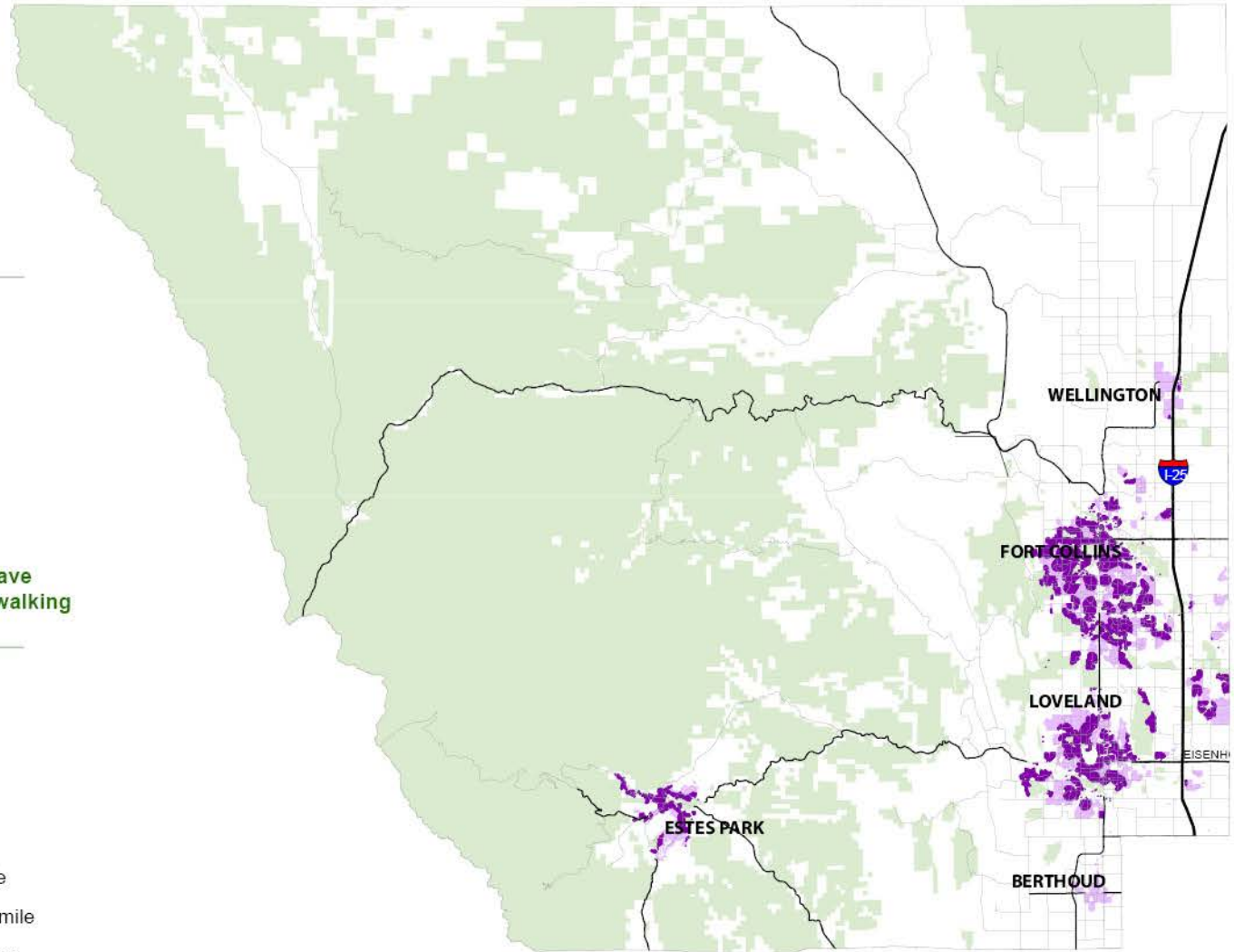
Within incorporated areas, 51% (46,214 residences out of 89,751) have access to parks and open space within walking distance of 1/4 mile.

Fort Collins: 59% (28,785 residences out of 49,106)
 Loveland: 49% (13,363 residences out of 27,109)
 Estes Park: 65% (2,525 residences out of 3,909)
 Berthoud: 0% (0 residences out of 2,086)
 Wellington: 15% (45 residences out of 2,911)
 Windsor: 52% (1,413 residences out of 2,692)
 Timnath: 2% (26 residences out of 1,178)
 Johnstown: 7% (51 residences out of 760)

Within incorporated areas, 52% of residential units (51,458 out of 99,454) have access to parks and open space within walking distance.

Fort Collins: 59% (32,463 out of 55,453)
 Loveland: 49% (14,765 out of 30,074)
 Estes Park: 64% (2,686 out of 4,171)
 Berthoud: 0% (0 out of 2,176)
 Wellington: 2% (45 out of 2,941)
 Windsor: 53% (1,419 out of 2,696)
 Timnath: 2% (29 out of 1,183)
 Johnstown: 7% (51 out of 760)

- Residences with access within 1/4 mile
- Residences without access within 1/4 mile
- Public Access to Parks and Open Space



PUBLIC PARKS AND OPEN SPACE WITHIN WALKING DISTANCE OF CITY RESIDENCES

Address points derived from Larimer County Assessor database of residential properties

Map 7: Public Parks and Open Space within Walking Distance of City Residences - Fort Collins/Loveland View



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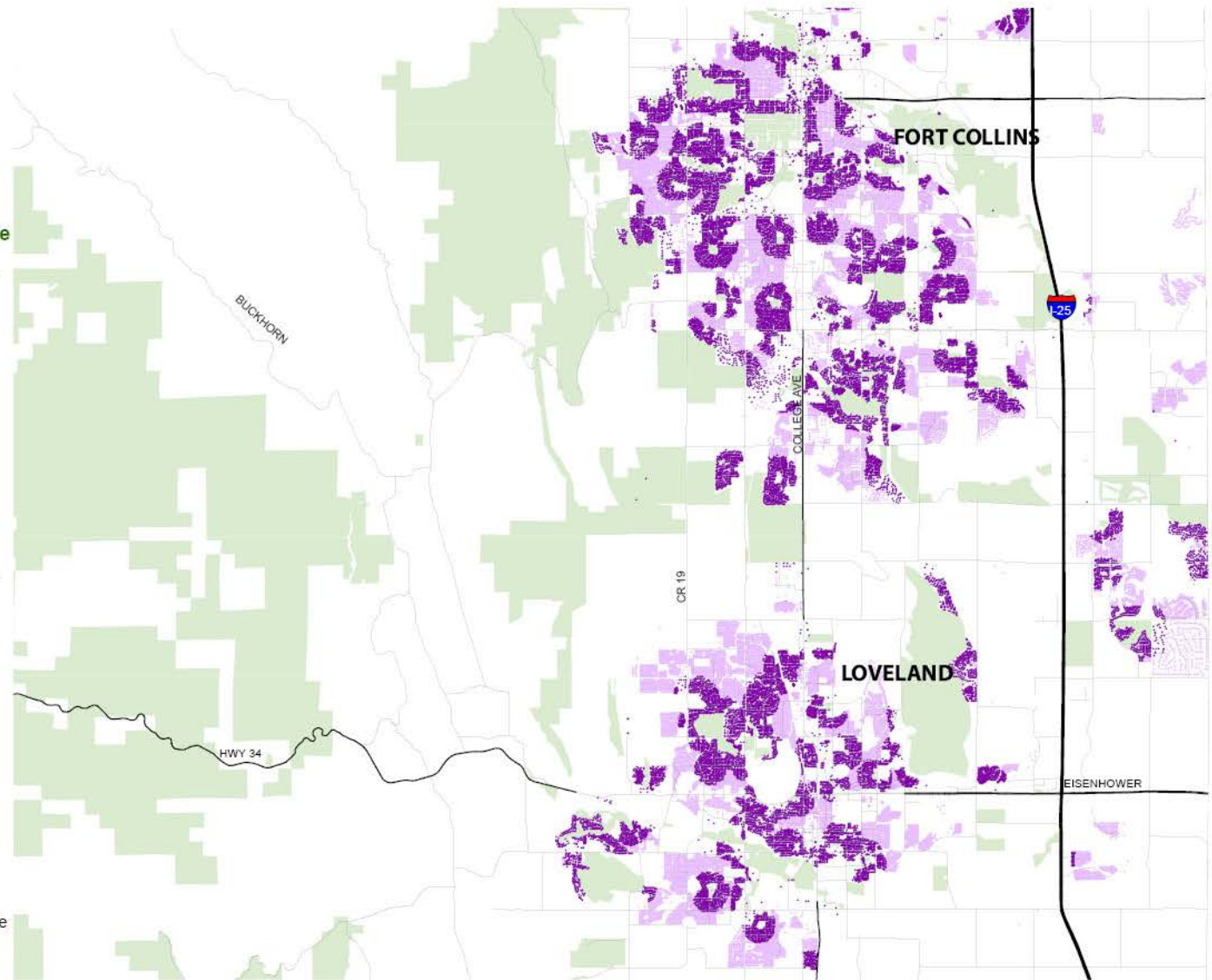
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- Residences with access within 1/4 mile
- Residences without access within 1/4 mile
- Public Access to Parks and Open Space



PUBLIC PARKS AND OPEN SPACE WITHIN WALKING DISTANCE OF CITY RESIDENCES

Address points derived from Larimer County Assessor database of residential properties

Distance from Schools to Parks and Open Space

The proximity of parks and open space to schools is an important factor for determining accessibility. 57 out of 91 (63 percent) of schools in Larimer County have public parks and open space within a five minute walk. There are 1,150 acres of parks and open space located within a five minute walk of all schools. To understand the spatial distribution of schools and their proximity to parks and open space, see Maps 8 and 9. Figure 22 provides a list of schools without publicly accessible parks and open space located within a five minute walk.

Figure 22: Schools without Parks and Open Space Located within a Five Minute Walk.

SCHOOL	
Bacon Elementary	Ivy Stockwell Elementary
Bauder Elementary	Kinard Core Knowledge Middle School
Berthoud Elementary	Lincoln Junior High School
Berthoud High School	Lincoln Middle School
Bethke Elementary	Learning House Foundation for Early Childhood
Big Thompson Elementary	Lucile Erwin Middle School
Carrie Martin Elementary	Namaqua Elementary
Cherry Heights Elementary (Proposed)	ODEa Elementary
Cottonwood Plains Elementary	Pioneer School
East Prospect High School (Proposed)	Ponderosa Elementary
Eyestone Elementary	Poudre High School
Fallana Early Childhood	Putnam Elementary
Harris Bilingual Immersion Elementary	Rocky Mountain High School
Irish Elementary	Stansberry Elementary

The purpose of this analysis was to identify schools that do not have adjacent parks and open space. The school properties may include their own natural features.

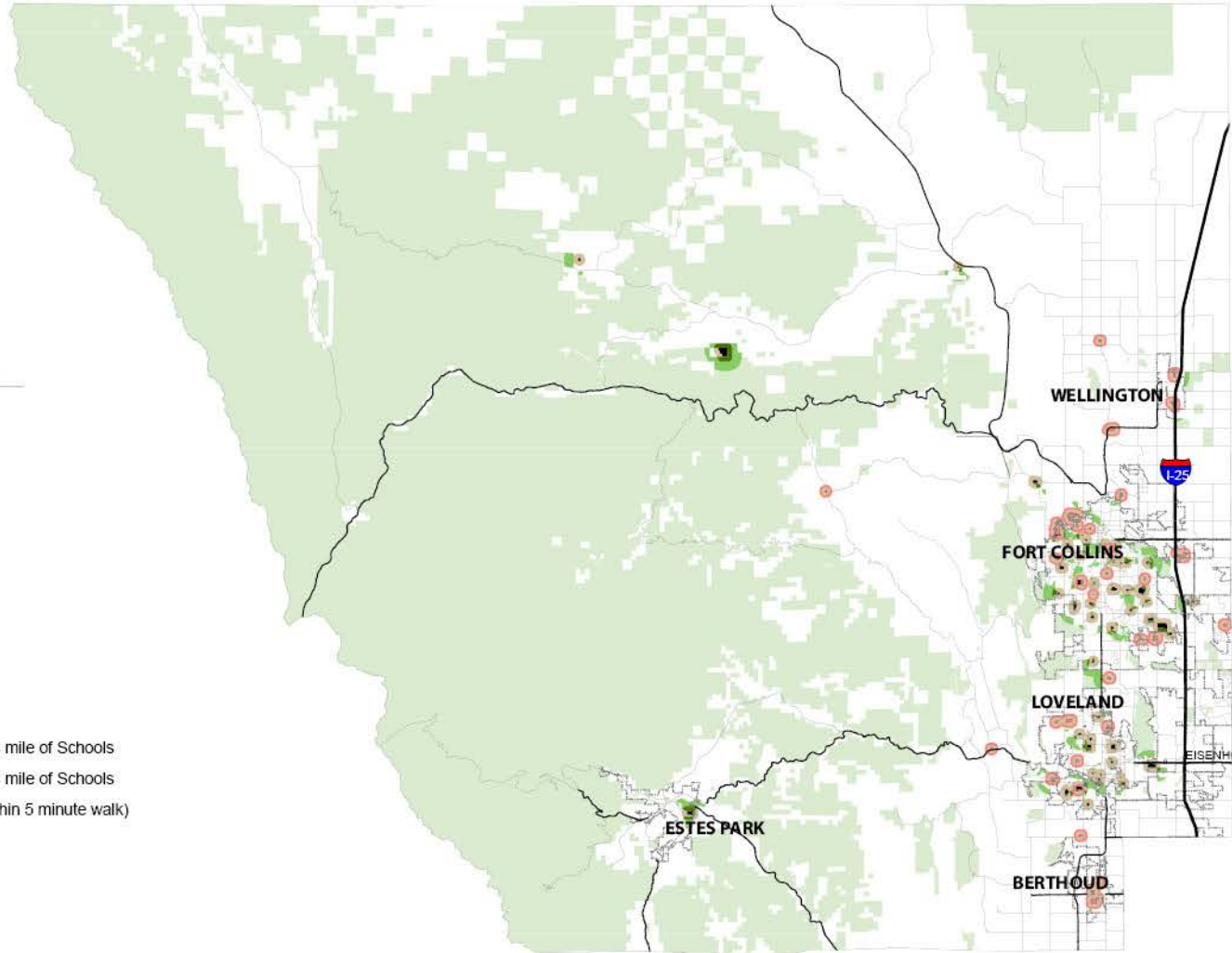
Map 8: Access to Parks and Open Space Within Walking Distance of Schools- County View



1,150 acres of Public Parks and Open Space are within a 1/4 mile walking distance of schools

57 out of 91 (63%) Schools in Larimer County have Public Parks and Open Space within a 1/4 mile walk

- Public Access to Parks and Open Space within 1/4 mile of Schools
- Public Access to Parks and Open Space within 3/4 mile of Schools
- Schools not served by Parks and Open Space (within 5 minute walk)
- Priority Areas
- All other schools (K-12)
- 5 Min. Walking Distance (1/4 mile) from Schools
- Public Access to Parks and Open Space



PUBLIC ACCESS TO PARKS AND OPEN SPACE WITHIN WALKING DISTANCE OF SCHOOLS

Map 9: Access to Parks and Open Space Within Walking Distance of Schools- Fort Collins/Loveland View

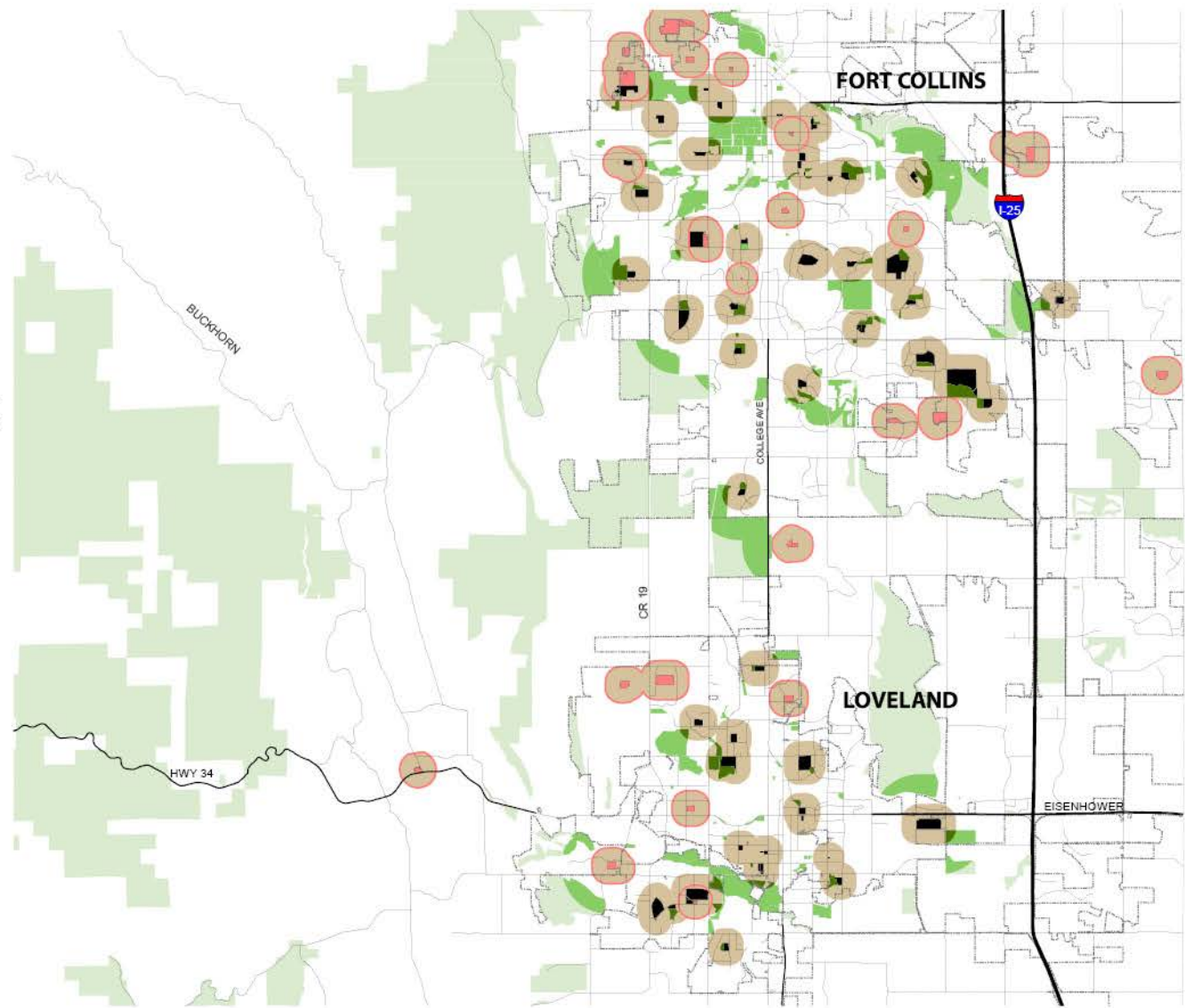


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1,150 acres of Public Parks and Open Space are within a 1/4 mile walking distance of schools

57 out of 91 (63%) Schools in Larimer County have Public Parks and Open Space within a 1/4 mile walk

- Public Access to Parks and Open Space within 1/4 mile of Schools
- Public Access to Parks and Open Space within 3/4 mile of Schools
- Other Public Access to Parks and Open Space
- Schools not served by Open Space (within 5 minute walk)
- All other schools (K-12)
- Priority Areas
- 5 Min. Walking Distance (1/4 mile) from Schools



PUBLIC ACCESS TO PARKS AND OPEN SPACE WITHIN WALKING DISTANCE OF SCHOOLS

Distance from Child Care Facilities to Parks and Open Space

This analysis utilizes existing child care facilities to understand if they are appropriately served by parks and open space. 82 out of 363 child care facilities are not located within a five minute walk of parks and open space. To understand the spatial distribution of child care facilities and their proximity to parks and open space, see Map 10.

Figure 23: Inventory of Child Care Facilities' Proximity to Parks and Open Space

CHILD CARE FACILITY TYPE	TOTAL # FACILITIES	# FACILITIES WITHOUT ACCESS TO PARKS AND OPEN SPACE WITHIN A 5 MINUTE WALKING DISTANCE
Before and After School Programs	45	18
Pre-Schools	63	25
Family Child Care Homes	252	137
Family Child Care	5	3

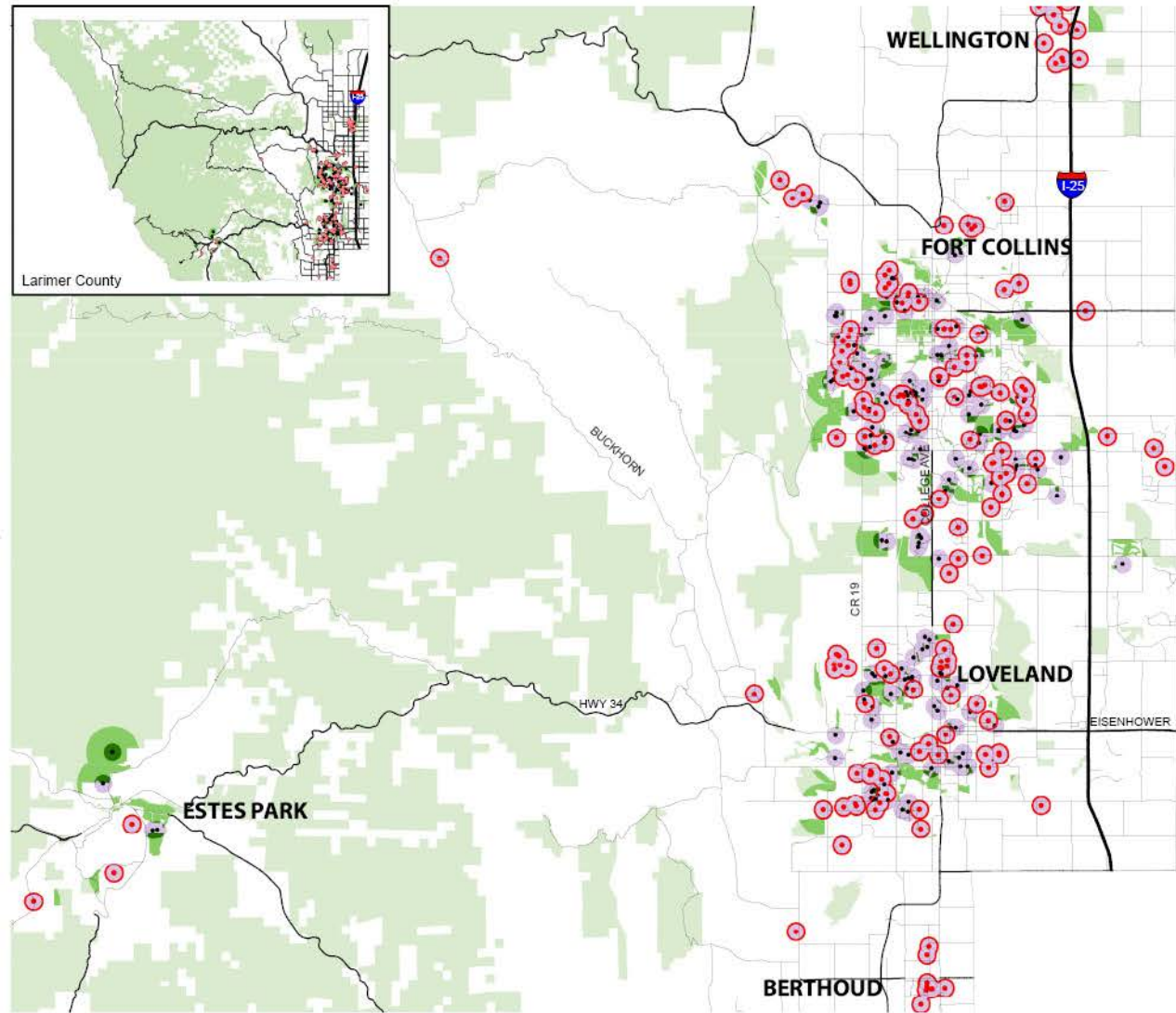
Map 10: Child Care Facilities Access to Parks and Open Space



182 out of 363 (or 50%) Child Care Facilities are not located within a 5 minute walk of parks and open space.

This equates to 3,198 "licenses" (allowances for children) without access to parks and open space within 1/4 mile.

- Child Care without Parks and Open Space within a 1/4 mile
- Priority Areas
- Child Care Locations
- Parks and Open Space within 1/4 mile of Child Care
- Parks and Open Space within 3/4 mile of Child Care
- 5 Min. Walk Distance (1/4 mile) from Child Care
- Public Access to Parks and Open Space



PUBLIC ACCESS TO PARKS AND OPEN SPACE WITHIN WALKING DISTANCE OF CHILD CARE FACILITIES

Child care facilities are defined as: family child care, family child care homes, preschools and before/after school programs obtained from Larimer County.

Resident Distance to Trails

There are 612 miles of regional, paved, and soft surface trails within Larimer County. Each city varies greatly in the availability of trails per capita. Windsor, Estes Park, and Fort Collins provide the greatest number of trails per-person within municipal boundaries. Thirty-four percent of all address points (including residential, commercial, and industrial throughout the County) are within a five minute walk of existing and proposed trails.

The Plug in to Nature County-wide Survey indicates that people are overall satisfied with trail opportunities in Larimer County. However, Community Meeting participants emphasized a need for greater trail connectivity and trail completion.

See Map 11 for spatial distribution of trails and their proximity to populated areas. See Figure 24 for a listing of trail mileage within each city.

Figure 24: Trail Inventory

COMMUNITY	TOTAL TRAIL MILEAGE WITHIN CITY LIMITS	TRAIL MILEAGE WITHIN CITY LIMITS PER 1,000 PEOPLE POPULATION
Loveland	22.3	0.33
Windsor (in Larimer County)	19.5	8.9
Fort Collins	150.3	1.04
Estes Park	19.8	3.4



The website *Trails.com* provides a searchable database with maps identifying hikes appropriate for children. It also highlights natural features that kids think are “really cool” extracted from the guidebook “Best Hikes with Children in Colorado.”

Map 11: Proximity to Trails



Finding Connections to the Outdoors
for Youth and Families in Larimer County

34% (45,301 out of 133,504) of
addresses (all) are within a 5 minute
(1/4 mile) walk of a trail.

Trail Mileage in Larimer County: 612 miles

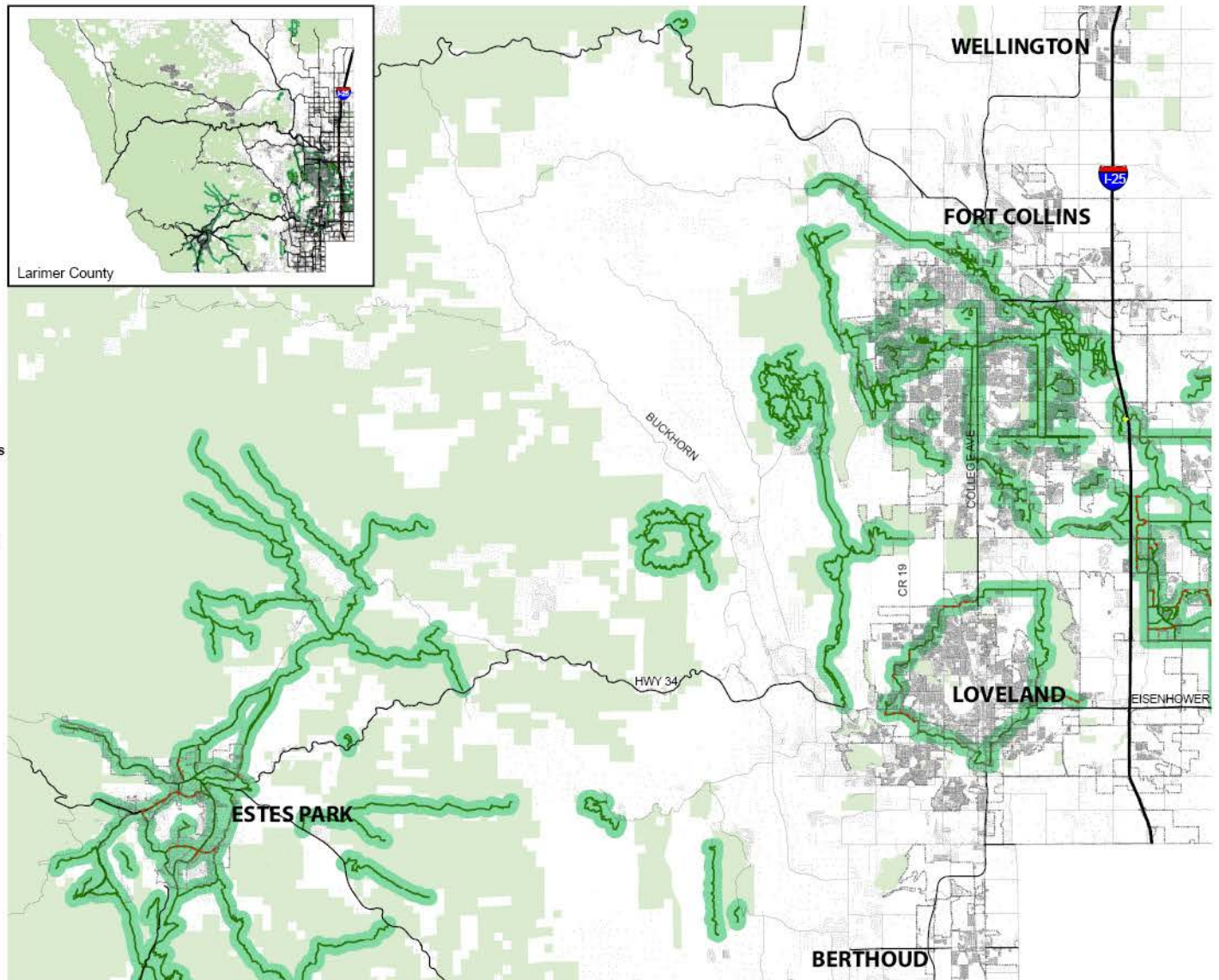
Trail Mileage by City Limits:

Loveland (existing and proposed) = 22.3
Windsor = 19.5 (in Larimer County), 166 total city limits
Fort Collins = 150.3
Estes Park = 19.8

Trail Mileage in City Limits per (1,000 people):

Loveland (existing and proposed) = .33
Windsor = 8.9
Fort Collins = 1.04
Estes Park = 3.4

- 1/4 Mile Access to Trails
- Public Access Parks and Open Space
- Trails
- Proposed/Future Trails
- Address Points (All)



PROXIMITY TO TRAILS

For this analysis, it was determined best to extract applicable trail types from Fort Collins. For example, this analysis does not include paved bike routes located on or along roadways.

Accessibility Related to Demographics

Distribution of Parks and Open Space Evaluation

The proximity of parks and open space to specific population groups was completed to determine any disparities in parks and open space distribution across the County. This evaluation helps identify underserved demographic groups and their proximity to parks and open space. The demographic factors evaluated include:

- Development density
- Population density
- Concentration of children
- Income range
- Racial diversity

The threshold for identifying the parks and open space available for underserved populations was determined by comparing the percent coverage of parks and open space in incorporated areas (11.3%) to that of the above demographic factors.

Development and Population Density

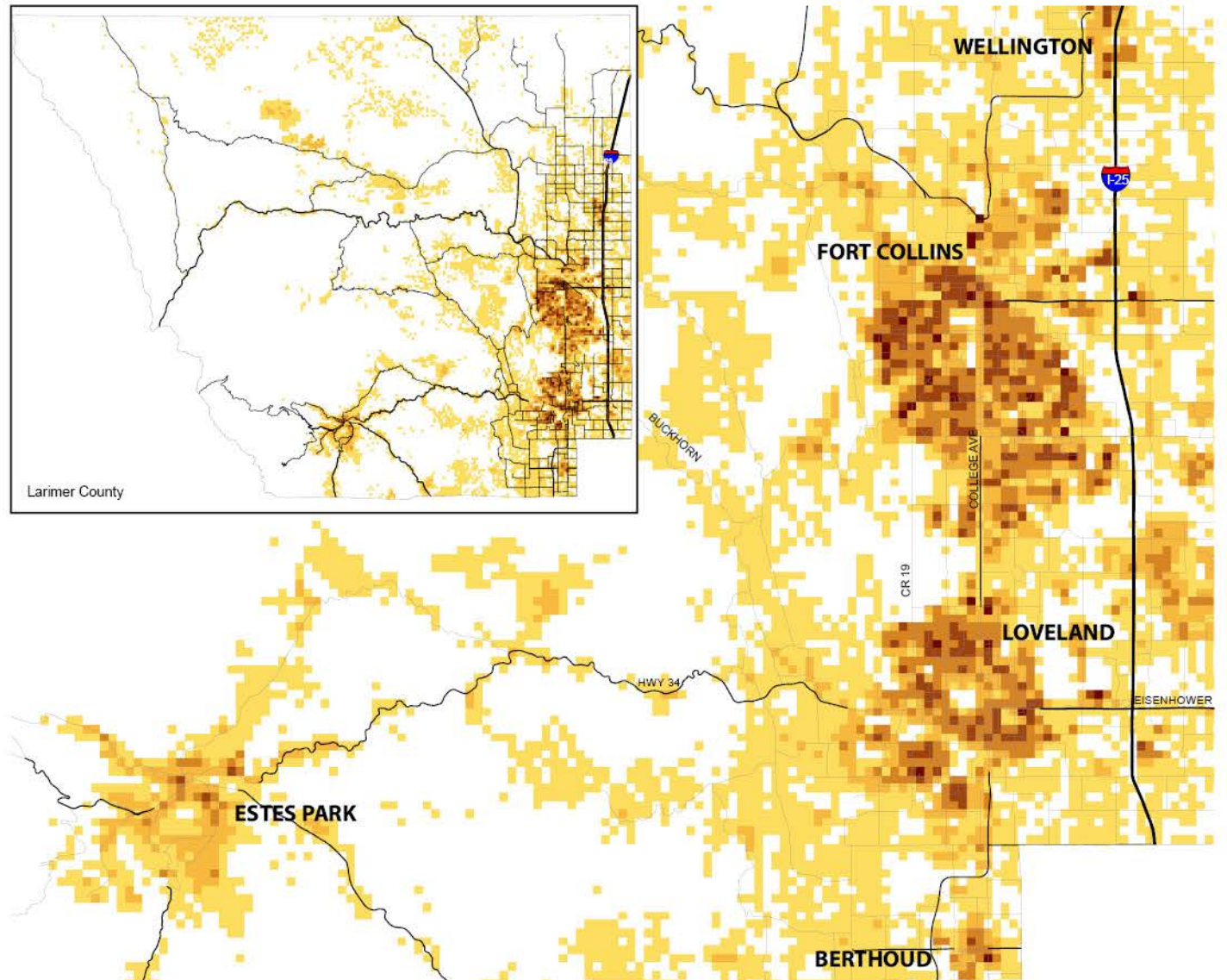
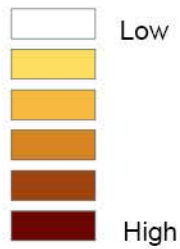
Map 12 displays the density of all address points in the County, including agricultural, industrial, commercial, and residential. The range of densities describes the general location of development concentration within the County.

The “Census Areas with High Density Population” Map 13 highlights in blue and red colors the medium and high population density areas ranging from 8.1 to 25 people per acre. Only 1.9 percent of the land area in medium to high density areas is parks and open space. These medium and high population density areas have far less parks and open space acreage than the overall incorporated areas which average 11.3 percent. Therefore these areas are considered underserved.

Map 12: Concentration of Development



Concentration of Development



DENSITY OF ADDRESS POINTS (ALL)

Map 13: High Density of Population




Finding Connections to the Outdoors
for Youth and Families in Larimer County




Parks and Open space coverage within city boundaries is 11.3% (8,980 out of 79,194 acres)

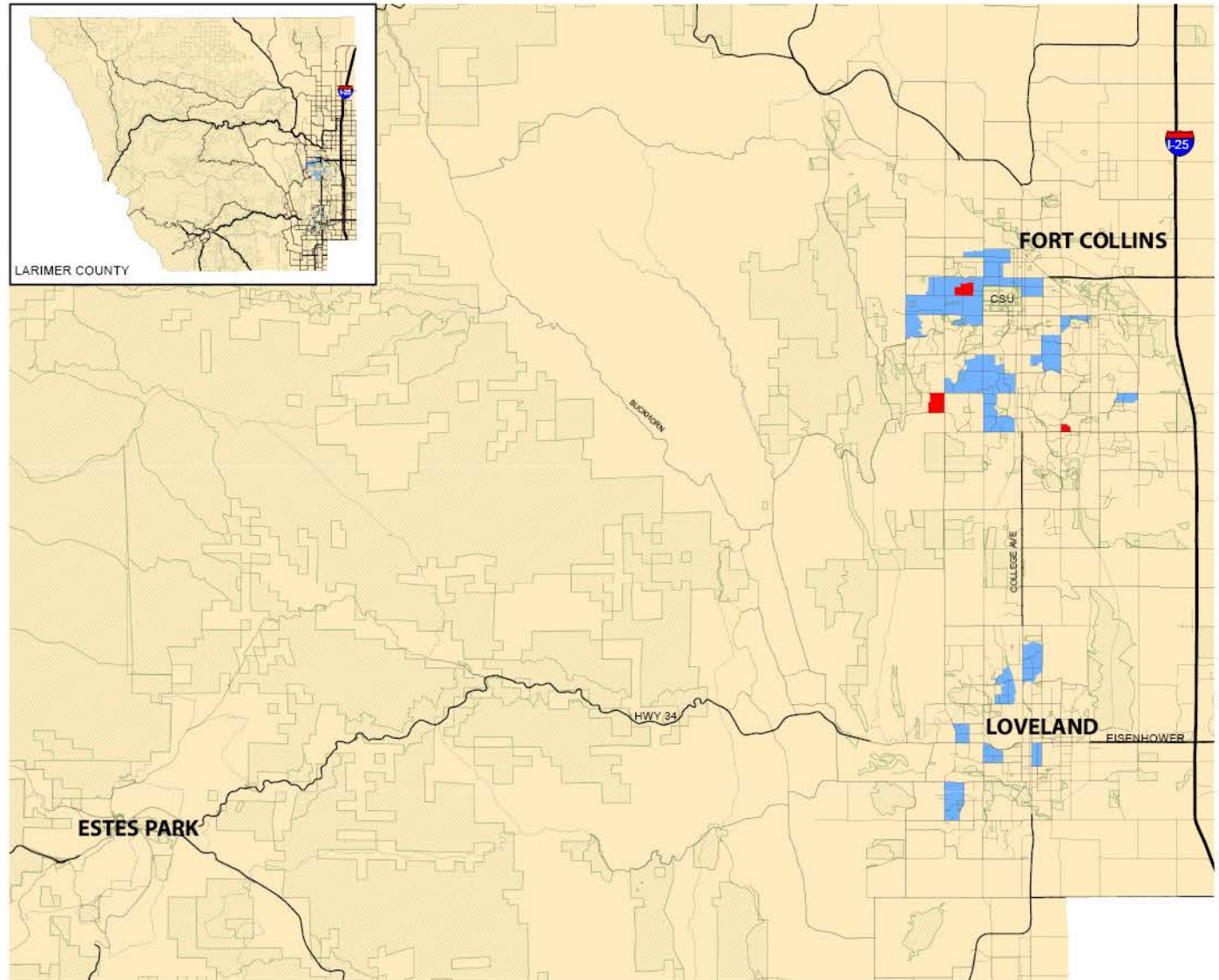
Coverage of parks and open space in areas with a LOW density of people/acre is 56% or 944,920 acres out of 1,680,703 acres.

Coverage of parks and open space in areas with a MEDIUM/HIGH density of people/acre is 1.9% or (94 acres out of 4,981 acres).

 Public Access to Parks and Open Space

People Per Acre

-  people per acre-HIGH (16.1-25)
-  people per acre-MED (8.1-16)
-  people per acre-LOW (0-8.0)



CENSUS AREAS WITH HIGH DENSITY POPULATION

Concentration of Children

The locations of greatest concentration of children somewhat differ from that of the entire population of the County. The most dense residential neighborhoods are concentrated around the CSU campus in Fort Collins, while density of children spreads more uniformly throughout Fort Collins and Loveland neighborhoods. See Map 14.

In areas with the highest density of children, (1.6 to 5.1 children per acre) publicly accessible parks and open space comprise 2.7 percent of the land area. Since the percent of publicly accessible parks and open space acres within both high population and high children density areas is far lower than the amounts found within all incorporated areas (11.3 percent), these census block areas shown in red and blue are considered underserved in acres of parks and open space.

Income Range

Utilizing the 2010 Census median household income data, the lowest income category of \$0-\$27,000 annually was extracted to understand if nature and outdoor recreation opportunities are located within an appropriate distance. The lowest income category is shown on Map 15 in yellow.

Nine percent (331.5 acres) of the land area within low income neighborhoods is parks and open space. Since the availability of parks and open space is not significantly different than the overall incorporated areas, low income areas do not appear to be notably underserved. To understand the spatial distribution of income see Map 13.

Racial Diversity

The 2010 Census Diversity Index identifies locations of racial diversity. The highest racial diversity areas were extracted to understand if these areas are appropriately served by nature and outdoor recreation opportunities. There are 572 acres of parks and open space within these areas, which equates to nearly seven percent parks and open space coverage. See Map 16.

This evaluation suggests that although public input indicated that the Latino population may relate to nature differently than the larger Caucasian population, it is not due to a lack of parks and open space in close proximity to the areas of greatest population concentrations. Community meetings and focus groups confirmed this understanding. The study concludes that factors other than proximity alone have a greater influence on Latino's connections to nature.

Map 14: Concentration of Children



Finding Connections to the Outdoors
for Youth and Families in Larimer County

Parks and open space coverage within
city boundaries is 11.3%
(8,980 out of 79,194 acres)

THE AVERAGE PERCENTAGE OF PARKS
AND OPEN SPACE IN HIGH POPULATED
AREAS (8-26 people per acre) IS 2%.

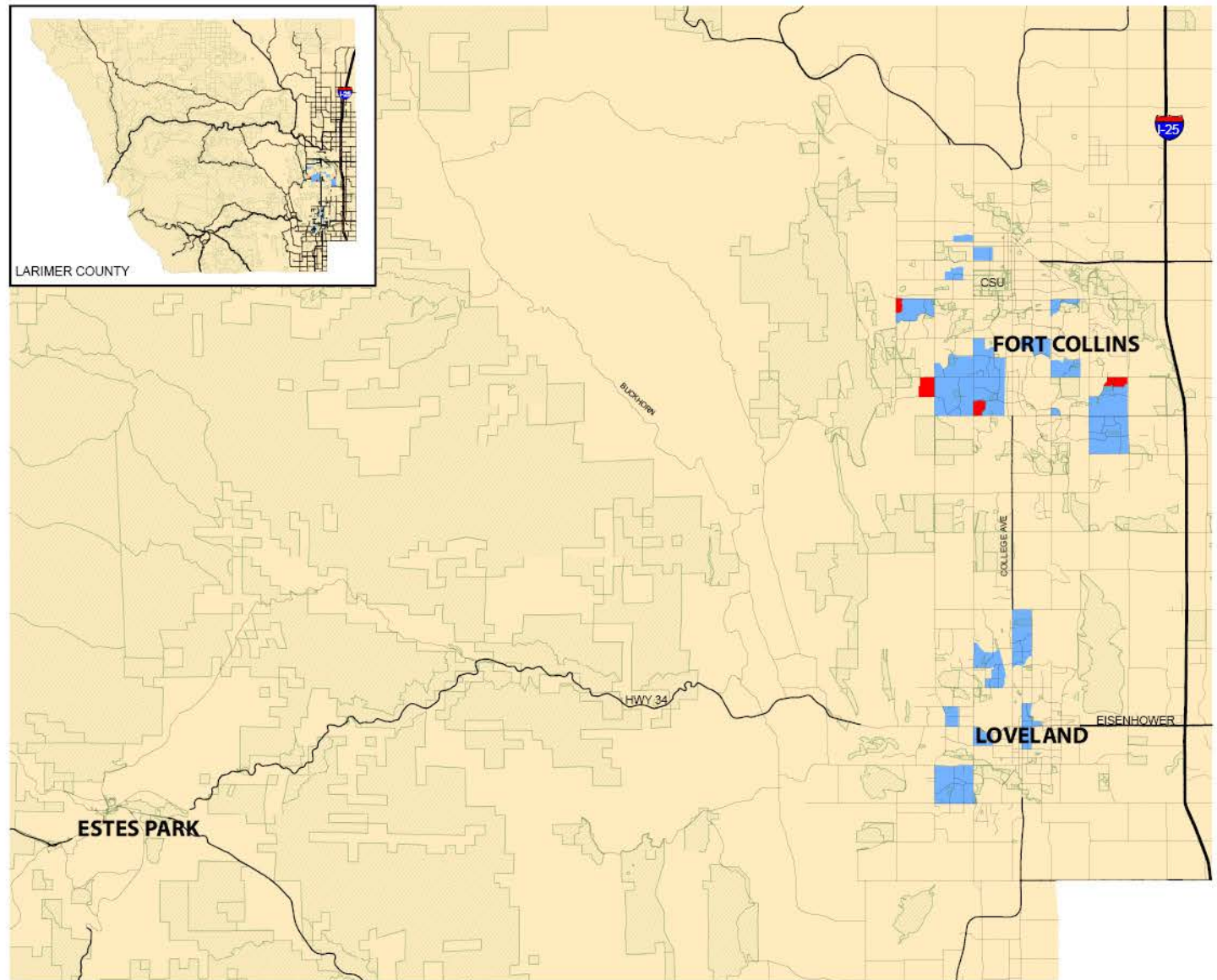
Coverage of parks and open space in areas
with a LOW density of children/acre
is 56% or (944,847 acres out of
1,679,520 acres).

Coverage of parks and open space in areas
with a MEDIUM/HIGH density of children/acre
is 2.7% or (168 acres out of 6,163 acres).

Public Access to Parks and Open Space

Children Per Acre

- Children per acre - HIGH (3.1-5.1)
- Children per acre - MED (1.6-3.0)
- Children per acre - LOW (0-1.5)



CENSUS AREAS WITH HIGH DENSITY OF CHILDREN

Map 15: Lowest Income Areas Proximity to Parks and Open Space





Finding Connections to the Outdoors
for Youth and Families in Larimer County

Parks and open space coverage within
city boundaries is 11.3%
(8,980 out of 79,194 acres)






924 ACRES OF PARKS AND OPEN SPACE
WITHIN A 5 MINUTE WALKING DISTANCE
OF THE LOWEST INCOME AREAS
(\$0 - \$27,000)

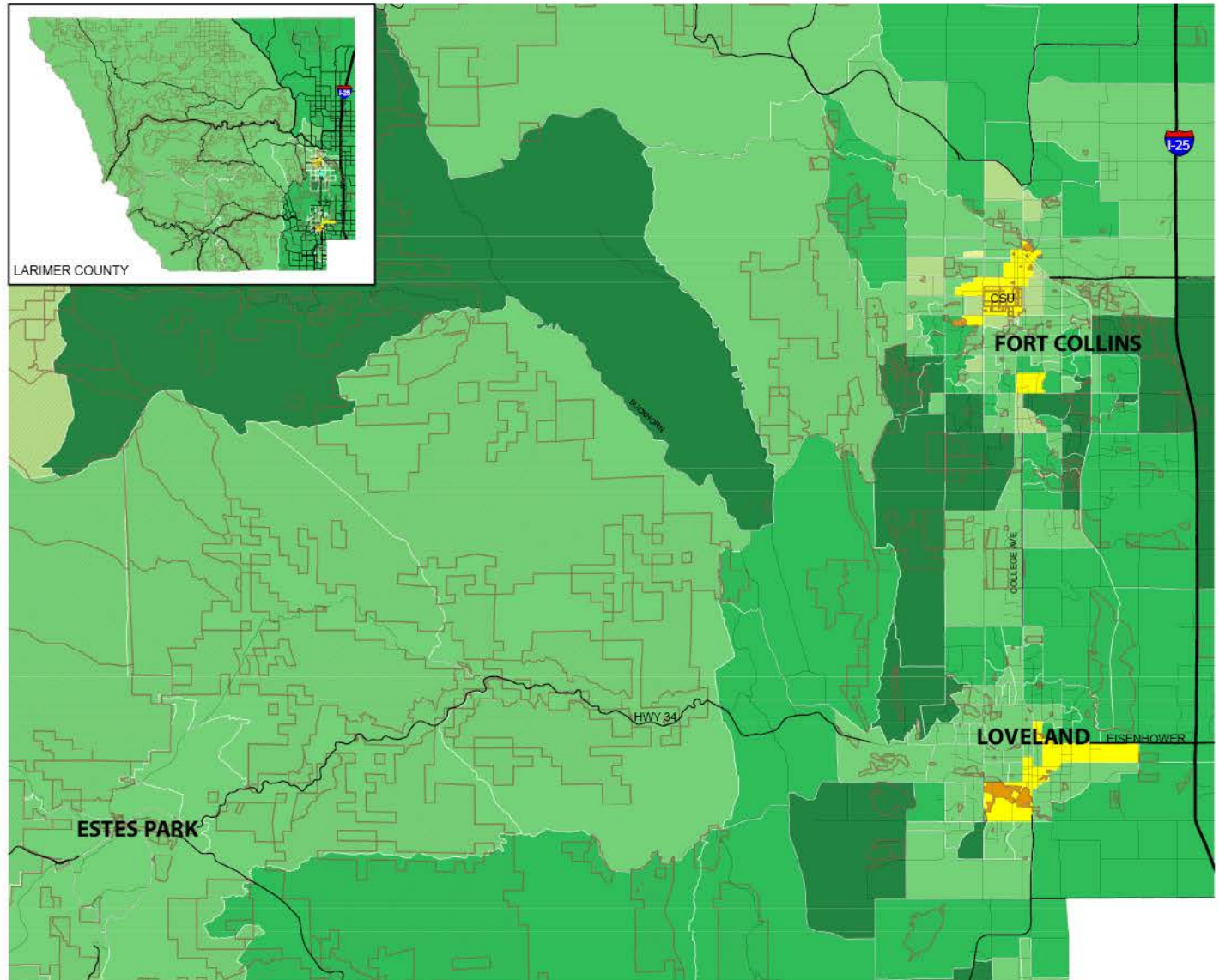
331.5 ACRES OF PARKS AND OPEN SPACE
ARE LOCATED WITHIN THE LOWEST
INCOME AREAS (\$0 - \$27,000).

THIS EQUATES TO 9% OF LOWEST INCOME
LANDS AS PARKS OPEN SPACE.
(This calculation does not include CSU
campus as open space)

-  Parks and Open Space within
Lowest Income Areas
-  Public Access to Parks and Open Space

2010 Census Data

- Median Household Income**
-  \$84,001 to \$375,000
 -  \$70,001 to \$84,000
 -  \$41,001 to \$70,000 (Mean: \$55,265)
 -  \$27,001 to \$41,000
 -  Income \$0 - \$27,000



LOWEST INCOME AREAS - PROXIMITY TO PARKS AND OPEN SPACE

It should be noted that the CSU campus was not considered a park or open space for this evaluation.

Map 16: Populations with Highest Racial Diversity Proximity to Parks and Open Space



Finding Connections to the Outdoors
for Youth and Families in Larimer County

Parks and open space coverage within city boundaries is 11.3% (8,980 out of 79,194 acres)

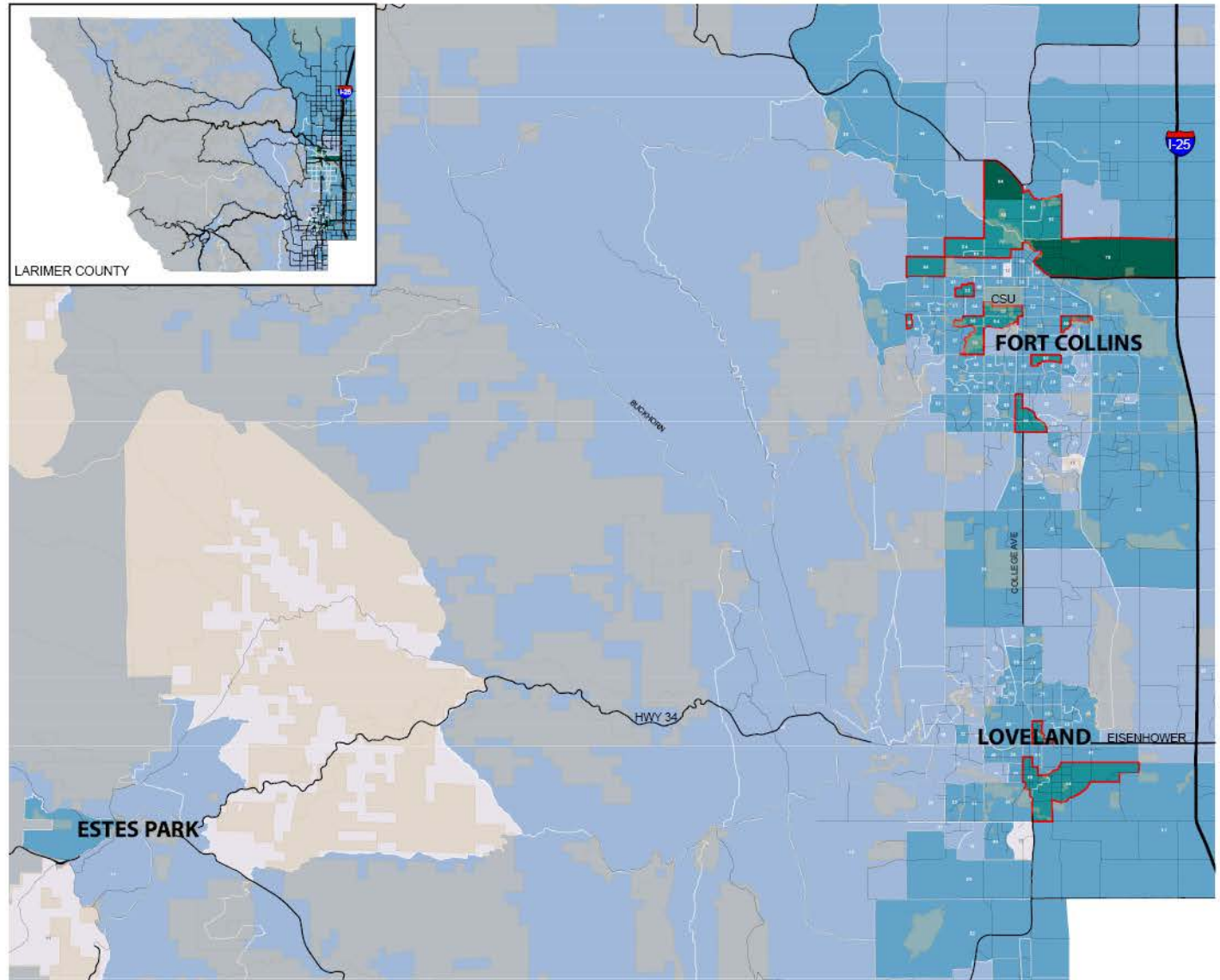
572 ACRES OF PARKS AND OPEN SPACE WITHIN AREAS OF HIGHEST DIVERSITY. THIS EQUATES TO 6.9% PARKS AND OPEN SPACE.

- High Diversity Index
- Public Parks and Open Space

2010 Census Data

Diversity Index

- 75.1 to 100 (more diverse)
- 53.1 to 75.0
- 26.1 to 53.0 (Mean: 42.0)
- 12.1 to 26.0
- 0 to 12 (less diverse)



POPULATIONS WITH HIGHEST RACIAL DIVERSITY - PROXIMITY TO PARKS AND OPEN SPACE

7



Lands Suitable for Parks & Open Space

Lands Suitable for Connections to Nature

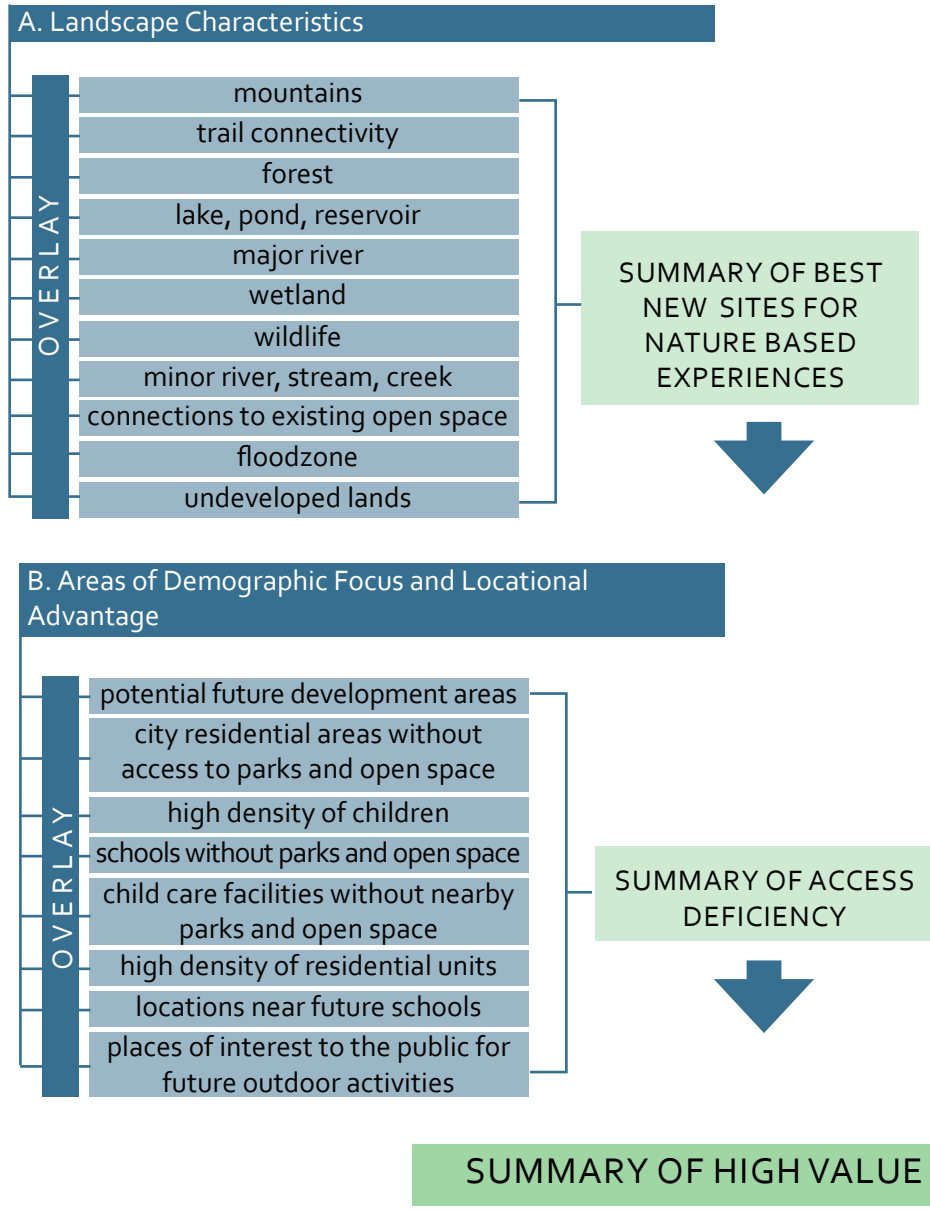
Identification of New Sites for Nature Based Experiences

The County, municipalities, government agencies, land trusts and others have done a remarkable job of conserving lands for their ecological, recreation, scenic and other natural quality values. This study adds a dimension of understanding to what constitutes desirable future parks, trails, and open space for youth and families to experience nature.

The evaluation will inform future planning efforts in identifying locations for parks, trails, and open space that improve youth and family access to nature. A blend of natural and social conditions are used to identify which lands are most suitable to achieve the goals of this study. The social conditions include the significant demographics and deficiencies in proximity to parks and open space identified in Chapter 6.

The study utilizes Geographic Information Systems (GIS) mapping and databases to determine the most suitable sites for future parks and open space within Larimer County. Community values inform the analysis in evaluating the most desirable features.

Land Areas with High Suitability for Nature Based Experiences



Land Characteristics with High Suitability for Nature Based Experiences

The County-wide Plug in to Nature Survey provided valuable information about the natural settings that are integral to creating a positive experience for families in nature and the out-of-doors. For example, the most highly valued land characteristics were mountains, trails, forest and water resources. Figure 25 describes the weighted importance assigned to landscape characteristics on a scale of 1 (lowest importance) to 10 (highest importance) utilized in the mapping overlay to identify the locations that contain the most suitable characteristics.

Figure 25: Landscape Characteristics Weighting

IMPORTANT SETTINGS AS PLACES FOR FAMILIES TO BE IN NATURE AND OUTDOORS	
Setting	Weight Importance
Mountains	10
Trail Connectivity	10
Forest	9
Lake, Pond, Reservoir	9
Major River	9
Wetland	9
Wildlife	5
Minor River, Stream, Creek	5
Connections to Existing Parks and Open Space	5
Flood Plain Zone	3

Map 17 shows the locations that contain the greatest number of high value natural features using the weighted importance from the County-wide Survey results.

When all currently developed lands and all conserved lands are removed from consideration, suitable locations for nature and outdoor experiences are revealed. Maps 18 and 19 indicate that the majority of lands identified as most suitable exist in the western portion of the County, along major waterways, water bodies, or surrounding existing parks and open space lands.

“Nature in its smallest forms, has strong restorative power along with an ability to fascinate, invoke a sense of wonder and connection”

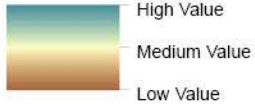
- Tom Beatley, Planning Magazine, January 2012



Map 17: Important Settings as Places for Families to be in Nature/Outdoors

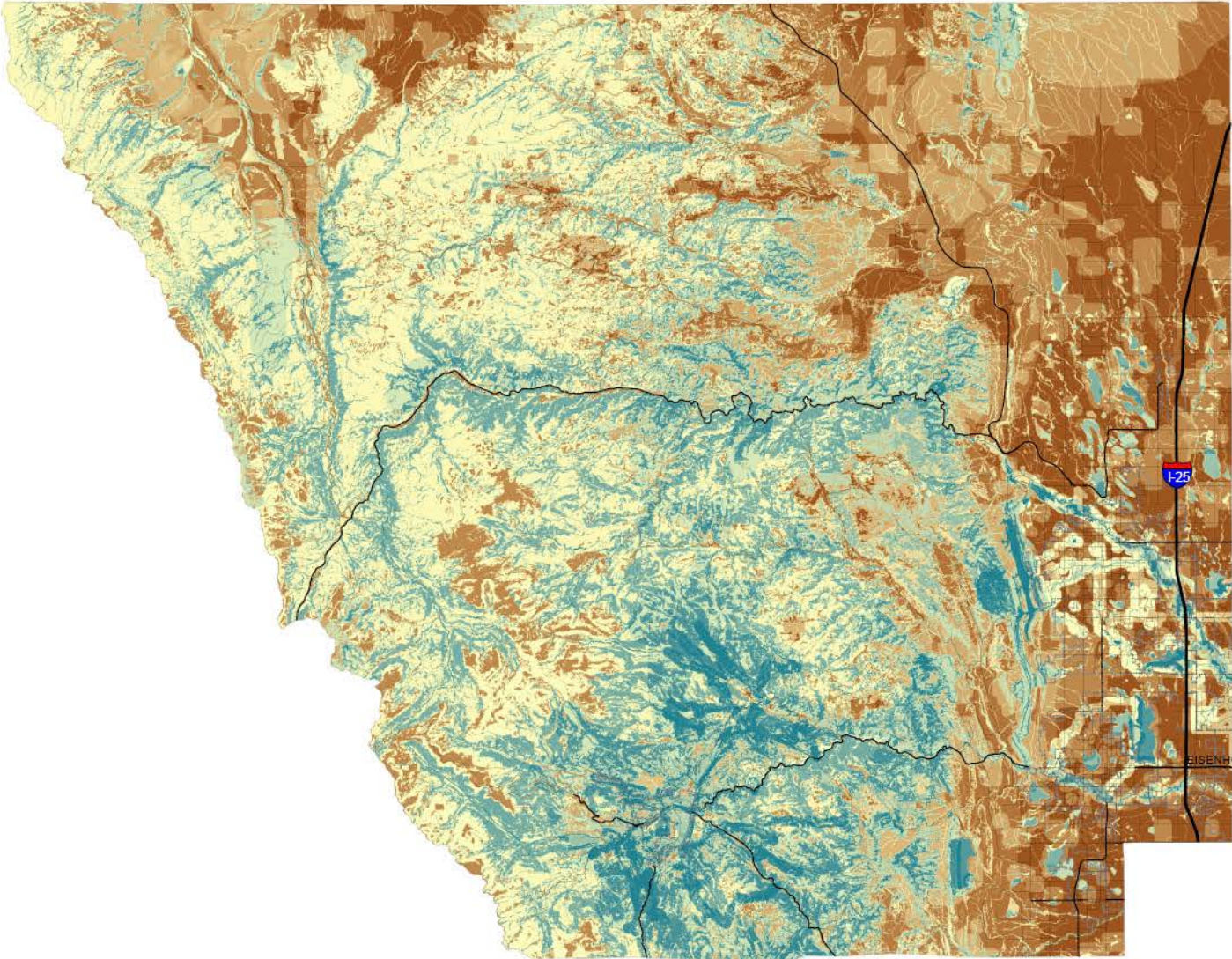


Important Settings to be in Nature/Outdoors



FEATURES:

- Mountains
- Trail Connectivity
- Forest
- Lake, Pond, Reservoir
- Major River
- Wetland
- Wildlife
- Minor River, Stream, Creek
- Connections to Existing Open Space
- Floodplain Zones



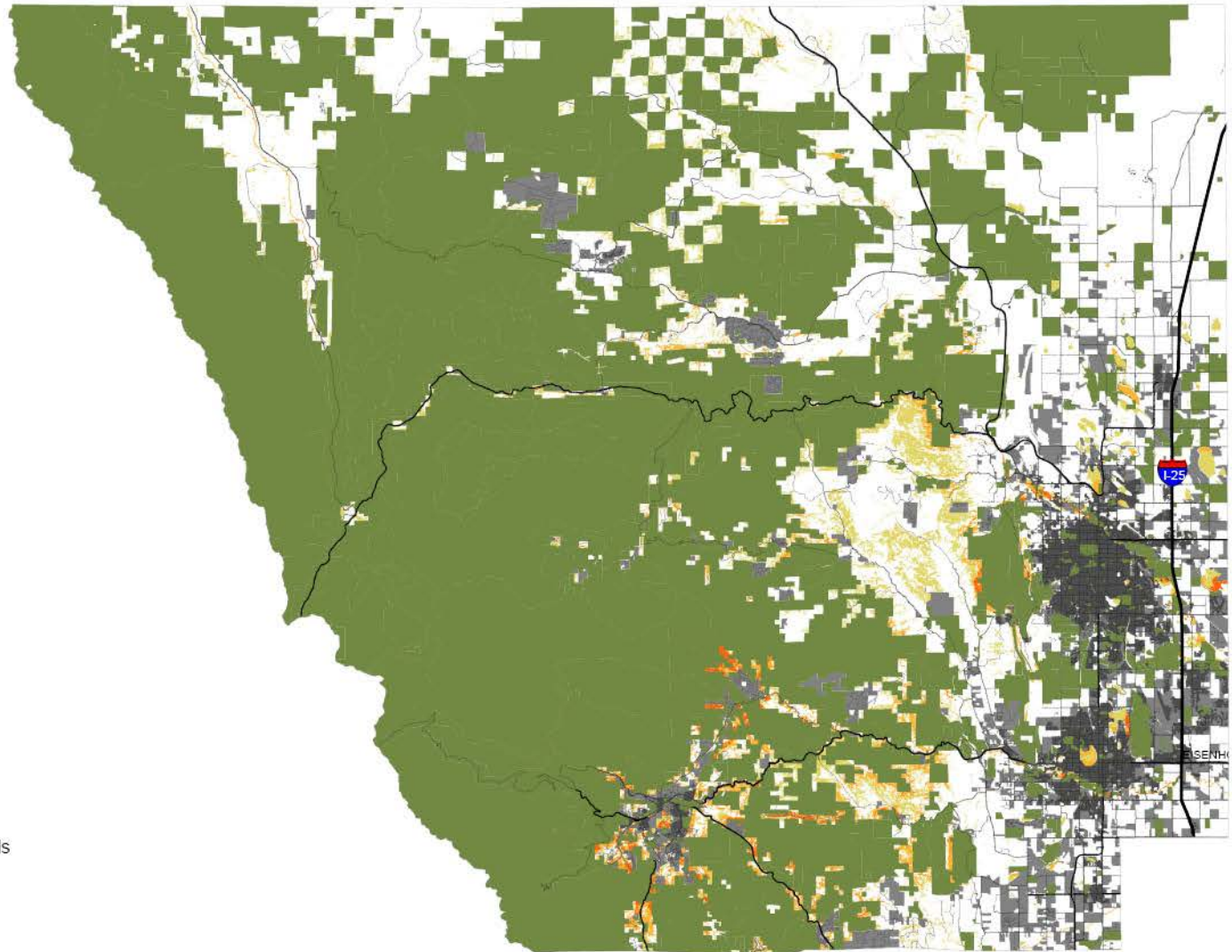
Important Settings as Places for Families to be in Nature/Outdoors

Map 18: Suitability of Places for Nature/Outdoor Experiences- County View



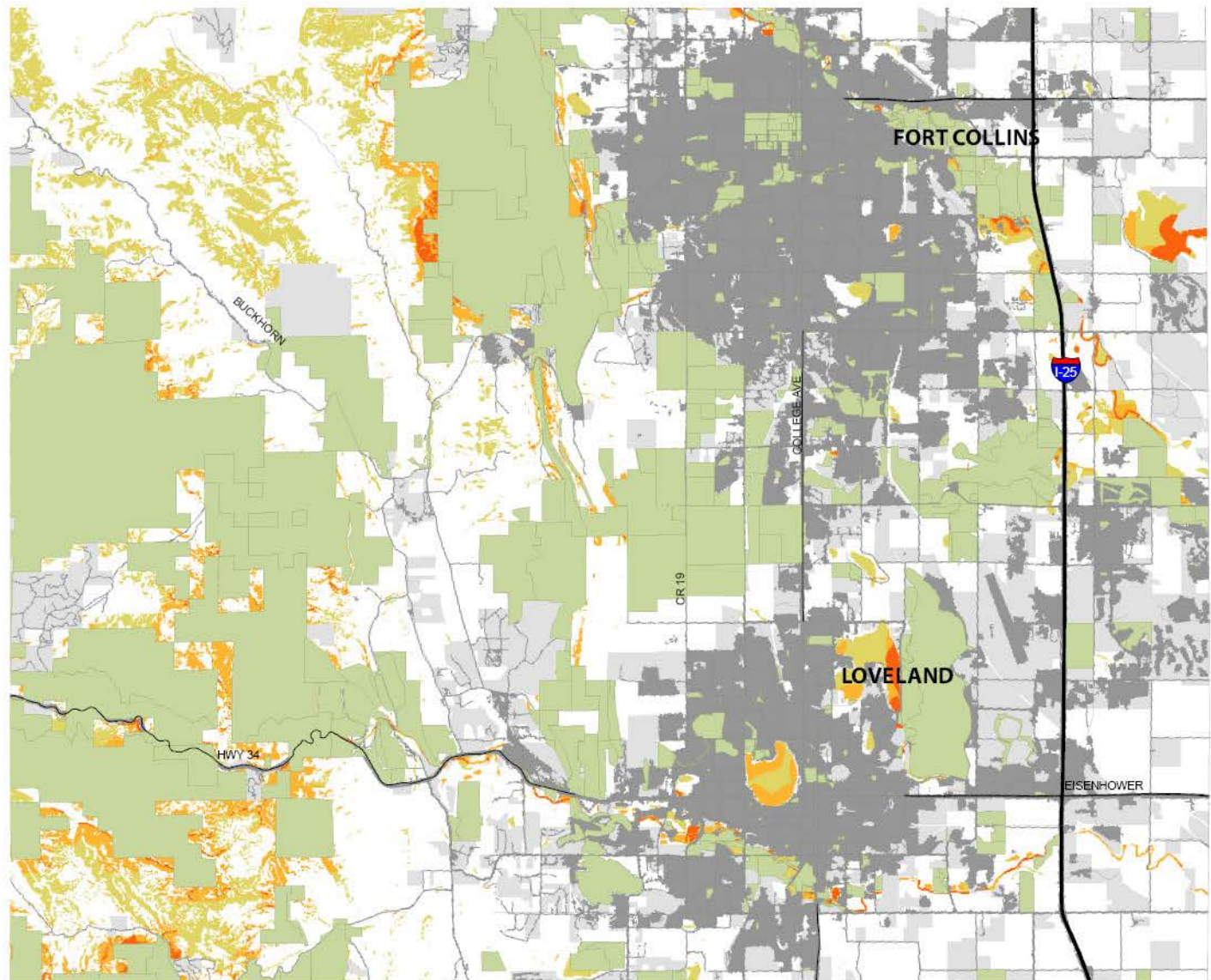
Important Settings to be in Nature/Outdoors

- Medium Value
- High Value
- Extremely High Value
- Impervious Surfaces
- Subdivisions
- All Public Access and Conserved Lands



Suitability of Places for Nature/Outdoors Experiences

Map 19: Suitability of Places for Nature/Outdoor Experiences- Fort Collins/Loveland View



Important Settings to be in Nature/Outdoors

Value

- Low Value
- Medium Value
- High Value
- Extremely High Value

- Impervious Surfaces
- Subdivisions
- All Public Access and Conserved Lands

Suitability of Places for Nature/Outdoors Experiences

Areas of Demographic Focus and Locational Advantage

Growth Management Areas

Areas of potential future development and growth are considered to be important locations to plan for future opportunities. The potential future development areas are defined by the Growth Management Areas and Planned Areas anticipated by local municipalities. Map 20 shows these potential future development areas. Areas surrounding six potential future school sites within the Thompson and Poudre school districts are also included in this analysis.

Demographic Focus

Areas which were identified from the analysis as deficient in access to nature are: urban residential areas, schools, and child care facilities that do not have public parks and open space within close proximity. Other areas of focus include locations with high concentrations of children and high density of population. Input from the public informed the weighting of significant demographic characteristics and geographically underserved locations.

Figure 26: Areas of Demographic Focus and Locational Advantage Weighting

WEIGHTED PLACES OF FOCUS	
Target Places	Weight Importance
Potential Future Development Areas	10
City Residential Areas without Access to Parks and Open Space within 1/4 Mile	9
High Density of Children	6 to 8
Schools without Parks and Open Space within 1/4 Mile	7
Child Care Facilities without Parks and Open Space within 1/4 Mile	6
High Density of Residential Units	5
Locations with 1/2 Mile of Potential Future School	4
Places of Interest to the Public for Future Outdoor Activities	1 to 3

Importance is assigned to mapped characteristics on a scale of 1 (lowest importance) to 10 (highest importance).

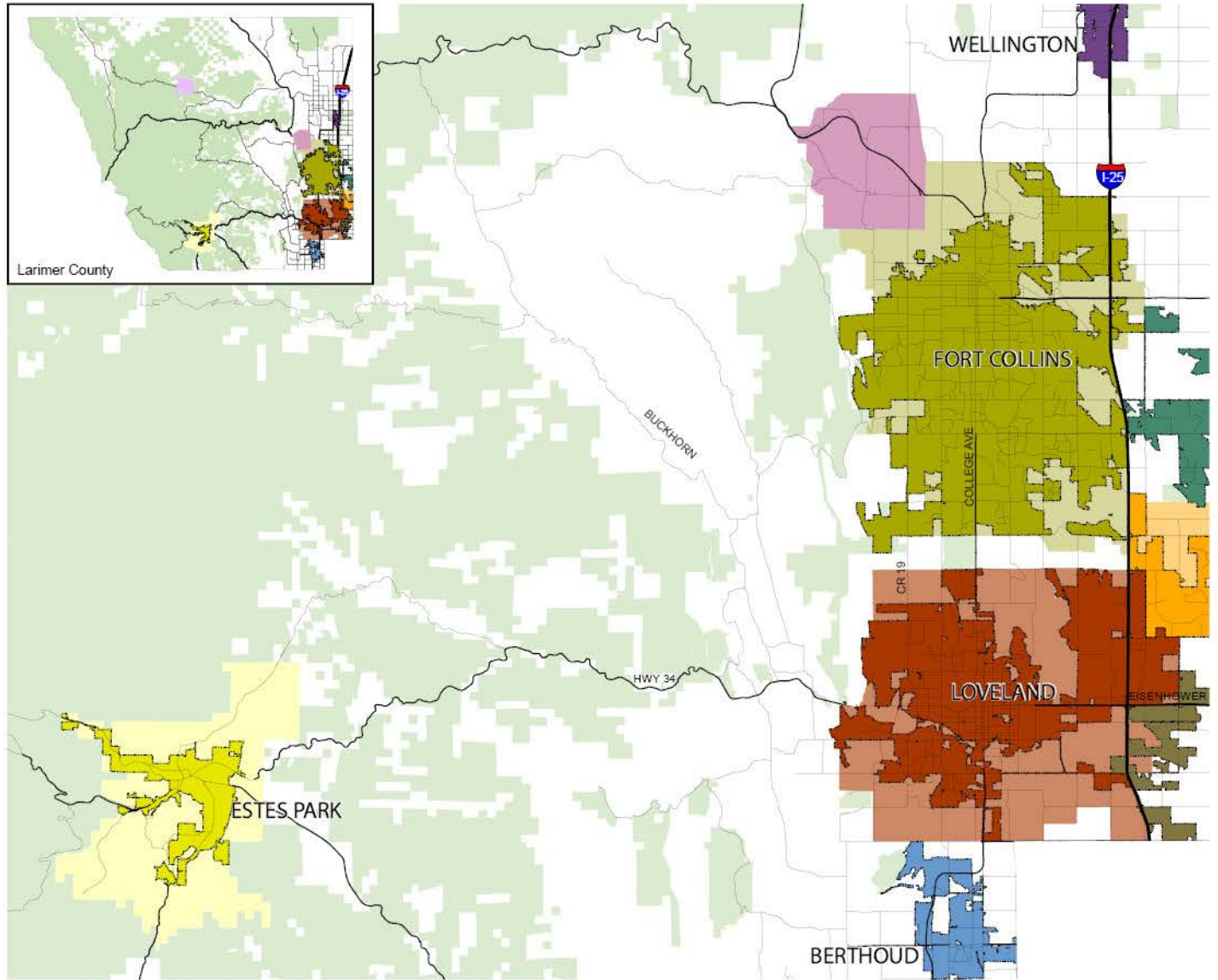
The weighted mapping includes the input from parents at the Community Meetings regarding places they would like to see outdoor activities for their children.

Overall these demographic and locational factors focus on serving the greatest number of residents, therefore it is not surprising that the primary areas of high value are within or just outside of municipal boundaries. See Maps 21 and 22.

Map 20: Growth Management Areas

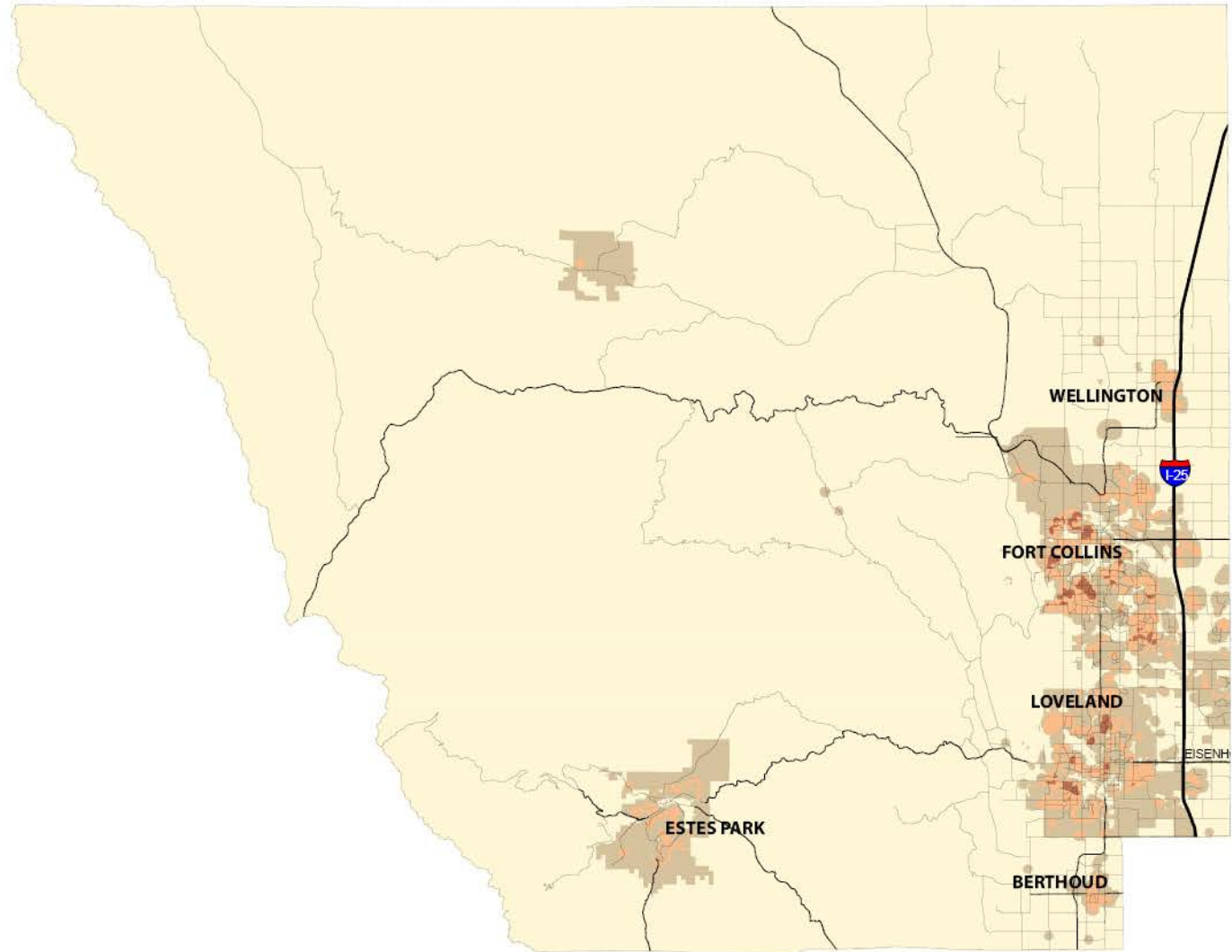


- Berthoud
- Estes Park
- Fort Collins
- Johnstown
- Loveland
- Timnath
- Wellington
- Windsor
- Fort Collins GMA
- Laporte Area Plan
- Red Feather Lakes Plan Area
- Estes Park GMA
- Loveland GMA
- Windsor GMA



GROWTH MANAGEMENT AREAS

Map 21: Focus Areas - County View



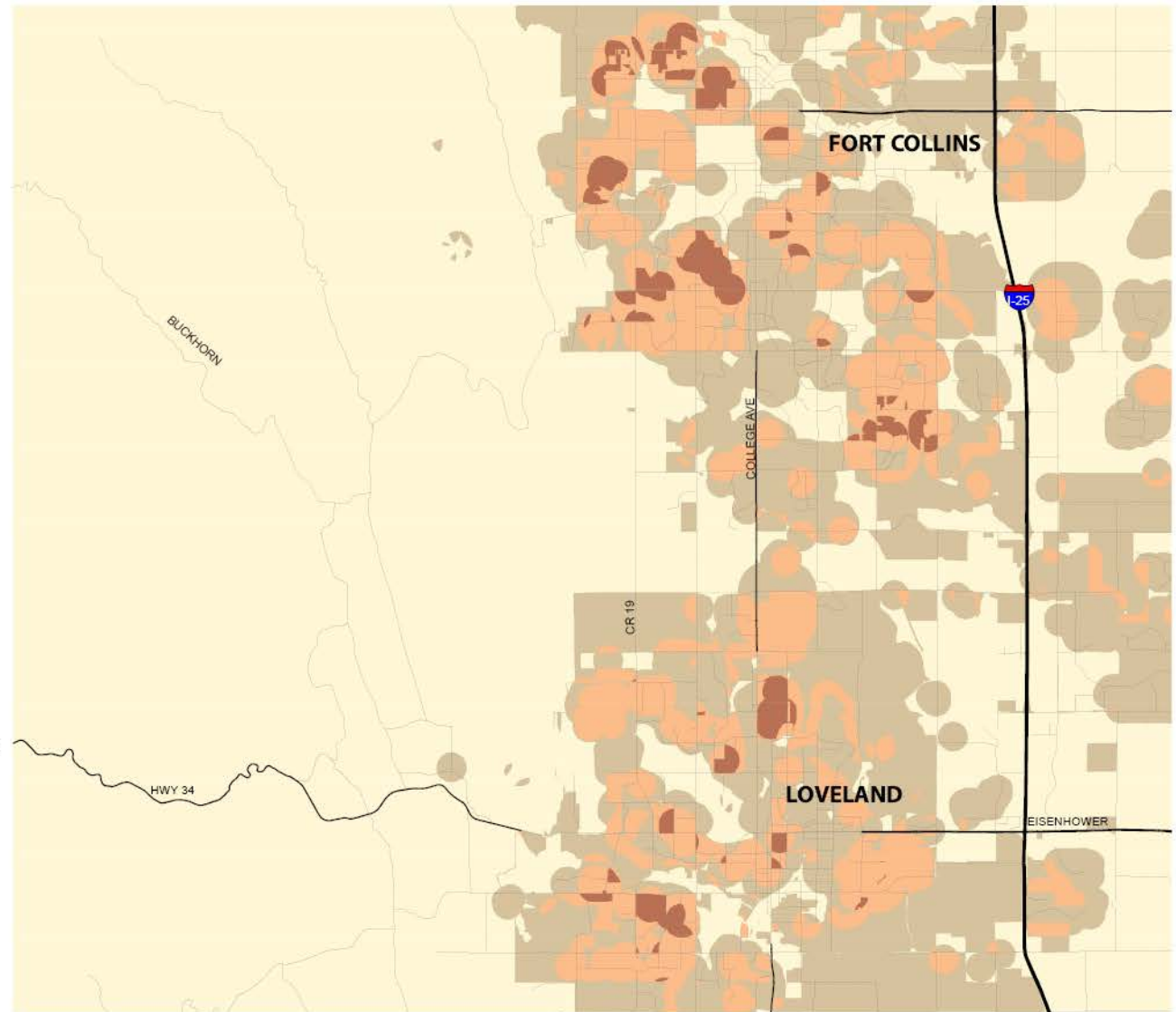
Value Features:

- Potential Future Urban Areas
- Residential Areas without Access to Open Space
- High Density of Children
- High Density of Residences
- Schools without Open Space within a Quarter Mile
- Child Care without Open Space within a Quarter Mile
- Locations near Future Potential Schools
- Places of Public Interest for Future Outdoor Activities

Light Yellow	0 - 2	Low Value
Tan	2 - 11	Medium Value
Orange	11 - 25	High Value
Dark Brown	25 - 44	Extremely High Value

Focus Areas based on Demographics, Future Growth Areas and Proximity to Open Space

Map 22: Focus Areas - Fort Collins/Loveland View



Value Features:

- Potential Future Urban Areas
- Residential Areas without Access to Parks and Open Space
- High Density of Children
- High Density of Residences
- Schools without Parks and Open Space within a Quarter Mile
- Child Care without Parks and Open Space within a Quarter Mile
- Locations near Future Potential Schools
- Places of Public Interest for Future Outdoor Activities

	0 - 2	Low Value
	2 - 11	Medium Value
	11 - 25	High Value
	25 - 44	Extremely High Value

Focus Areas Based on Demographics, Future Growth Areas and Proximity to Parks and Open Space

Summary of High Value Lands

Maps 23-26 illustrate a composite of land areas with high suitability for nature based experiences, and areas of demographic focus. This summary indicates those lands that are considered the most desirable for providing youth and families access to nature in the future. These identified areas should be considered in the planning and acquisition of lands for future parks, trails, and open space. These lands are highlighted at both a County-wide level map and are enlarged for the highly urbanized areas.

The lands identified as having the greatest value for better connecting youth and families to nature are primarily located within or near the edges of municipalities. While there are lands throughout the County that have valuable natural qualities, such as along rivers and within mountainous areas, they are located far from populated areas and therefore are considered less valuable to achieving the goals of this project. Lands identified for each geographic region of high value are as follows:

"I am glad I will not be young in a future without wilderness"

- Aldo Leopold

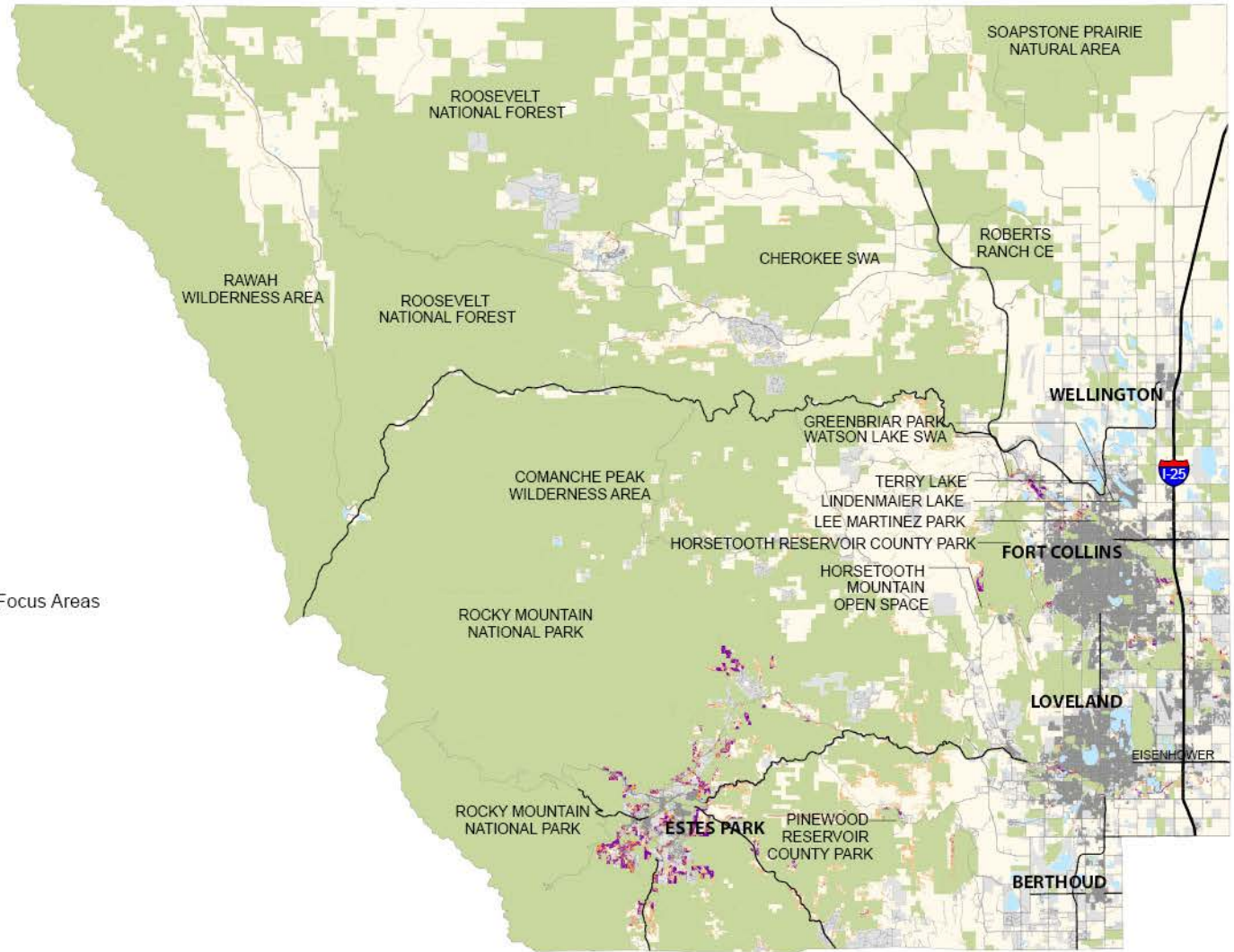
County

- Western boundary of Horsetooth Mountain Open Space along the Mill Creek and West Ridge trail corridors.
- Northwest of Fort Collins along the Poudre River from Watson Lake State Wildlife Area to Lee Martinez Park.
- North of Fort Collins adjacent to Lindenmeier Lake, Long Pond, and Terry Lake. It is in an area where future development is anticipated and near a Poudre School District future school site. Greenbriar Park and Redwing Marsh Natural Area are nearby.
- Lands west of Horsetooth Reservoir County Park near the Spring Canyon Dam.
- Lands surrounding Pinewood Reservoir County Park and buffering Ramsey Shockey Open Space.

Estes Park

- Surrounded by Rocky Mountain National Park and Roosevelt National Forest, it is not surprising to find lands within and surrounding the town of Estes Park contain a high degree of valued natural features. However, with low concentrations of children and low development density, the criteria for selecting the most suitable locations for publicly accessible parks and open space must be modified. Land near places that already attract families, such as commercial areas or near schools, or libraries provide the greatest potential of serving a range of child age groups.

Map 23: Summary of High Value Lands - County-wide Composite Map

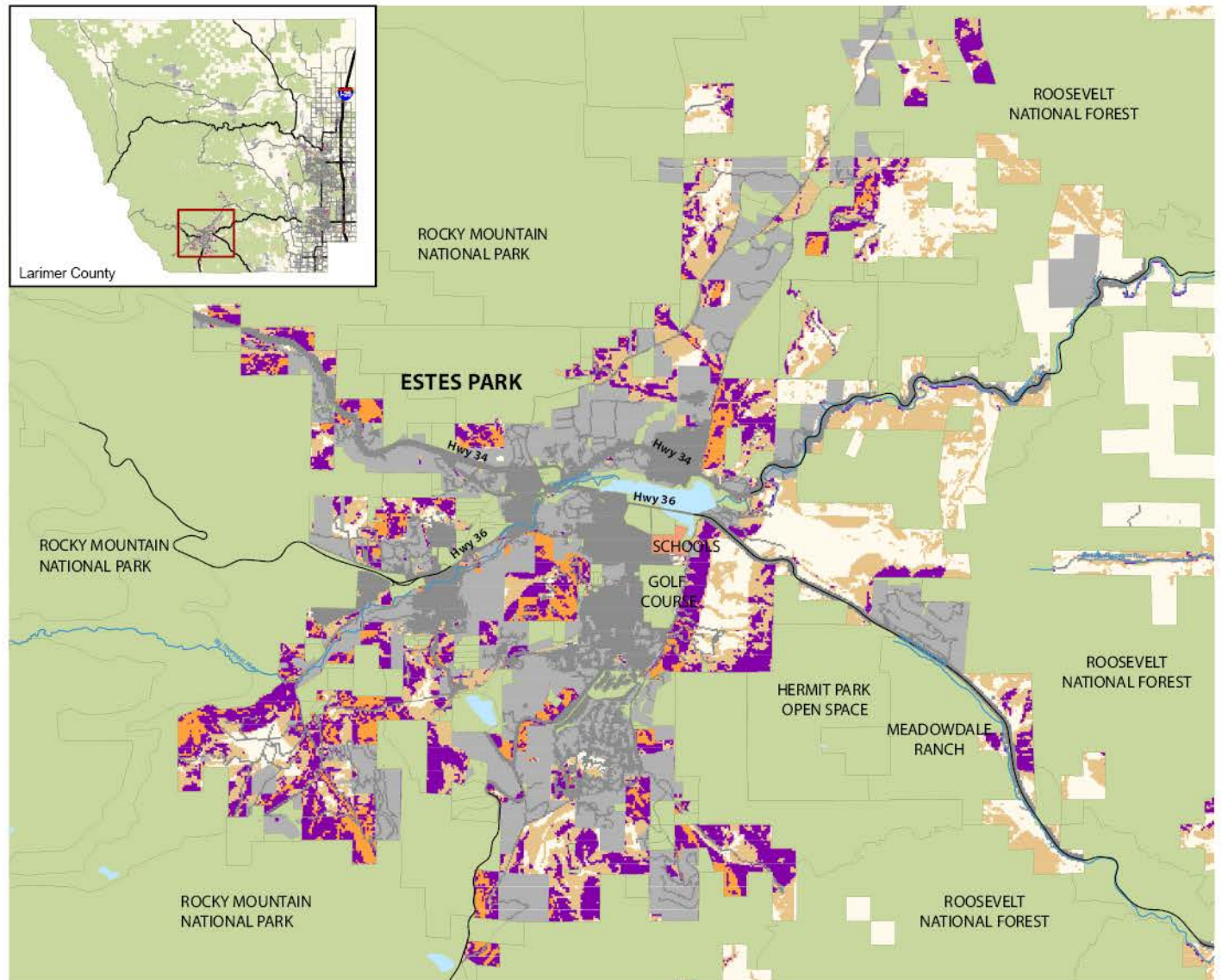


Important Settings to be in Nature/Outdoors and Focus Areas

- 0 - 25 Low Value
- 25 - 35 Medium Value
- 35 - 45 High Value
- 45 - 74 Extremely High Value
- All Public Access and Conserved Lands
- Impervious Surfaces
- Subdivisions

Highest Suitable Lands Combined With Focus Areas

Map 24: Summary of High Value Lands - Estes Park Composite Map



Important Settings to be in Nature/Outdoors and Focus Areas

- 0 - 25 Low Value
- 25 - 35 Medium Value
- 35 - 45 High Value
- 45 - 74 Extremely High Value
- Impervious Surfaces
- Subdivisions
- All Public Access and Conserved Lands

Highest Suitable Lands Combined With Focus Areas - Estes Park Area

Fort Collins

- South of the CSU Environmental Learning Center along the Poudre River.
- Between Arapaho Bend Natural Area and Archery Range Natural Area.
- Between Fossil Creek Wetlands Natural Area to Southridge Golf Course.
- North of Grandview Park along both sides of Taft Hill Road.

Timnath

- Along the Poudre River from Three Bell conservation easement to Arapaho Bend Natural Area.

Loveland

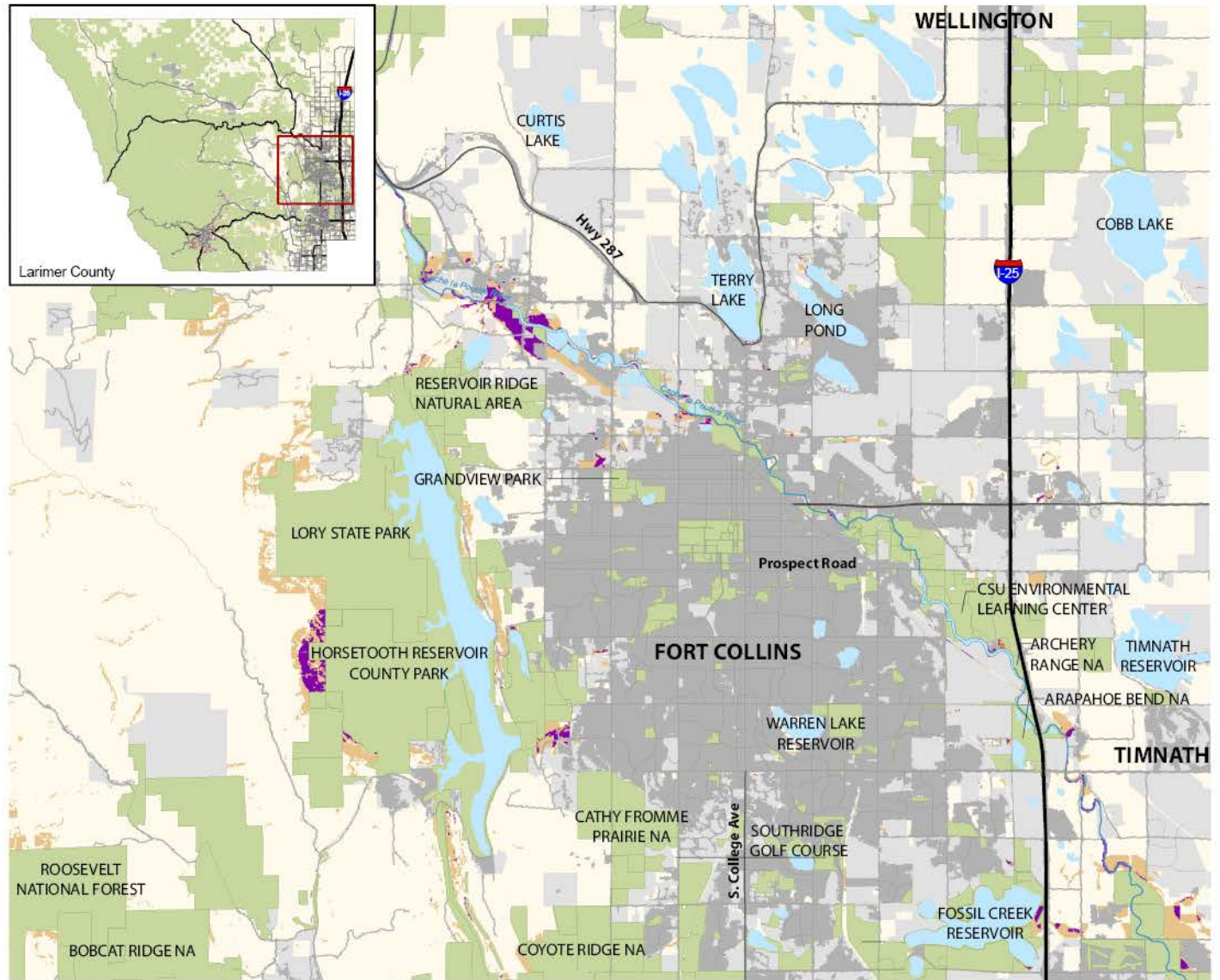
- In the southern portion of Loveland along a ten mile stretch of the Big Thompson River from Interstate 25 to Hidden Valley Open Space. These lands are interspersed between the numerous conserved lands.
- The south side of Boyd Lake.
- The south side of Horseshoe Lake.
- South of Long View Farm in the northwestern quadrant of Loveland.
- Between Ryans Gulch and 14th Street.
- Northwest of Lake Loveland near 29th Street.

Johnstown

- Along the Big Thompson River.



Map 25: Summary of High Value Lands - Fort Collins Composite Map

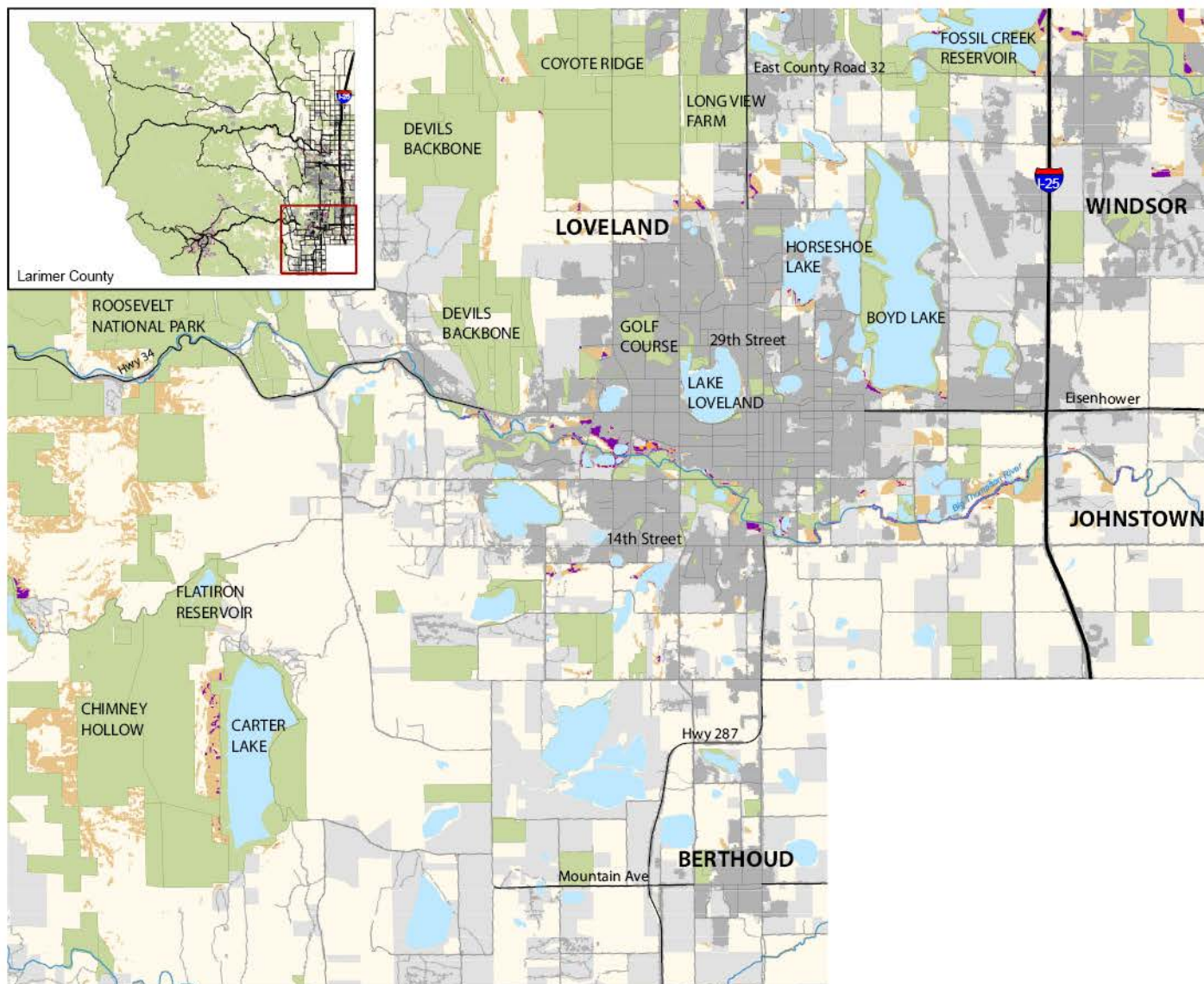


Important Settings to be in Nature/Outdoors and Focus Areas

- All Public Access and Conserved Lands
- Impervious Surfaces
- Subdivisions
- 0 - 25 Low Value
- 25 - 35 Medium Value
- 35 - 45 High Value
- 45 - 74 Extremely High Value

Highest Suitable Lands Combined With Focus Areas - Fort Collins Area

Map 26: Summary of High Value Lands - Loveland Composite Map



Important Settings to be in Nature/Outdoors and Focus Areas

- 0 - 25 Low Value
- 25 - 35 Medium Value
- 35 - 45 High Value
- 45 - 74 Extremely High Value

- Impervious Surfaces
- Subdivisions
- All Public Access and Conserved Lands

Highest Suitable Lands Combined With Focus Areas - Loveland and Berthoud Area





Recommendations

Recommendations

The following recommendations cover many subjects and are provided to improve the central theme of this study. Many entities such as Larimer County, municipalities, program providers, private organizations, schools, and others will have a role in implementing these recommendations, however specific organizations are not identified within each recommendation.

Enhance Outdoor Programs

1. Target better program coordination.

- Future initiatives should include a collaborative planning approach and ongoing coordination among the Nature and Outdoor Program Providers and Youth/Family Program Providers. A community-wide summit could be the venue to explore improving coordination between programs.
- Investigate the possibility of a coordinated effort to reduce costs for first-time participants or to provide scholarships to attend programs.

2. Add programs to fill gaps.

- Coordinate nature and outdoor program offerings to increase opportunities throughout all seasons. Modify existing programs to be appropriate for winter.
- Incorporate technology such as phone applications and GPS units into program opportunities.
- Collaborate with youth and family service programs to offer outdoor skills programs. These could include after-school and weekend programs. Monitor and test the popularity of these programs.
- Develop outdoor programs that create social avenues for teenagers.
- Create programs that engage the entire family.
- Provide family and nature programs on a consistent basis so that Youth/Family Program Providers become accustomed to the schedule.
- Provide training for program providers on appropriate techniques to reach diverse audiences.
- Investigate options for transportation funding for Youth/Family Program Providers to improve accessibility to outdoor sites.



Children serve as volunteers at Two Creeks.

Integrate with School Programs

1. Integrate outdoor learning into school curricula.

- Add to the *Guide to Informal Science Education Programs* prepared by Colorado State University Environmental Learning Center by adding a list off-site parks and open space recommended for student groups to visit. The guide should include maps and describe visit logistics, appropriate activities, plant and wildlife species, geologic features, and facilities.
- Develop material kits and field equipment for use with specific activities or at specific sites.
- Identify existing successful projects and educate program directors of the attributes that have been successful.
- Compile specific activities that meet school standards.
- Plan to coordinate with the Colorado Environmental Literacy Plan once it is complete.
- Provide outdoor lessons for periods throughout the school year.
- Develop a teacher training plan and provide support and mentoring.

2. Promote partnerships between schools, families, and the community.

- Coordinate with schools to send flier advertisements home with children promoting outdoor opportunities for families.
- Develop a model for nature clubs and/or school-promoted family nature outings.
- Form partnerships between schools and outdoor volunteer groups.
- Develop partnerships with volunteer groups to create natural settings on school grounds.
- Consider partnerships between Youth/Family Program Providers and Larimer County Youth Conservation Corps.

3. Explore a possible new curriculum commitment by school districts that includes experiential outdoor education.

- Examine existing examples of experiential outdoor education programs, such as the Poudre School District Eco Week, and Aspen School District that provides activities ranging from service-oriented trips to wilderness adventures. Successful examples integrate outdoor experiences into the school curriculum.

Integrate with Early Childhood Programs

1. Plan, fund, and build nature areas, gardens, or green playgrounds at child care centers.

- Provide technical assistance, funding, and ongoing support to child care providers for the creation of nature areas.
- Train providers to incorporate outdoor activities that fit with their existing curriculum.
- Develop a mentoring program for childcare providers to assist teachers in facilitating outdoor learning.

2. Schedule multiple programs throughout the year.

- Programs hosted by Nature and Outdoor Program Providers should be held regularly on sites near child care centers.

Improve Accessibility

1. Improve safe access to parks and open space in urban places.

- Create a “Safe Routes to Nature” program modeled after the Department of Transportation’s “Safe Routes to Schools” program. The highest priority should be to get families and children safely and conveniently to natural environments.
- Create stronger connections from residential neighborhoods to parks and open space through a system of continuous trails and sidewalks. Consider creating additional bikeways that are separated from vehicular travel lanes.
- Fort Collins and Loveland are currently included in the Bicycle Friendly Communities Program. Seek to expand this program to more communities in the County.
- Provide play areas appropriate for different age groups.
- Increase access to water and water sports. Improve safety for young children around rivers and streams allowing them to access water.
- Provide and design winter facilities and activities where appropriate.

2. Improve transportation options.

- Provide transportation for outdoor activities in the form of busses or shuttles. Examples often utilize partnerships with libraries, museums, schools, social services, youth organizations, and outdoor retailers.
- Build awareness about transportation subsidies available to teachers from Larimer County Natural Resources and Fort Collins Natural Areas programs.

3. Ease financial barriers.

- Consider allowing a free first time visit in fee areas.
- Consider a park pass that could be used to access parks and open space throughout the County regardless of the operating agency or management entity. Address the logistical problems between management entities in creating a one-pass system.
- Investigate methods to make outdoor equipment more available to youth and families. This could include a “gear library” or “gear swap,” a community supported subsidized program for rentals, or backpacks with equipment for check-out via the public library. See <http://www.bawt.org/programs/gear/gear-libraries/> for an example.

4. Locate play areas near those that are underserved.

- Locate parks and open space in places that are close and convenient to underserved populations.
- Link school planning with parks and open space acquisition. Plan schools that include the concept that parks and open space are within or adjacent to the school.



Improve Awareness

1. Implement a coordinated information campaign.

- Develop a coordinated information campaign. Partners in this coordinated marketing campaign should include public land managers, Nature and Outdoor Program Providers, outdoor equipment manufacturers and retailers, Chambers of Commerce, school districts, convention/visitors' bureaus, media outlets, the Healthier Communities Coalition, the Early Childhood Council, and representatives from the Latino communities of Larimer County.
- Create a County-wide outdoor and nature experience brand directed at families to create a consistent message and identification.
- Consider the creation of a newsletter that is not agency or provider specific but rather comprehensive for County programs, parks, and open space.
- Coordinate with programs that promote physical fitness activities (i.e. CanDo) to encourage lifelong enjoyment of outdoor experiences.
- Organize information about places and activities based on appropriate age groups.

Explore the outdoors! Find parks, trails, and other nature sites.

Enter your Zip, or City and State: Fort Collins, Colorado within 25 Miles

Found 56 nature sites and 2 events within 25 miles of Fort Collins, Colorado!

Miles	Events	Site Name
25	0	Carter Lake
25	0	Pinewood Lake
25	0	Ramsay-Shockey Open Space
24	0	Flatiron Reservoir
21	0	Blue Sky Trail
21	0	Cherokee Park Ranch
21	0	Devil's Backbone Open Space
20	0	Boyd Lake State Park
20	0	Shambhala Botanic Gardens
20	0	Sylvan Dale Guest Ranch
18	0	Rimrock Open Space
18	0	River Bluffs Open Space
18	0	Sundance Trail Ranch
17	0	Fossil Creek Reservoir Regional Open Space
16	0	Bobcat Ridge Natural Area
16	0	Colina Mariposa Natural Area
15	0	Fossil Creek Park
15	0	Two Creeks Natural Area
13	0	Cathy Fromme Prairie
13	0	Environmental Learning

The National Wildlife Foundation recently created a website to help people locate nearby parks and open space facilities.

Existing examples of websites can be found at:

www.naturenet.com/index.html
www.naturerocks.org/find-activities.aspx
www.planetexplore.com/events.php
www.nwf.org/naturefind/
www.trails.com
www.recreation.gov

Oh, Ranger! ParkFinder application for iPhone

- Consolidate existing maps to show outdoor opportunities County-wide.
- Provide information about outdoor recreation opportunities in outdoor sports retail shops and departments of major retailers like Sportsman’s Warehouse, REI, Jax Outdoor, Sports Authority, and Wal-mart.

2. Create a single website for information about County events, activities, and places to go.

- Provide a “one-stop shopping” website with interactive maps and a database that includes activities, facilities, and programs. Currently much of this information is available on separate websites for each land manager or program provider. However, the public is typically not aware of all the websites that would contain this information. A website that allows for key word searches is a way people would like to access this information. Example queries: “Where can I go fishing within 15 miles of my house?” “Where is the best swimming for my two-year old?”
- Utilize social media to provide information.
- Link to a national website or existing phone applications that are well known in order to better reach new residents. The US Forest Service has a website under development, “GetOutdoorsCO,” that may be an opportunity to provide updated County information once it is complete.



Nature play can occur in any place that allows for climbing trees, rolling down hills, scrambling up rocks, catching frogs, damming up water, hiding in grass, watching butterflies, building snow forts, digging in sand, planting seeds, jumping in leaves, tracking animals, and more.
- Landscape Architecture Magazine

“Wild Zones” differ from parks and nature reserves because they offer opportunities to interact with the environment rather than leaving it untouched. People of all ages are invited to build dens, make sculptures from natural materials, dig holes and play with water, mud, and rocks - all things that previous generations were able to do on empty plots of land, in woodlands, or in other marginal spaces in urban areas.
- Wildzones.net

Infill for Nature Experiences

1. Transform existing properties to include nature play areas.

- Smaller urban or neighborhood parks tend to lack natural features because of their emphasis on providing formal play areas, sports fields, and manicured landscapes. Re-vegetating and consideration of natural “wild zone” areas as a legitimate park program will allow for unstructured play and nature connection within existing neighborhoods. Additional public lands with the potential to allow children to experience nature include library and university properties.
- School grounds could offer children an opportunity to engage in everyday nature experiences and allow access to nearby residents. This could include the creation of play areas with natural elements and landscape features or the creation of outdoor classrooms or gardens.
- Child care facilities are often small with little outdoor space for play. However, there is increasing interest and research on opportunities for adding natural elements into these small spaces.

2. Develop an initiative for parks and open space to be a catalyst for urban redevelopment.

- Redirect funding and attention to create parks and open space on infill sites that will encourage reinvestment, create distinctive neighborhoods, and resolve previously deficient nature connections in existing neighborhoods.
- Incorporate parks and open space with public access into existing neighborhoods and infill sites. This could include converting private lands into public parks and open space. These places create a sense of community and desirable neighborhood character that will enhance existing neighborhoods and catalyze redevelopment.

3. Explore “redeveloping” nature in urban areas surrounded by a large population with limited access to nature.

- Utility Lands: Develop and nurture partnerships with local utility and drainage districts for public access of natural lands previously set aside for utility purposes.



The above rendering is an example of an “infill nature” plant and wildlife history park.

Acquire Additional Lands for Public Access

- Stormwater Storage Sites: Lands that currently serve as stormwater management lands or floodplains have the potential to become multi-purpose. Many of these lands are located in close proximity to residential areas and schools. These lands should be evaluated for their quality of desirable natural elements and feasibility for allowing public access.
- Community Gardens: Investigate the conversion of vacant lands, derelict properties, and other land holdings pending redevelopment to be used as community gardens. These projects could focus on opportunities for family and children in urban garden settings.
- Conservation Easements: Review and possibly amend existing conservation easement agreements for properties located near urban centers. While many values must be balanced in establishing limits to use on conservation easements, such as habitat protection, preservation of scenic views and agricultural uses, accommodating public access is not inconsistent with the purpose of many conservation easements. Opportunities may exist for education, recreation, and reserved program use purposes.

1. Target the acquisition of lands that have high natural resource qualities and are located in the areas of demographic focus.

- Refer to the list and maps of high valued lands for nature connections provided in Chapter 7 for considering potential land acquisitions.
- Preserve a wide-range of landscapes in places close to existing urban areas as well as those that are more remote that contain unique natural resources of exceptional value. All types of outdoor experiences should be made available.
- Intensify the focus on public water-based opportunities with a concerted effort to acquire limited and key waterfront sites.
- Acquire lands to complete interconnected parks, open space, and trail system along the Poudre and Big Thompson Rivers. This will be a cooperative effort among multiple jurisdictions including the County, municipalities, and governmental agencies.

2. Use a comprehensive greenprint approach to gain coordination and greater value.

- Planning for nature connections should take a systems approach to create linkages between the neighborhood scale and the regional scale. A multi-jurisdictional approach can create a greenprint system that connects private, county, municipal, and federal lands. Over the long-term, this can create a comprehensive program that connects all residents to these assets. This approach avoids a myopic view of only local needs and funding.
- Investigate city and County parks and open space acquisition selection programs to evaluate how lands for youth and family access to nature fits within an overall view of acquisitions, timing of land purchase, and construction.
- Evaluate the levels of service, citizen satisfaction, and economic parameters of the County and municipalities.

Accommodate Future Needs

1. Plan for the acquisition of parks and open space in advance of new development.

- Plan to expand the amount of trails, parks and open space to accommodate increases in population.
- Identify lands more suitable for parks, open space, and trails than development within the Growth Management boundaries. Future land use planning should designate these areas for private or public protection.
- In the development review process, lands within future developments should be required to set aside space for access to nature. Typically governmental review agencies have parks and open space requirements that only specify the amount of acreage that should be set aside as non-developed areas. More specific requirements could be created for natural places intended for residents and/or public access as well as park dedication. The amount and types of land to satisfy these conditions should be reviewed in light of the findings of this study.



Lands along the rivers should be a priority for acquisition.



Education programs in conjunction with a nature center reinforces learning.

Metrics and Standards for Improvement

Baseline measurements need to be continuously collected to monitor achievement of targets. Indicator metrics are possible areas to measure progress against the targets for improvement. Baseline conditions describe the current condition as of 2011. These metrics could be accomplished within a time-frame of 5 to 10 years and offer a means to prioritize efforts and funding.

The metrics and standards for improvement are described in Figure 27.

Figure 27: Metrics and Standards for Improvement

	Indicator	Baseline Condition	Measurement Method	Target for the Future
1	Increased citizen satisfaction with family connections to nature	87% of survey respondents reported their child's nature connection as very high.	Survey every other year	Maintain or increase reported satisfaction from all demographic groups and communities.
2	Annual number of people participating in Larimer County outdoor/nature programs	67,000 people participated in Larimer County outdoor programs in 2011.	Program providers annual reporting	On a per-capita basis, participation numbers are maintained or increased.
3	Educational opportunities focused on new facilities	The CSU Environmental Learning Center is the outdoor education facility located within the County.	Planning for realization	Create a new flagship nature learning center at a diverse natural resource site with educational programs.
4	Number of new programs to fill needs identified in this study	65 program providers as of 2011.	Program providers annual reporting	More comprehensive programs offered with coordinated effort among providers. Increase by 20%, the number of programs which focus on needs that are currently unfulfilled in young children age groups, winter focused programs, and those for outdoor skills.
5	Increase awareness on sources for information	Multiple sources for information exist including websites, printed materials, flyers, advertisements and maps.	A single-source website	A website that is operational and consolidates multiple information sources. A website address that is widely published with all other communication.
6	Increased visitation to natural places	Baseline to be determined	Reporting from land manager	Increase annual visitation by one percent per year.
7	Total publicly accessible parks and open space in Larimer County	944,551 acres of publicly accessible parks and open space in Larimer County as of 2011.	GIS calculations of land by manager	A growth of publicly accessible lands per-capita that is equal to the proportion of population growth plus five percent.
8	Parks and open space within a five minute walk of schools, child care facilities, and residences	51% of residential address points, 57 out of 91 (63%) of schools, and 182 out of 363 (or 50%) of child care facilities are located within a five minute walk of parks and open space.	GIS calculations, Assessor Data	Improve the amount of parks and open space within existing developed areas by 10 percent to improve nature based access.
9	Linear mileage of trails	612 miles of paved and natural surface trails in Larimer County as of 2011. Fort Collins and Loveland are currently included in the Bicycle Friendly Communities Program.	GIS mapping calculations	Increase the mileage of trails county-wide by 20 percent and complete segments to be identified to better connect residential areas to nature destinations. Seek to expand the Bicycle Friendly Communities program to communities with a population of more than 5,000.
10	Acreage of parks and open space planned for the Growth Management areas	Generalized comprehensive plans identifying goals and objectives.	Specific plans for parks and open space	In conjunction or in advance of development, identify location, size, and attributes of parks and open space.
11	Lands preserved with high natural resource value and diversity	43,000 acres of existing open lands in Larimer County's system, inclusive of both public and non-public access.	GIS mapping calculations	Identify six irreplaceable areas of high resource value equal to 5,000 acres that may provide public or non-public access and seek funding for acquisition.
12	Public investment	A quarter-cent sales and use tax to protect parks and open space currently exists in Larimer County. The City of Fort Collins also has an Open Space Yes! Sales Tax.	County reporting	Maintain a stable and reliable economic investment in future parks and open space programs, facilities, and accessibility county-wide equal to a quarter-cent sales and use tax.