Southeast Community Plan

Healthy People and Places Assessment

Analysis and Recommendations

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Executive Overview

Why Conduct an Assessment?

Our surroundings and communities shape how physically active we are, how well we eat, and whether we have proper access to education, employment, transportation, healthcare, and other opportunities to flourish. Communities that lack the amenities and services to support healthy lifestyles face greater public health challenges with chronic diseases such as diabetes, heart disease, and obesity. Well-designed neighborhoods with high access to nourishing food can improve health, while poorly designed neighborhoods with low access can harm health.

About the Assessment

The Southeast Community Health Assessment has two parts: an analysis and a set of recommendations. The analysis used a data-based approach to illustrate health inequity within the City of Colorado Springs, highlighting areas where the Southeast Community is either surpassing or falling behind other parts of the City in individual and public health. This comparative analysis used data at the neighborhood and community level to both highlight potential inequities and show specific areas where focused investment and policy will be needed to improve the health outcomes of residents. The key findings of the analysis were then used to draft a set of recommended policies, investments, and partnerships the City could pursue to advance public health and well-being in the Southeast Community.

Key Findings

Overall, the well-being and socioeconomic health of the study area lag behind those of the city as a whole. However, the distribution of health impacts related to the built environment is generally even between the community and the city, apart from a few areas that have either much higher or much lower equity.

Healthy People

Socio-economic: The western part of the study area (west of South Academy Boulevard) is the least equitable area in terms of educational attainment, life expectancy, and rate of families in poverty, with areas along S. Academy and the neighborhood of Soaring Eagles, having an even higher rate of families in poverty.

Well-being: The study area has slightly below average equity in personal health compared to the city. Most notably, adult obesity the entire Southborough neighborhood than the rest of Colorado Springs.

Healthy Places

Connectivity: Overall, the study area has average sidewalks and bike network connectivity with only a few areas, including the east side of Deerfield Hills and streets around Verde Drive, having below average equity of access for low stress bike facilities. The population that drives alone to work is mostly average with a few areas around S. Academy Boulevard and Astrozon Boulevard that have much higher and much lower equity for mode share.

Access: There is a stark divide of existing grocery store access across the study area, with areas along the west and northeast sides of S. Academy Boulevard having a much higher than average access and other areas outside having much lower access, being further away from stores. This is the case across Colorado Springs, throughout which areas along commercial

corridors have higher grocery store access. In the area along the west side of S. Academy, north of Astrozon and the Highway 24 interchange, there is a high concentration of fast-food restaurants; there are similar concentrations along I-25 and S. Academy throughout the city. In the study area, access to parks is generally average or above that of the city as a whole, but acres of park per capita is lower than average throughout the study area.

Environment: Some environmental indicators, such as home water consumption and exposure to the urban heat island effect, are above average for the study area when compared to the city, demonstrating a generally equitable distribution of environmental harms and benefits. However, Pikes Peak North, Southborough, Deerfield Hills, and Soaring Eagles, which lie in the north and east parts of the study area, experience greater urban heat island effects are comparatively less equitable to neighboring communities.

Introduction

About the Analysis

Research shows a strong association between the built environment—where we live, learn, work, eat, play, and worship—and our health. Our surroundings and communities shape how physically active we are, how well we eat, and whether we have proper access to education, employment, transportation, healthcare, and other opportunities to flourish. Communities that lack the amenities and services to support healthy lifestyles face greater public health challenges with chronic diseases such as diabetes, heart disease, and obesity. Well-designed neighborhoods with high access to nourishing food can improve health, while poorly designed neighborhoods with low access can harm health. In addition, the changing environment and climate pose a risk to community health. To be resilient to climate change and other environmental disruptions, as well as their subsequent effects on social and economic inequities, communities must be viewed as assets and as key actors in both preparedness and long-term resilience. Building an understanding of a community's environmental challenges is a critical component of its long-term health.

Across the nation, already substantial gaps in public health between communities are increasing, many of them caused by barriers set up at all levels of society. It is a challenge to be healthy without access to good jobs, schools, and safe affordable homes. Health equity means increasing opportunities for everyone to live the healthiest life possible, no matter who they are, where they live, or how much they earn. The Robert Wood Johnson Foundation provides the following definition for health equity:

> "Health equity means that everyone has a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care."

Differences in social, economic, and environmental conditions significantly impact equity. Because each community's challenges are unique, solutions to balance these inequities must be based on each community's individual needs. Achieving health equity requires directing resources to communities that have the poorest health outcomes, rather than distributing resources evenly across every location. This analysis is intended to provide a better understanding of the health equity of the Southeast Community and help set up a framework to track health equity at a citywide scale.

This analysis used a data-based approach to illustrate health inequity within the City of Colorado Springs (City), highlighting areas where the Southeast Community (study area) is either surpassing or falling behind other parts of the City in individual and public health. This comparative analysis used data at the neighborhood and community level to both highlight potential inequities and show specific areas where focused investment and policy will be needed to improve the health outcomes of residents. The quantity and quality of public infrastructure, such as parks and neighborhood amenities, often correlates with the health inequity of residents. This analysis presents data to help inform and prioritize planning and investment decisions that will have the greatest impact on improving the health outcomes of the

residents who need it most, allowing them to reach their full potential for a healthy and productive life.

The analysis section of this community health assessment is based on two indices: the Healthy People index and the Healthy Places index. The Healthy People index measures the well-being and socioeconomic health of the community, while the Healthy Places index identifies measures access to goods and necessities, connectivity, and environmental risks. Together, these indices show how factors that influence public health are distributed across the Southeast Community, resulting in differential health outcomes between residents.

Planning Context

PlanCOS, the City's comprehensive plan, recommends a newly invigorated Neighborhood Planning Program. The first plan under this program will be the Southeast Community Plan, covering approximately 4,835 acres that are home to 36,000 people. Compared with the city as a whole, southeast Colorado Springs has a higher incidence of poverty, a markedly lower life expectancy, and less access to healthy foods. It is also the hottest area of the city with the least amount of tree cover.

Although these topics have been discussed in previous plans, reports (including the Urban Land Institute [ULI] Healthy Places Report, 2018), and in ongoing community initiatives, such as the Resilient Inspired Strong Engaged (RISE) Coalition, data for these topics has not yet been systematically assessed for inclusion in an actionable land use master plan.

Community health, food access, and climate response have not traditionally been included in the City's physical development planning process. However, it is important to address these topics to begin resolving the health inequalities within the study area, which is identified as a high priority by the area's City Council representative. This health assessment, which includes community health, food access, and climate response elements, would complement and support more "traditional" plan elements, such as land use, transportation, and housing, that are already included in PlanCOS (along with alongside the more innovative categories of Unique Places, Renowned Culture, and Majestic Landscapes) and will be a part of the upcoming Southeast Community Plan. The Southeast Community Plan has the opportunity to play a pivotal role in improving community health, and it would be unwise to leave health-related recommendations and initiatives unaddressed. The primary challenge will be to effectively address these emerging topics in an effective and contextually useful way.

Community Health Perceptions

The community members within the Southeast Community Plan boundary perceive the area to have significant barriers to healthy living and a healthy lifestyle. Through numerous surveys and discussions with the Plan's Steering Committee, residents communicated that they must leave the area to shop for healthy foods, recreate outdoors, and obtain basic medical services and necessities. Residents also conveyed a strong desire for additional community gardens, farmer's markets, urban farming education, and improvements to parks and trails. Though grocery stores exist in the Plan area, many residents have complained that the quality of produce and other foods are far lower than in other grocery stores across the city. Other residents have mentioned these grocery stores are hard to access without a vehicle due to a lack of nearby transit stops, bicycle infrastructure, or smooth sidewalks.

Analysis Methodology

The methodology for this assessment's data analysis was constructed around comparing the study area to the rest of the city. Based on the size of the study area and the data available, it was decided that Census Block Groups were appropriate for this analysis. The specific Block Groups used for this analysis were included based on whether or not there was sufficient data for each block group, defined as having over 100 dwelling units.

The following table (Figure 1) provides a list of the analysis datasets, corresponding sources, and initial granularity of the data.

Figure 1: Data and Sources

Dataset	Source	Initial Granularity	Sub-Index	Index
Educational Attainment	Census, 2018 5yr ACS	Census Block Group	Socioeconomic	Healthy People
Families in Poverty	Census, 2018 5yr ACS	Census Block Group		
Cost Burdened Households	H&T Affordability Index	Census Block Group		
Adult Obesity	CDPHE	Census Tract	Well-Being	
Life Expectancy	CDPHE	Census Tract		
Use of Health Care	CDPHE	Census Tract		
Sidewalk Connectivity	City	Building	Connectivity	Healthy Places
Bike Network Connectivity	City	Building		
Mode Share	Census, 2018 5yr ACS	Census Block Group		
Access to Parks	City	Building	Access	
Existing Grocery Store Access	City	Building		
Potential Grocery Store Access	City	Parcel		
Low Quality Food Retail	City	Building		
Acres of Park per Capita	City, Census-2018 5yr ACS	Parcel	Environment	
Home Water Consumption	Colorado Springs Utilities	Building		
Urban Heat Island	Trust for Public Land	30-meter averages Citywide		

Spatial relationships between the datasets were created using Esri ArcGIS; analytic tools used to accomplish this included Union, Intersect, and Spatial Join, which aggregated data to the Block Group level. The resulting Block Group data was then statistically analyzed using the Standard Deviation tool across the City. The output yielded up to seven groups of data at various deviation ranges, including:

- < -2.5 Std Dev.
- -2.50 To -1.50
- -1.50 To -0.50
- -0.50 To 0.50
- 0.50 To 1.50
- 1.50 to 2.50
- >2.50 Std Dev

By using the Standard Deviation tool for each dataset, the variation in data scales and values between datasets was normalized. This allowed for the creation of an index that equally weighted all factors. Each Block Group was given a value ranging from -3 to 3, corresponding to its Standard Deviation in relation to the rest of the Block Groups in the city. This method illustrates inequities throughout the city by identifying areas where the data is either higher or lower than the citywide average. These values were then added together for a combination of datasets to create each of the five sub-indices. These five sub-indices were then added to create the two main indices of this analysis: Healthy People and Healthy Places.

Study Area

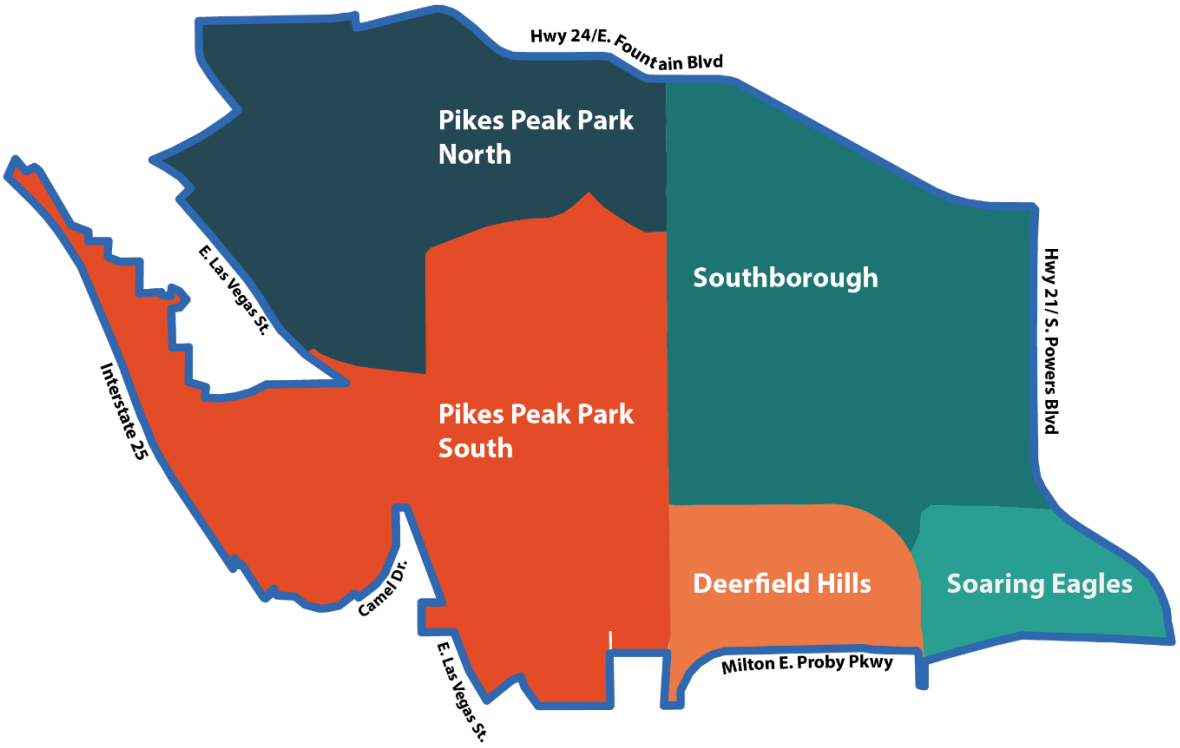
The study area is located along the southern edge of the city and contains five neighborhoods:

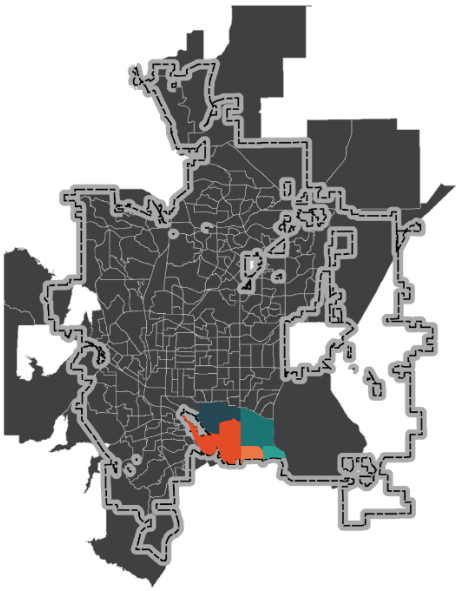
- Pikes Peak Park North
- Pikes Peak Park South
- Southborough
- Deerfield Hills
- Soaring Eagles

It is bound by Martin Luther King Bypass/US 24 and Fountain Boulevard on the north; Powers Boulevard/CO 21 on the east; Milton E Proby Parkway, the City boundary, Drennan Road, Silica Drive, East Las Vegas Street, and Carmel Drive on the south; and Interstate 25 on the west.

Error! Reference source not found. on the next page shows the study area and its relation to the C ity.

Figure 2: Neighborhood Map





Part 1: Analysis

Healthy People Index

What Is It and Why Is It Important?

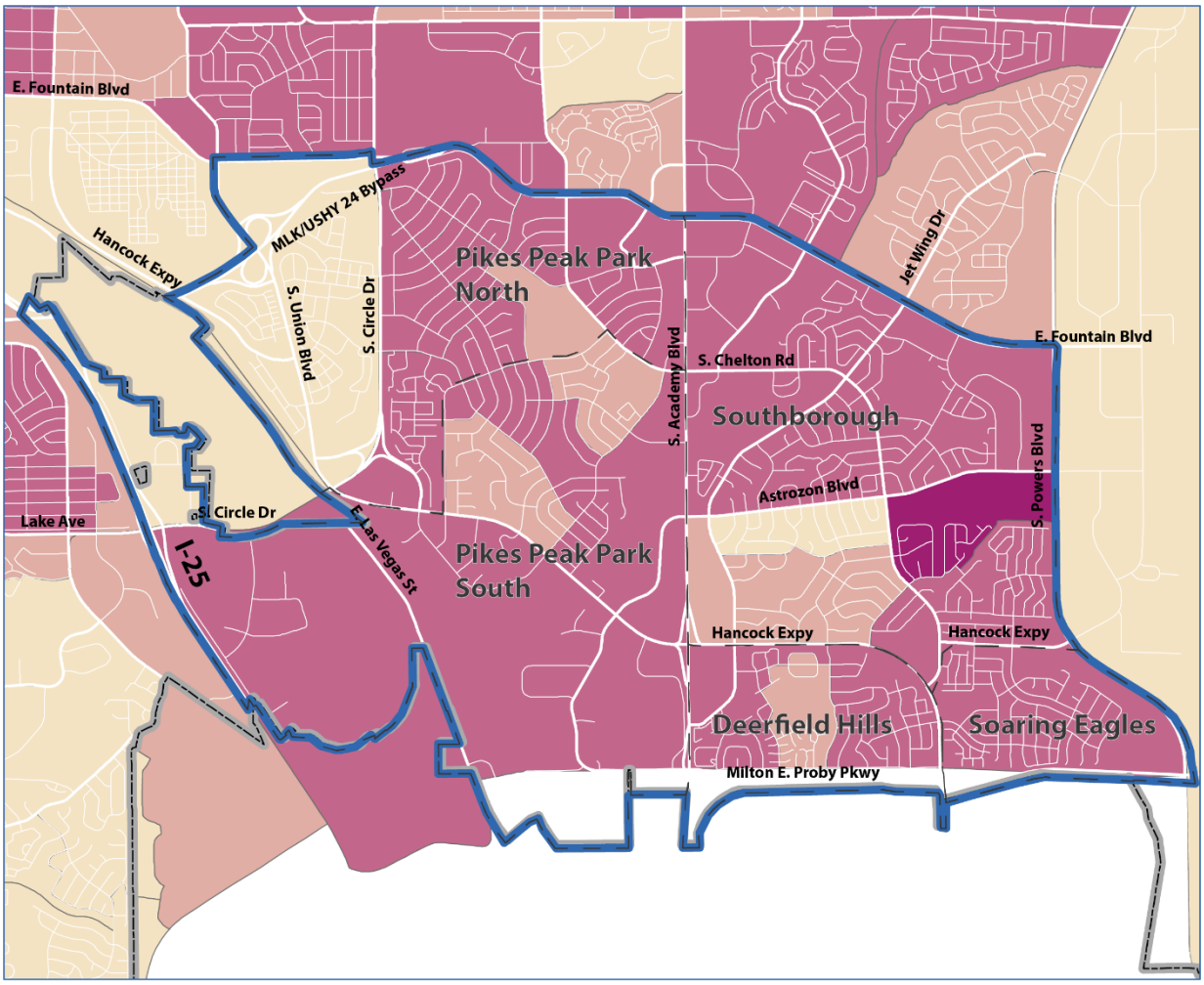
There are numerous factors that contribute to the health of residents. Genetics and family health history influence only about 30 percent of a person's health, while the other 70 percent is influenced by behaviors and environmental and socioeconomic conditions, such as education, income, and access to healthcare. From birth, life expectancy can be estimated based on zip code. Community members even 10 miles apart can have vastly different outcomes based on where and how long they go to school, their income, and whether they are predisposed or develop diseases as a result of lower quality food and healthcare. (Nicole I. Larson PhD Jan. 2009). Although health and the built environment are connected, gaining a baseline understanding of the physical and financial health equity of the community will help illustrate where the community is today and measure the impacts of changes to policy and the built environment over time. The Healthy People index was created using the following sub-indices:

- **Socioeconomic Health:** The connection between financial resources and health
- **Wellbeing:** The core indicators of an individual's health which is greatly impacted by factors both within and beyond their control

Healthy People Trends

As shown in Figure 3, approximately 90% of the study area scores lower than average for equity on the Healthy People index. One Block Group in the study area, located south of Astrozon Boulevard and west of South Powers Boulevard in the Southborough neighborhood, scored lowest in the entire city. This area with the lowest overall health equity is directly east of an area that had average health equity, illustrating that inequities exist at a hyper-local level within the study area. Comparing the study area to the city shows the concentration of lower health equity in the southern region of the city, with the majority of Block Groups ranking below average. The study area and the area directly north of the study area have the lowest overall Healthy People index score, and thus the lowest health equity, in the entire city.

Figure 3: Healthy People Index

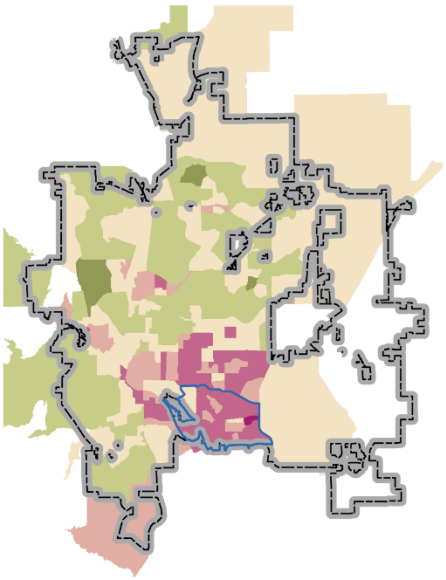


Healthy People Index

Least Equitable — Average — Most Equitable

Healthy People Indicators

- Socio-economic
- Wellbeing



Socioeconomic Health

There is a strong connection between the financial resources people have—measured by things like income, cost of living, and socioeconomic status—and their health. In general, higher income is linked with better health. Socioeconomic health can affect an individual's nutrition, access to high-quality healthcare, educational attainment, and access to quality shelter, which is the most basic human necessity. Educational status is a major predictor of health because it affects employment status, income, and access to resources. Factors linked to socioeconomic status can have a dramatic effect on the health of residents. The individual metrics that comprise the Socioeconomic Health sub-index include:

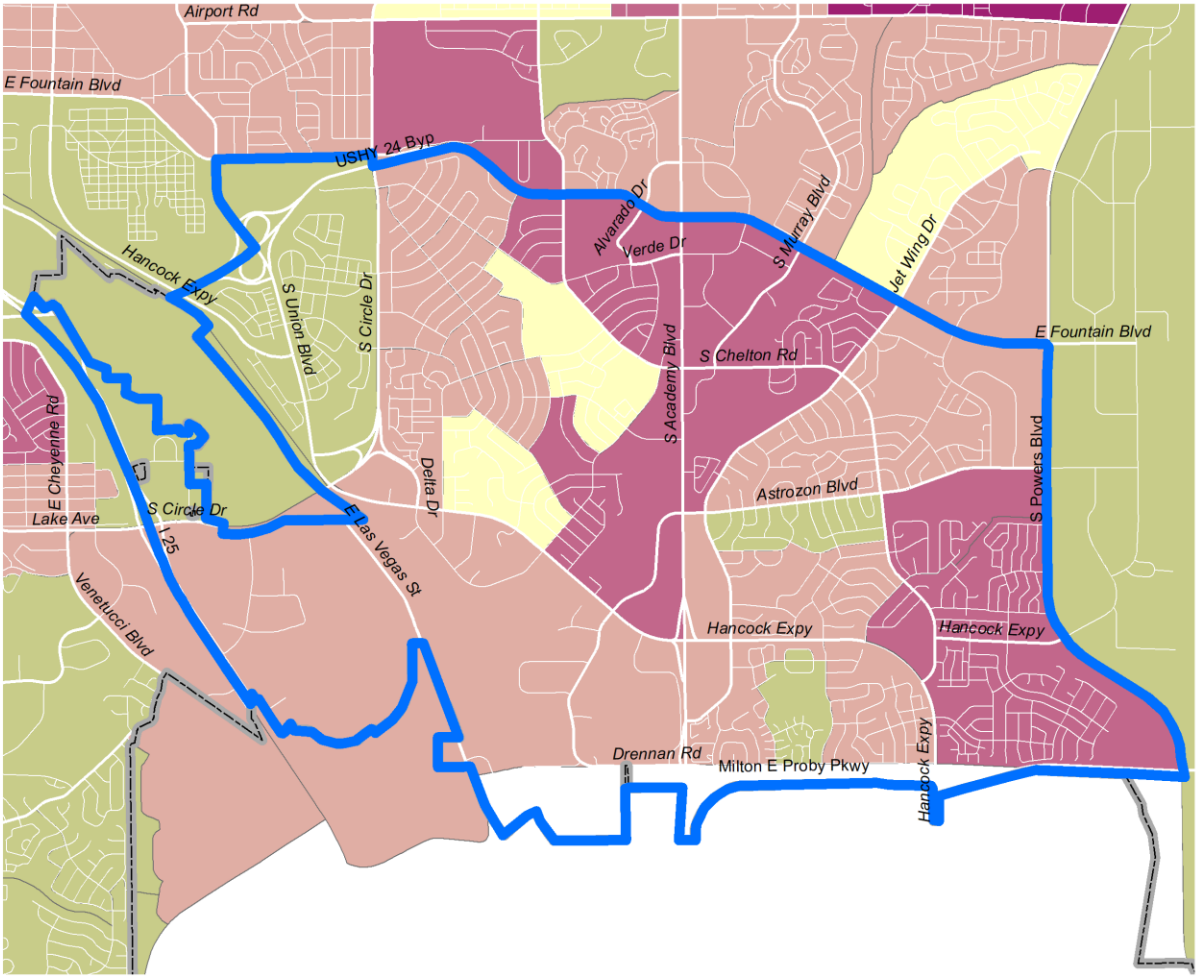
- **Educational Attainment:** The percentage of population that has at least a high school diploma
- **Families Below Poverty:** The percentage of families at or below the federal poverty line
- **Cost Burdened Households**: The average percent of income spent on housing and transportation costs

Socioeconomic Sub-Index Summary

The socioeconomic health sub-index (4) shows that much of the study area has lower than average socioeconomic health than the rest of the city. Only two Block Groups in the study area scored average, both of which were in the Pikes Peak Park North neighborhood. Four Block Groups scored slightly above average, located in Pikes Peak Park North, South, Southborough, and Deerfield Hills, respectively.

Nearly half the study area contains Block Groups with high percentages of families in poverty, and nearly the entire study area has lower educational attainment than the citywide average. However, there is a comparatively low percentage of cost-burdened households throughout the study area, primarily due to the lower cost of housing and the study area's relatively central location, which reduces transportation costs.

Figure 4: Socioeconomic Index

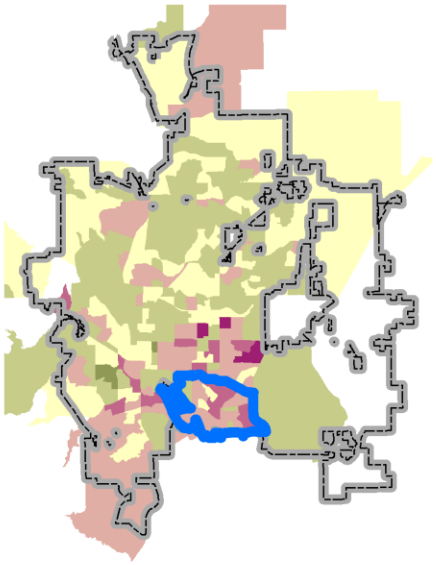


Healthy People Socio-economic Index

Least Equitable — Average — Most Equitable

Socio-economic Indicators

- **Educational Attainment**
- **Famielies Below Poverty**
- **Cost Burdened Households**



Well-being

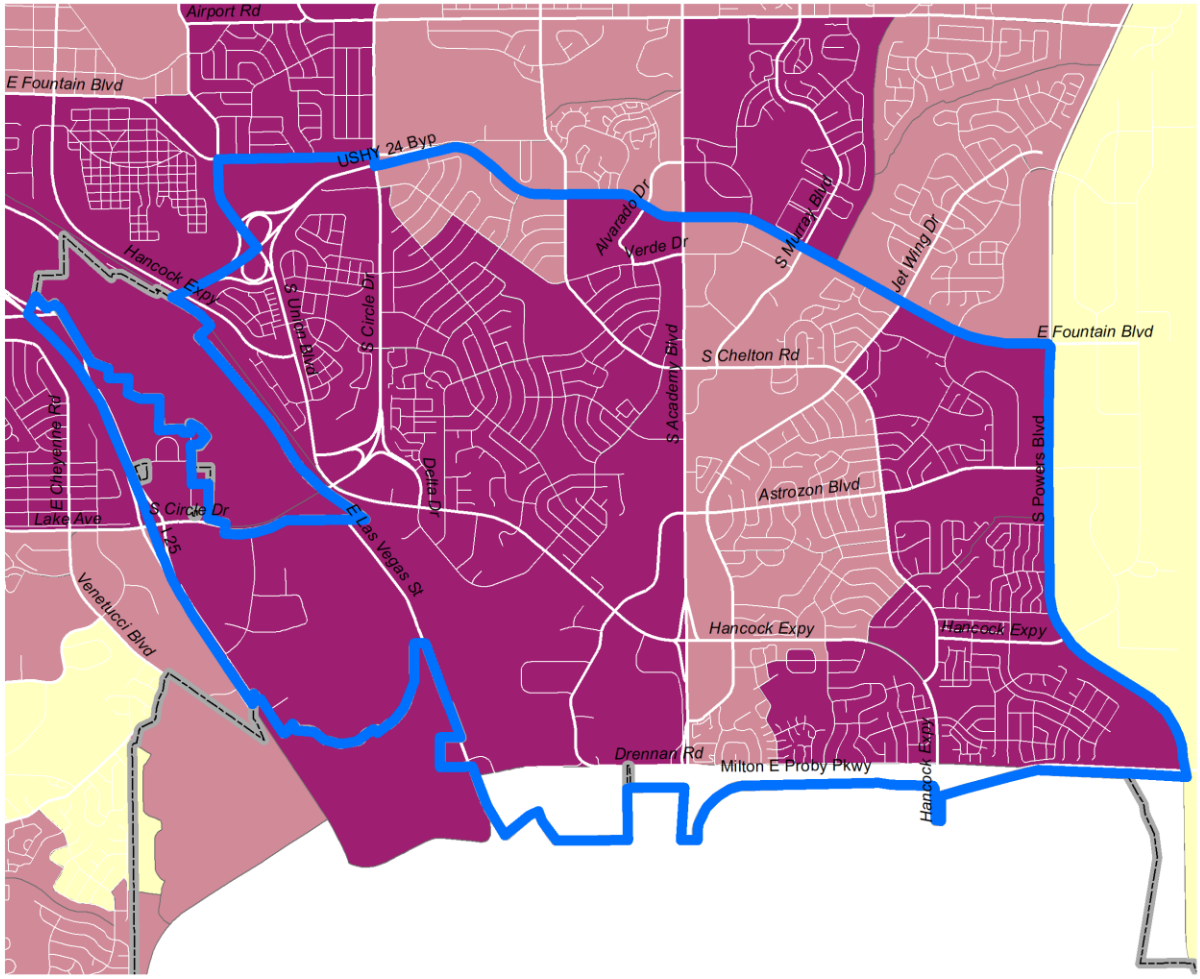
Well-being is a positive outcome that is meaningful for individuals and for many sectors of society that indicates people perceive that their lives as comfortable, healthy, or happy. The well-being sub-index includes metrics relating to individual morbidity and mortality. Morbidity refers to diseases, disability, or poor health, while mortality refers to a measure of death in a population. Obtaining health-related data, especially mental health-related data, at the neighborhood and community scale is a limitation of this index. However, this sub-index can still illustrate existing inequities within the city. The individual metrics that comprise the Well-being sub-index are:

- **Adult Obesity:** The percentage of the population that is defined as obese
- **Life Expectancy:** The statistical measure of the average amount of time that a person is expected to live
- **Use of Healthcare**: the percentage of the population that has not had a regular medical check-up in over a year

Well-being Sub-Index Summary

The Well-being sub-index, as shown in Figure 5, illustrates that approximately 80% of the area is least equitable, with the other 20% being slightly lower than average. The study area is far below most of the City for equity of resident health, with a concentration of the least equitable Block Groups. This index represents the individual health of residents and suggests that the Southeast Community is much unhealthier than the rest of the City. The prevalence of adult obesity for El Paso County is 22.9%, which is moderate compared to the highest prevalence in state in Logan County being 36%. The areas with lower well-being equity in the study area correlate to the demographics where some Block Groups have higher percentages of Hispanic/Latino residents compared to the city average of 18.4%.

Figure 5: Well-being Index

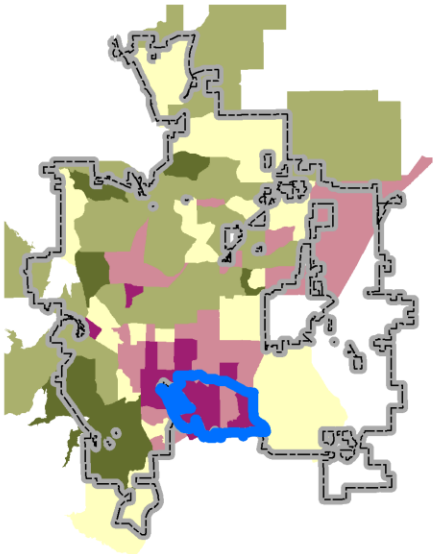


Healthy People Well-being Index

Least Equitable — Average — Most Equitable

Well-being Indicators

- Adult Obesity
- Life Expectancy
- Use of Health Care



Healthy Places Index

What Is It and Why Is It Important?

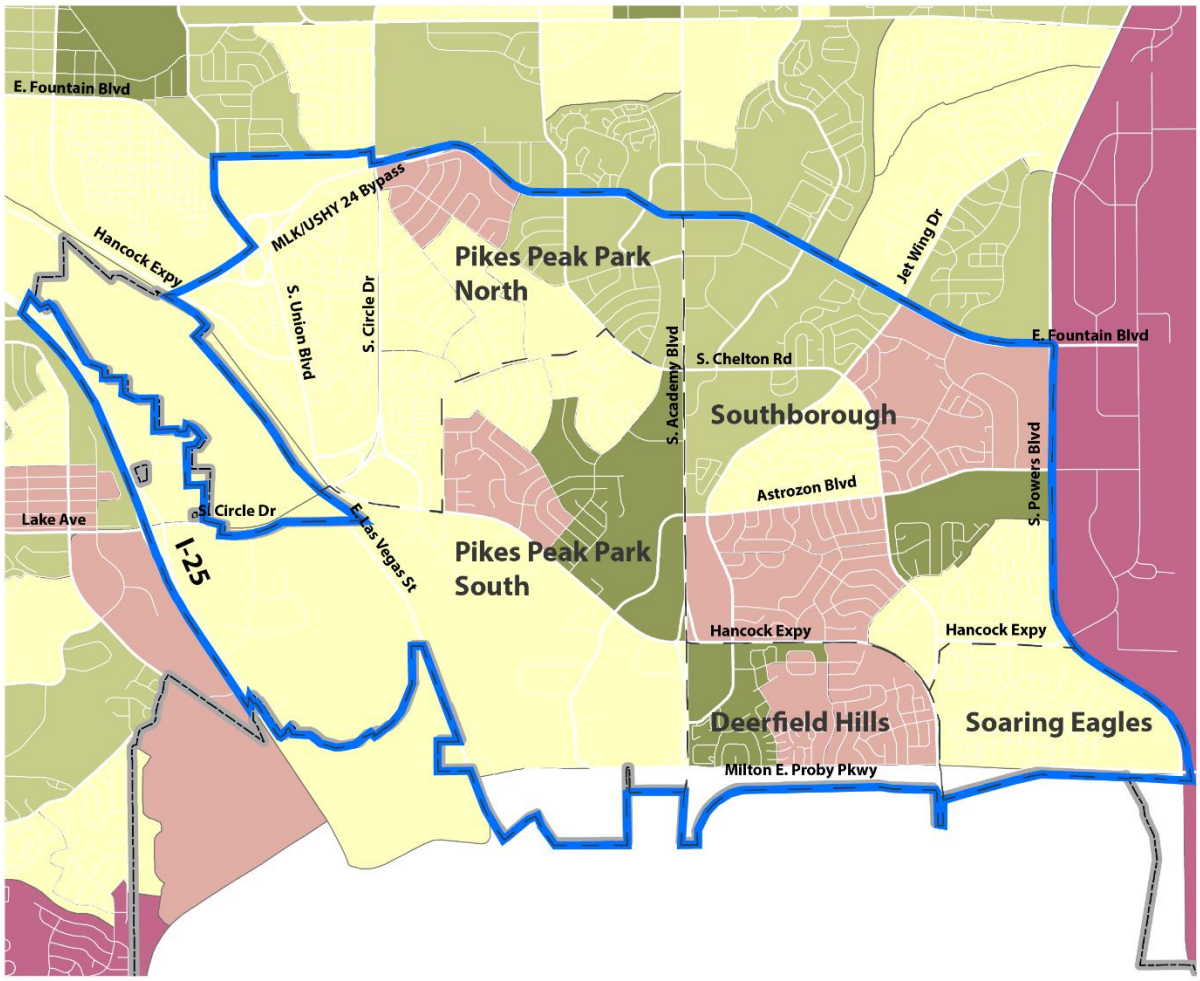
The health of a community can be gauged by the ability of residents to access basic amenities, such as food and healthcare, and whether the modes of doing so are safe and convenient. Healthy places are also defined by the quality of the care and amenities, which are lower in certain neighborhoods and generally correlate with zip codes with lower income and higher minority populations. The metrics of healthy places for this analysis were categorized as:

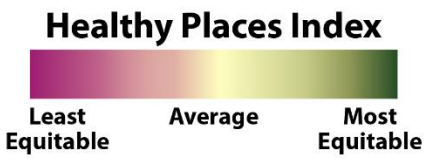
- **Connectivity:** The availability of transportation infrastructure contributes to a person's ability to maintain healthy behaviors
- **Access:** Ease of access to daily goods, services, parks, and healthy foods contributes to a person's overall health
- **Environment:** Environmental conditions and resiliency to environmental risks impact health outcomes for a community

Healthy Places Map Summary

Compared with the Healthy People index, the Healthy Places index in Figure shows mostly average and above average health equity, with only five Block Groups in the study area scoring lower than average. Interestingly, some of the Block Groups that scored low on the Healthy People index scored inversely on the Healthy Places index, most notably the Block Groups in the eastern section of the study area in Southborough, around the intersection of Astrozon Boulevard and South Chelton Road. This includes the single least equitable Block Group from the Healthy People index, which is higher than average in the Healthy Places index. The Healthy Place equity for the city is mostly above average or average, with a few areas near the north and the south city boundary being less equitable.

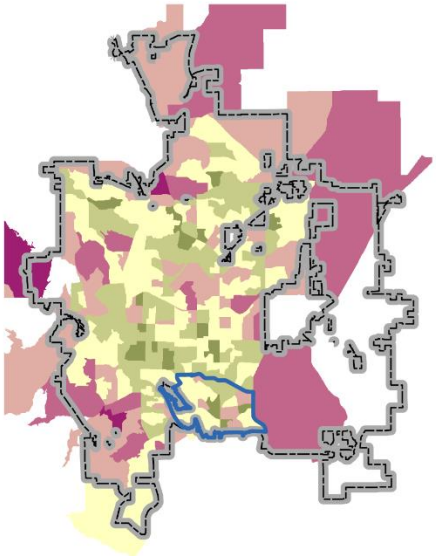
Figure 6: Healthy Places Index





Healthy Places Indicators

- Connectivity
- Access
- Environment



Connectivity

What Is It and Why Is It Important?

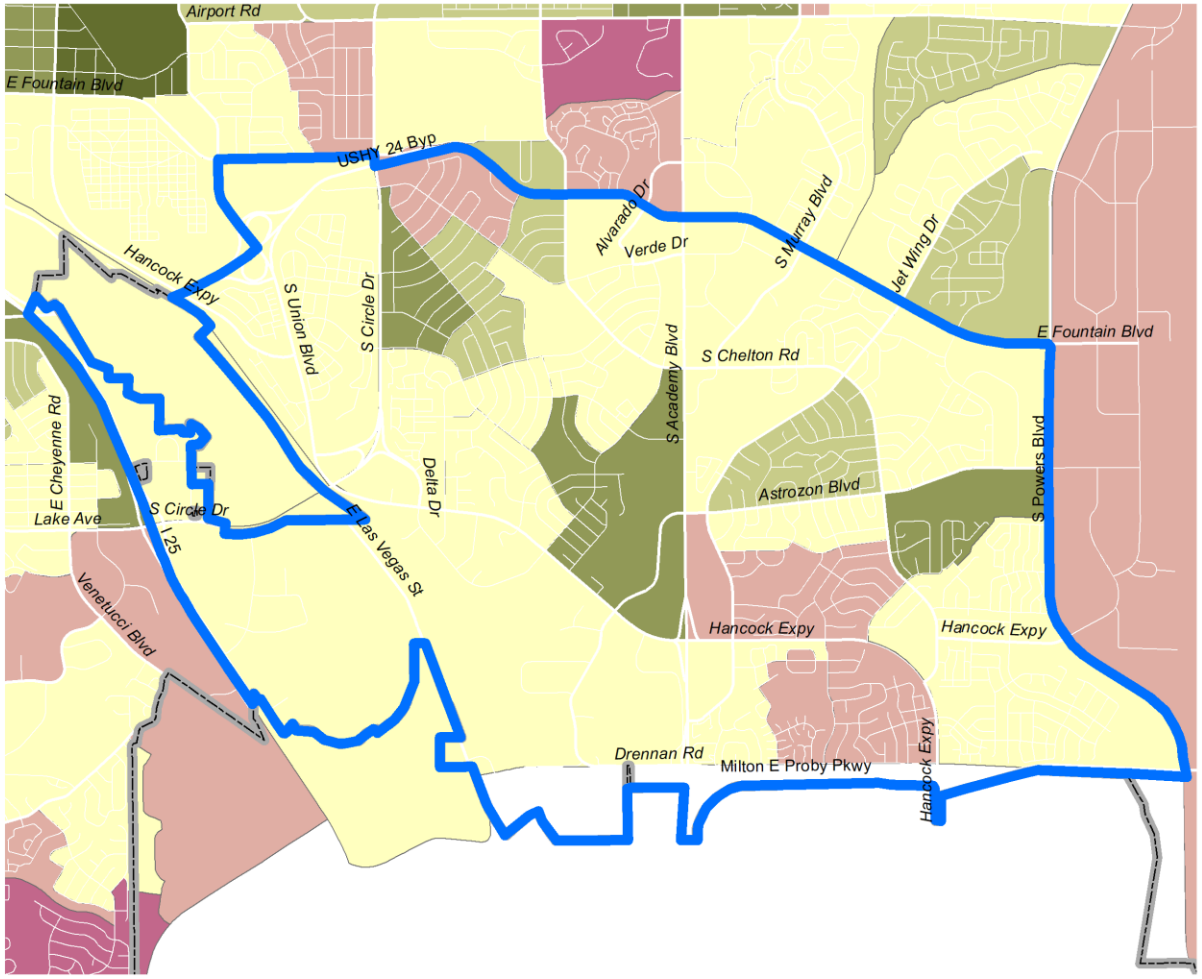
The way cities are organized and built out can have a drastic impact on quality of life and, ultimately. an individual's health. Residents who rely on public transit are often lower income and have no other transportation option. In many cases, public transit takes more time to reach basic amenities such as the grocery store or the doctor. Alternatives to public transit, like cars, can be cost-prohibitive to many residents who may already be cost-burdened and have to spend a high percentage of their income on housing and other necessities. The alternative to cars and public transit is active modes of mobility, including walking, bicycling, and scootering. Proximity to safe, low-stress bicycle facilities and sidewalks enables residents to walk or bike rather than use a car or public transit. In some situations, active modes of mobility may also be faster than cars or public transit. The individual metrics that comprise the Connectivity sub-index include:

- **Sidewalk Connectivity:** The number of dwelling units within 50 feet of a sidewalk
- **Bike Network Connectivity:** The number of dwelling units within a quarter mile of low-stress bicycle facilities
- **Mode Share:** The population that drives to work alone

Connectivity Sub-Index Summary

As shown in , approximately 85% of the study area has average equity of connectivity. The remaining 15% is split between slightly lower equity in the east side of Deerfield Hills, south Southborough, and north Pikes Peak Park North, and higher equity in the north and south of Pikes Peak Park North and the middle and east of Southborough. The high average connectivity equity may be a result of the suburban development pattern of the study area, which resulted in ample sidewalks and a high concentration of local streets. The high average may also be a result of residents living relatively close to downtown, which may reduce the number of people driving to work alone. The city has higher equity of connectivity around downtown and the near west side of downtown, with equity gradually decreasing further from downtown.

Figure 7: Connectivity Index

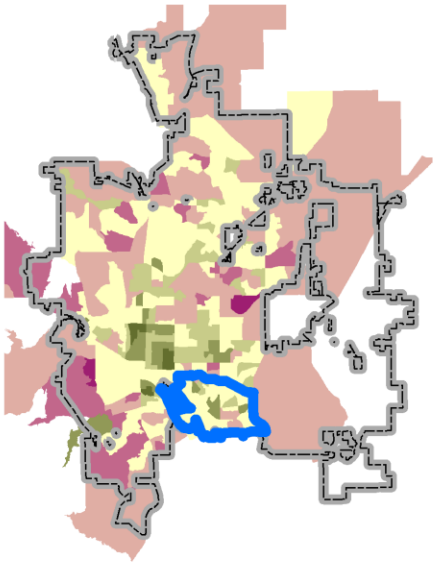


Healthy Places Connectivity Index

Least Equitable — Average — Most Equitable

Connectivity Indicators

- Sidewalk Connectivity
- Bike Network Connectivity
- Mode Share



Access

What Is It and Why Is It Important?

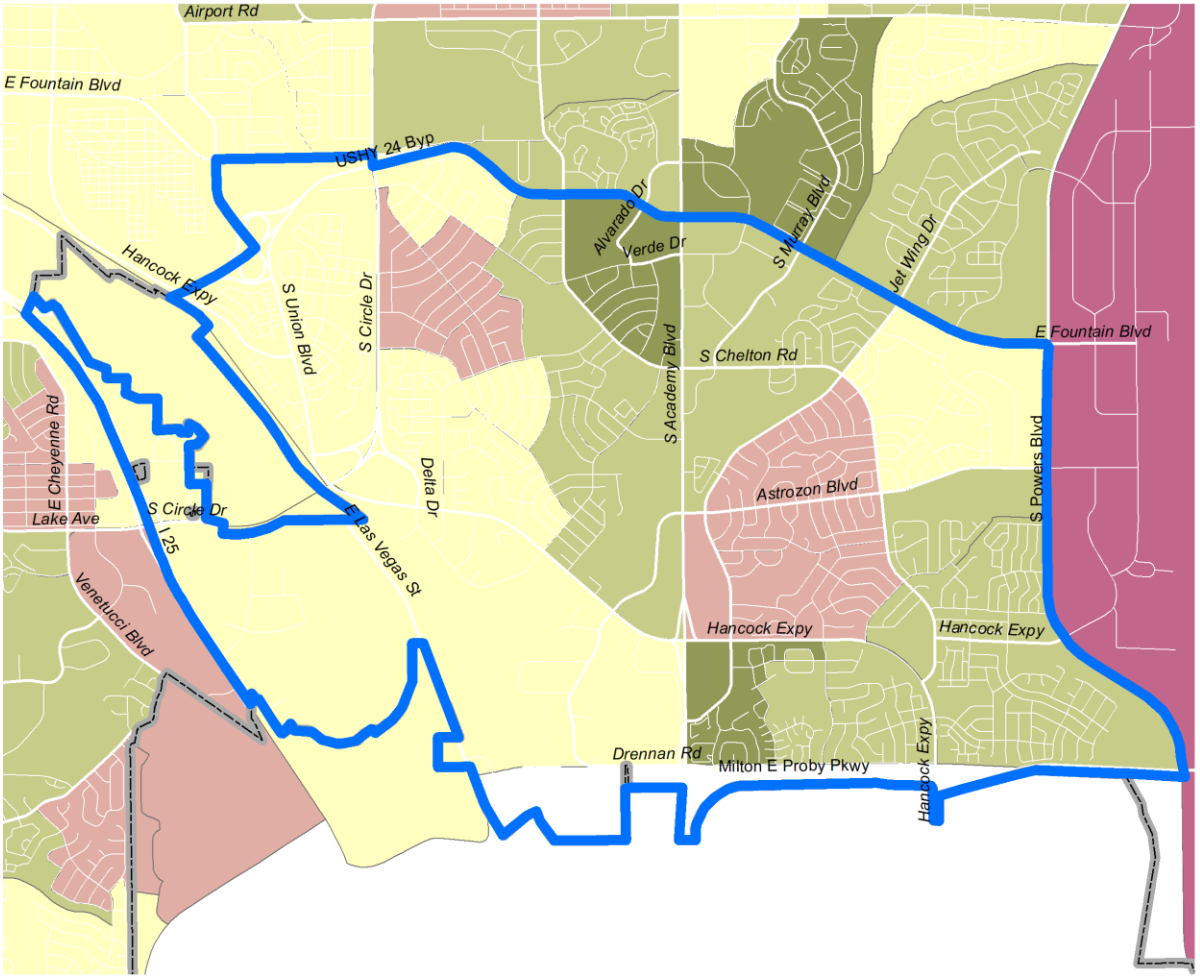
Access to basic amenities, like healthy food and space for recreation, is crucial to the overall health of a community. Limited access to these necessities can increase adverse health conditions, further economic uncertainty, and contribute to lower life expectancy. The individual metrics that comprise the Access sub-index include:

- **Access to Parks:** Residents who can walk to a park or open space within a quarter mile
- **Existing Grocery Store Access:** Housing units within a quarter mile walk to a grocery store
- **Potential Grocery Store Access:** Property zoned to allow for grocery store use
- **Food Swamps:** Areas with a high proportion of fast-food restaurants to people

Access Sub-Index Summary

The western half of the study area, as shown in , has mostly average equity of access, except for the Block Groups on the western side of South Academy Boulevard and the middle of Pikes Peak Park North, which are slightly more and slightly less equitable, respectively. The Block Groups in the eastern side of South Academy Boulevard generally score higher on the Access sub-index, except for the areas north and south of Astrozon Boulevard and west of South Chelton Road, which have slightly lower than average access equity. The study area is like the rest of the city, having a mix of average, slightly above average, and slightly below average access equity. The areas of relatively high equity in the study area could be in part due to concentrations of parks, school yards, and grocery stores along the commercial corridor of South Academy Boulevard.

Figure 8: Access Index

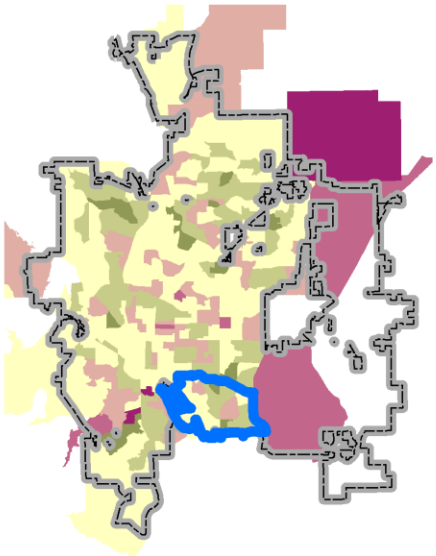


Healthy Places Access Index

Least Equitable — Average — Most Equitable

Access Indicators

- Access to Parks
- Existing Grocery Store Access
- Potential Grocery Store Access
- Food Swamp



Environment

What Is It and Why Is It Important?

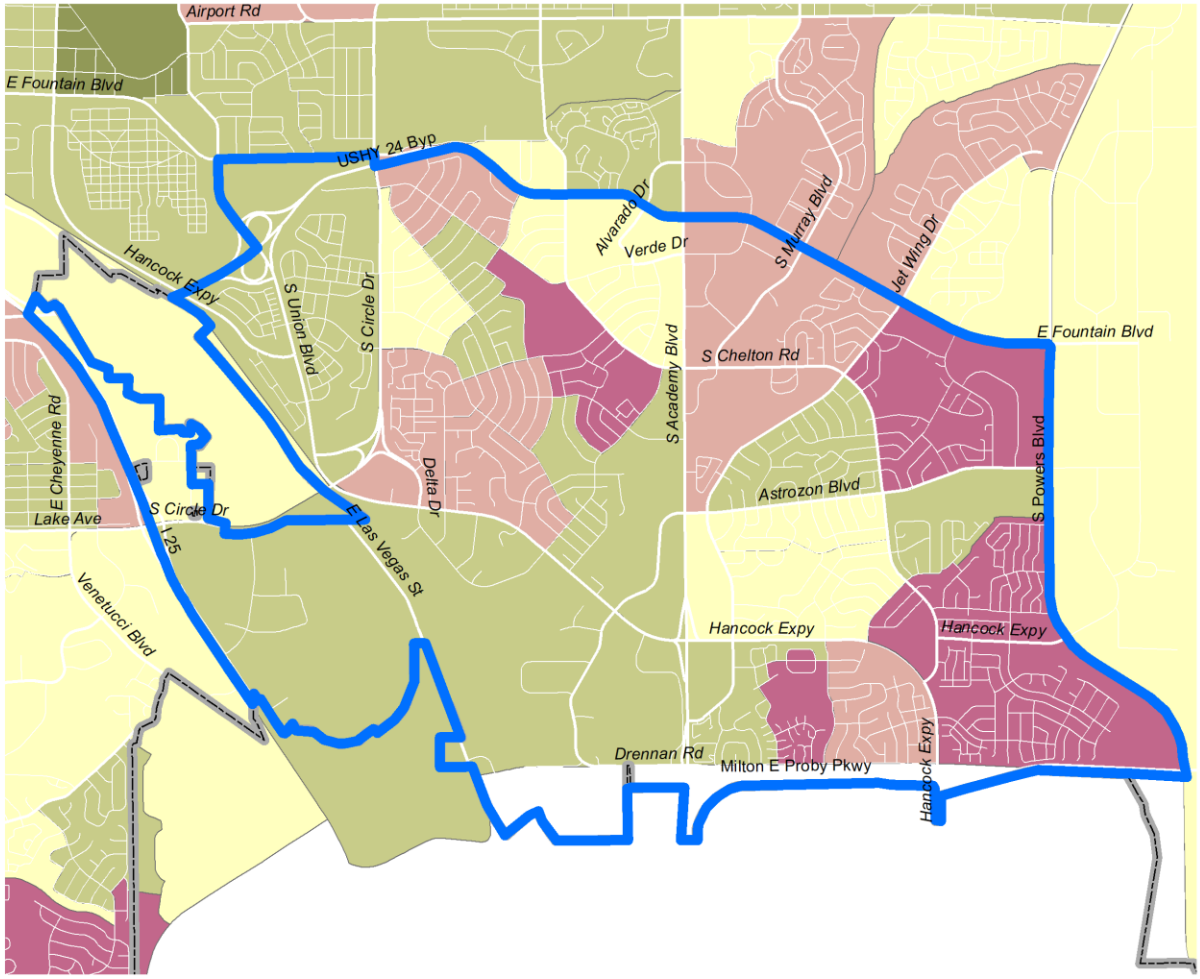
Increasingly, human changes to the environment are negatively affecting communities. Resources like water are becoming scarcer while increased development is raising surface temperatures, adversely affecting residents who typically have less open space within a quarter mile walking distance of their home. Safe air, land, and water are fundamental to a healthy community environment. The individual metrics that comprise the Environment sub-index include:

- **Acres of Park Per Capita:** Total acres of park per capita for each block group
- **Home Water Consumption:** Average gallons of water used per household per capita
- **Urban Heat Island:** Urbanized areas that experience higher temperatures than other areas of the city because they have less vegetation, tree cover, and other features that reflect heat from the sun

Environment Sub-Index Summary

The study area (Figure) has a mixture of above and below average equity scores on the Environment sub-index, with much of the southwest being above average and the eastern and northern areas being below average. Areas on the eastern border may have lower environmental equity because they are near the industrial area adjacent to the airport that is to the east of South Powers Boulevard. Much of the city has higher equity with a few areas that are much lower - one in the north and one along the southern boundary of the city. These areas have higher surface temperatures due to a lack of vegetation and tree canopy compared to the city center, along with lower amounts of park land due to continued development.

Figure 9: Environment Index

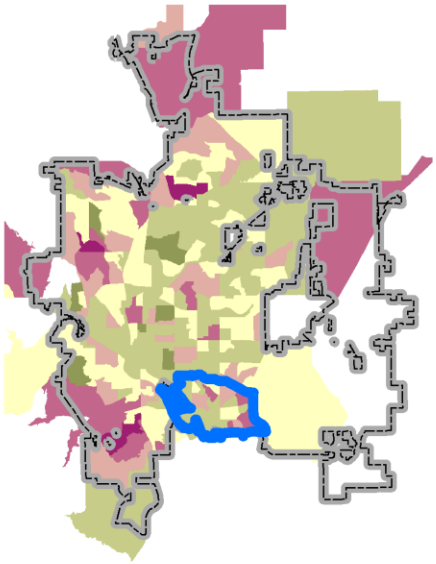


Healthy Places Environment Index

Least Equitable — Average — Most Equitable

Environmental Indicators

- Acres of Parks Per Capita
- Home Water Consumption
- Urban Heat Island



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Part 2: Key Findings, Objectives, and Recommendations

Key Finding Summary

Five key findings emerged from the Healthy Places index analysis:

1) The study area's bike and pedestrian networks are fairly well-connected but high-stress, making it difficult for residents to access healthy foods and discouraging them from getting exercise outdoors.
2) Grocery store access is uneven across the study area and neighborhoods far from arterial roads generally have less access to healthy foods.
3) S Academy Boulevard has very high concentrations of fast-food restaurants, making unhealthy eating more convenient for the residents of adjacent neighborhoods.
4) Study area residents generally have a park near their home, but many do not have safe ways to access that park due to the deficiencies in existing pedestrian and bike infrastructure. Additionally, there are a select few neighborhoods that are without a park of their own and are surrounded by arterial roads, which make it much harder to safely access open space.
5) The study area's average temperature is higher than many parts of the city due to the lack of vegetation, discouraging residents from being active outdoors and increasing their likelihood of heat exhaustion.

Recommendations

A. Connectivity

Key Finding A.1: Overall, the study area has average sidewalk and bike network connectivity with only a few areas, including the east side of Deerfield Hills and streets around Verde Drive, having below average equity of access for low stress bike facilities. The ease of walking and cycling in the neighborhood is below average, and vehicular flow is often prioritized over the safety and comfort of other roadway users through the design of infrastructure. This creates a barrier to pursuing outdoor recreation and safely accessing healthy foods and contributes to the overall lower health equity of the study area.

Objective A.1.1: Make walking safer and more appealing for people at all levels of ability through infrastructure improvements and urban design, such as installing vegetated buffers between sidewalks and lanes of traffic, curb bump-outs, and pedestrian islands. Reconfigure roadways to narrow vehicular lanes and use more space for active transportation facilities, such as bike lanes, wider sidewalks, or bus idling lanes.

Recommendations:

- Policy
  - Inventory the existing right-of-way along Hancock Expressway, Astrozon Boulevard, S Academy Boulevard, and S Circle Drive. Examine the right-of-way use, speed, and configuration to determine the appropriate locations for infrastructure improvements and lane reconfigurations.
  - Conduct a safety audit of intersections within the study area.
- Investment
  - Construct necessary improvements that would increase safety for all roadway users by providing refuge for non-automotive users and increasing sight lined for automotive users – curb bump-outs, vegetated extensions, pedestrian islands, lane reductions, etc.

Case Study: Beginning in 2017, Colorado Springs launched a study on Weber Street between Peak Avenue and Uintah Street to see if existing roadway space, which included 4 vehicle lanes, could be better used to accommodate all roadway users. After several public input events, the City decided to repurpose the roadway to provide 2 vehicle lanes, 1 vehicle turn lane, and two bike lanes. This change has provided dedicated space for bicycle users, shortened the distance that pedestrians must cross, and increased the sight distance for vehicles, improving safety and decreasing the chance of collisions for all roadway users.

(Source: Bike Colorado Springs, 2020, *Weber St Bike Lane Continuing North*)

Objective A.1.2: Install traffic calming improvements that slow or channel vehicular traffic and make travel safer for pedestrians and bicycle users and improve their commute to outdoor recreation and healthy food destinations.

Recommendations:

- Policy
  - Prioritize Neighborhood Traffic Calming Program improvements in the northwest and southeast portions of the study area.
  - Conduct a safety audit of intersections within the study area.
- Investment
  - Construct improvements that slow and channel vehicular traffic, such as bump-outs or chicanes, and decrease the likelihood of collisions for all roadway users.

Case Study: In 2019, the Town of Fraser, Colorado, launched a pedestrian safety improvement project on Highway 40. The project included concrete pedestrian islands with ADA ramps, landscaped curb bump-outs, and new sidewalks, all of which made it easier for pedestrians at all ability levels to cross the busy 5-lane street. These changes not only made the streetscape safer, but also more comfortable, encouraging residents to cross the highway and access the Town's active recreation opportunities on the east side, such as the River-Ridge Hiking Trail.

(Source: Town of Fraser, 2019, *US Hwy 40 Pedestrian Improvements Project*)

Objective A.1.3: Increase the connectivity of the sidewalk and bicycle networks to make it easier for all transportation users to recreate and access healthy foods.

Recommendations:

- Policy
  - Inventory the existing right-of-way along Hancock Expressway, Astrozon Boulevard, S Academy Boulevard, and S Circle Drive. Examine the right-of-way use, speed, and configuration to determine the appropriate locations for infrastructure improvements and lane reconfigurations.
  - Conduct a walking audit of the study area to identify locations that are critical for pedestrian infrastructure improvements and catalogue pedestrian destinations.
- Investment

- Fill sidewalk gaps along arterial roads then improve existing deficient sidewalks on local roads by making them wider and ADA-accessible. Prioritize notable gaps in the network and those that would create new connections to parks, trails, and green space, as well as grocery stores.

Case Study: In 2019, Colorado Springs installed new sidewalk along S Wahsatch Avenue and E St Elmo Avenue to fill in existing gaps that presented a barrier to pedestrian and bicycle movement, as well as to protect students attending the Vanguard School. These improvements made it possible for residents to safely travel through the neighborhood and across Highway 115 to access the Safeway and Natural Grocers, the only healthy food options in the immediate area. Previously, residents had few options for reaching the west side and were limited to the oversupply of fast-food restaurants on the east side. Overall, the City's completion of the sidewalk network and installation of crosswalk improvements made it easier for residents to safely access healthy food.

(Source: KKTV, 2019, *'We try to make it better': 2C improves thousands of sidewalks in Colorado Springs*)

Objective A.1.4: Lower the minimum parking requirement to address the negative impacts of large empty spaces on pedestrians, such as heat exposure and mental and physical exhaustion, and decrease the distance that pedestrians must travel to reach healthy foods.

Recommendations:

- Policy
  - Commission a parking reduction study that examines the parking capacity and usage for several land use types that are common in the study area, as well as across the city: automotive wash, automotive repair, convenience food sales, and hotel/motel. Lower the respective minimum parking requirements under the Code of Ordinances if supported by the parking study.
  - Expand the parking reduction conditions in the Code of Ordinances to offer reductions in exchange for the provision of bike, transit, or multi-modal facilities.
  - Increase or remove the maximum parking reduction (%) in the Code of Ordinances.

Case Study: In 2015, Fayetteville, Arkansas city council members approved a proposal to eliminate minimum parking requirements for nonresidential properties. The old rules were based on square footage, requiring, for example, restaurants to provide one parking space for every 100 square feet of building space and retail shop owners to provide one space for every 250 square feet. For residential, minimums below the specified requirements may be achieved for properties within a ¼ mile from Transit stops, substituted up to 10% for bike racks and motorcycle and scooter spaces. Shared parking between developments with non-conflicting demand such as a church and bank are encouraged as means to reduce the amount of parking required.

(Source: Fayetteville Flyer, *Fayetteville Eliminates Parking Requirements*)

B. Access

Key Finding B.1: There is a stark divide in existing grocery store access across the study area, with areas along the west and northeast sides of S. Academy Boulevard having a much higher than average access and other areas having much lower access. This is the case across Colorado Springs, throughout which residents tend to have higher grocery store access if they live near a commercial corridor. Poor transportation connectivity and the general spread-out nature of grocery stores both contribute to lower healthy food access – and overall health equity – for study area residents.

Objective B.1.1: Identify and create new locations for grocery stores, local healthy restaurants, and other healthy food service providers, such as food recovery nonprofits.

Recommendations:

- Policy
  - Inventory vacant and city-owned parcels across the study area. Identify those that are both close to residential neighborhoods and inexpensive to develop, either because they are owned by a partner agency (e.g. Xcel Energy) or city-owned.
- Partnership
  - Create a list of contacts at food recovery nonprofits and proactively incorporate representatives into the planning process, using their expertise to assess where new healthy food locations are needed.

Case Study: In 2019, the City of Milwaukee, Wisconsin, systematically identified areas where healthy food access was lacking and compiled possible solutions. As a part of this initiative, the City launched its White Box program, which inventoried vacant properties across areas in need and offered redevelopment incentives contingent on improving healthy food access. The incentive was in the form of reimbursable grants of up to $10 per square foot with a maximum grant in the amount of $25,000. Alongside several other financial tools, the White Box program has already financed several new grocery stores, increasing healthy food access across the city.

(Source: City of Milwaukee, 2019, *Milwaukee Fresh Food Access Report*)

Objective B.1.2: Partner with existing food-focused nonprofits to provide healthy foods and culturally relevant programming in a location that is centrally accessible to as much of the neighborhood as possible.

Recommendations:

- Partnership
  - Partner with healthy food nonprofits to assess if the planned distribution centers will serve the study area, and to what geographic extent. Pursue an agreement that would provide a small, satellite distribution truck/stand in the parts of the study area not served by the larger distribution centers in exchange for City program support.

Case Study: Food to Power is a Colorado Springs nonprofit that partners with food retailers and farms to distribute food that will be discarded by stores due to excess

ordering or because it is just past (or about to pass) the sell-by date. In addition to food distribution, the organization works on composting and education about sustainable food and agriculture practices. Food is already distributed locally at several community organizations outside of the study area, and a new location within the study area will be coming soon. Food to Power's new distribution hub, community center, and garden will be located just outside the Northwest corner of the study area and has a lot of potential to provide healthy food and community development for the Southeast neighborhoods.

(Source: Food to Power, 2021, *Hillside Hub*)

Key Finding B.2: In the area along the west side of S. Academy, north of Astrozon and the Highway 24 interchange, there is a high concentration of fast-food restaurants; there are similar concentrations along I-25 and S. Academy throughout the city. These concentrations make unhealthy eating more convenient for study area residents, lowering overall health equity for the neighborhood and encouraging unhealthy lifestyles.

Objective B.2.1: Create a Healthy Food Business Licensing Overlay district that requires most gas stations and convenience stores to dedicate floor space to healthy foods.

Recommendations:

- Policy
  - Create and adopt a Healthy Food Business Licensing Overlay district that requires all "convenience food sales" businesses that need a Liquor and Beer License to dedicate a certain percentage (e.g., 5%) of their total floor area to healthy staple foods, defined by the Code of Ordinances to include a diversity of fresh produce, dairy, eggs, breads, etc. Apply the district to the study area and prioritize enforcement along arterial roads, such as S Union Boulevard, S Circle Drive, Hancock Expressway, and Academy Boulevard.

Case Study: In 2017, the City of Passaic, New Jersey, adopted a Grocery Store Ordinance that required all grocery stores and accessory use groceries (which includes gas stations and convenience stores larger than 300 sq ft), to offer staple foods: milk, eggs, cheese, meat, fruits and vegetables, juice, whole grains, beans, and legumes. To meet the city requirement, businesses must continuously offer staple foods that are in good condition and free from damage. Each staple category has a specified quantity (e.g. 5 gallons of milk, 6 dozen-egg cartons, 30 pounds of produce, etc.) that must be offered, and the City Health Officer is tasked with enforcement.

(Source: Passaic, New Jersey, 2017, Code of Ordinances, *Chapter 162 Grocery Stores*).

Objective B.2.2: Offer density bonuses or tax assistance packages to incentivize new mixed-use development to incorporate grocery stores and healthy fast-casual franchises.

Recommendations:

- Policy
  - Modify the Code of Ordinances to include a section on healthy foods that provides expedited entitlement and building permit review (rapid response

review) for mixed-use projects that include a specified amount of grocery sales area, provided that the grocery includes healthy staple foods.

Case Study: Clark County, Nevada, modified its Development Code in 2013 to offer a density bonus to mixed-use developments that incorporate or locate near healthy food. Specifically, a project is entitled to a 20% density bonus if it includes a grocery store or similar retail use with 6,000 square feet or more of grocery sales area. The Code also offers the bonus to developments that are located within walking distance of a grocery store or similar healthy food establishment. Together, these policies incentivize residential development to either include or locate near healthy food options, increasing access for new and existing residents.

(Source: Clark County, 2013, Title 30 Development Code, *30.48.770 (C)(1)(b)(iii)*)

Objective B.2.3: Introduce or modify local land use policies and zoning to promote, expand, and protect community garden and farmers' market sites.

Recommendations:

- Policy
  - Modify the Code of Ordinances to create a new overlay zone that protects community gardens from development pressures when applied to an area, similar to the Historic Preservation Overlay. Apply the overlay district to the study area to protect the Deerfield Hills Community Garden and any new gardens should they arise.
- Partnership
  - Partner with community garden nonprofits and/or primary schools to expand community garden space and offer garden training.

Case Study: In 1988, the City of Boston, Massachusetts, established a specific "community garden" zoning sub-district, designed to be used as an overlay to protect existing gardens, within its open space zoning district. The open space district and nine open space subdistricts, taken together, present a comprehensive means for protecting and conserving open spaces through land use regulations. Land can be zoned simply as open space or given a subdistrict designation, instilling flexibility into the regulation of community amenities. The City has used the community garden sub-district designation to protect 16 community gardens, maintaining residents' access to community-supported healthy foods.

(Source: Boston Planning and Development Agency, 1988, *Article 33. Open Space Subdistricts*)

Key Finding B.3: In the study area, access to parks is generally average or above that of the city, but acres of park per capita is lower than average. To engage in outdoor recreation, people need not only open space but also safe, comfortable ways to access that open space. To encourage exercise and increase the overall health equity of the study area, both additional park space and improved pedestrian and bicycle network connections to that space are needed in areas where it is currently lacking.

Objective B.3.1: Locate new parks in the areas of the neighborhood that currently lack parks to increase residents' access to active outdoor recreation options.

Recommendations:

- Policy
  - Inventory vacant and city-owned parcels across the study area. Identify those that are both close to residential neighborhoods and inexpensive to develop, either because they are owned by a partner agency (e.g. Xcel Energy) or city-owned.
  - Prioritize locating new small parks or pocket-parks in the neighborhood between Astrozon Boulevard and Jet Wing Drive.

Case Study: In 2015, the City of Denver purchased from Xcel Energy in 2015 the east side of Fairfax Street between 28th and 29th Avenue, an area of the Park Hill neighborhood that was identified as a "park desert" due to its shortage of open spaces. The park, now referred to as the Park Hill Commons, will include play space, trees and landscaping, outdoor seating, and a shelter. Additionally, the park will be surrounded by restaurants that offer healthy food options, offices, and studio apartments, providing a range of needed amenities. The Park Hill Commons will be completed by the end of 2021 and will provide much-needed open space for recreation and play for neighborhood residents.

(Source: City and County of Denver, 2021, *29th & Fairfax Park Project*).

Objective B.3.2: Improve connections to existing parks and open space to make it easier for residents of all ages and abilities to reach outdoor recreation destinations.

Recommendations:

- Policy
  - Conduct a mobility analysis of the study area to find where arterial roads prevent residents from easily accessing parks by foot or on a bicycle (such as the intersection at Verde Drive and Chelton Road). Identify the improvements that would be needed to make a safe connection across the road and increase ease of access.
- Investment
  - Fill sidewalk gaps along arterial roads then improve existing deficient sidewalks on local roads by making them wider and ADA-accessible. Prioritize notable gaps in the network and those that would create new connections to parks, trails, and green space, as well as grocery stores.
  - Install mid-block crosswalks (signage, ADA ramps, and striping) at points along arterial roads that would create key connections from residential areas to open space.

Case Study: In 2017, Larimer County, Fort Collins, and Loveland realized a planning initiative that began in 2002 by opening the Loveland-Fort Collins Front Range Connector, a multi-use trail that linked together the 35 miles of paved trails in Fort Collins and the 18 miles of trails in Loveland. The connection nearly doubled the amount of recreation space available to residents and provided valuable space for walking, running, biking, and other formers of outdoor activity. By analyzing network connectivity

and being strategic with their improvements, the municipalities were able to substantially improve healthy living for residents at a relatively low cost.

(Source: City of Loveland, 2017, *First Paved Trail Connecting Loveland, Fort Collins - Open!*)

Objective B.3.3: Enact policies to ensure that parks and open spaces are designed in culturally appropriate ways so that all people feel welcome and encouraged to pursue outdoor activities.

Recommendations:

- Policy
  - Modify the Code of Ordinances to include a statement that new urban park lands shall be designed in a manner that is universally accessible and reflective of the surrounding neighborhood's culture and needs.
  - Study existing park space in the study area to determine if any amenities are under-used and could be redesigned to better match the neighborhood's culture and needs.

Case Study: In 2021, Colorado Springs broke ground on Panorama Park, an innovative project that incorporated accessibility and community-driven design as cornerstones since its initiation in 2019. Before the redesign, the park was mostly unused open lawn with a few older play structures. The new plan includes a universally accessible playground and community-made tile mural, as well as a variety of other landscaping elements that contribute to an exciting and welcoming experience for residents of all ages and abilities. By redeveloping the park into amenity and involving the community in the design process, the City ensured that the open space would be used to its fullest potential and reliably draw residents toward outdoor recreation.

(Source: City of Colorado Springs, 2021, *Panorama Park*)

C. Environment

Key Finding C.1: The overall environmental health equity of the study area varies depending on the environmental indicator selected. For example, daily home water consumption is average or above average across the study area, demonstrating that residents have sufficient access to clean water and the health benefits that it provides, such as hydration and cooling. However, the urban heat island effect, which is the increase in an area's air temperatures due to solar warming of impervious (non-vegetative) surfaces, is higher than average across the study area. In particular, Pikes Peak North, Southborough, Deerfield Hills, and Soaring Eagles experience greater heat stress and have comparatively lower health equity than neighboring communities.

Objective C.1.1: Create standards and a review process for upcoming redevelopment projects that encourages minimizing impervious surfaces and incorporating vegetation where possible.

Recommendations:

- Policy
  - Modify the Code of Ordinances article on plan submittals and review to require that the information on landscaping, irrigation, vegetation retention, and maintenance be included for all submittals on undeveloped land that propose a substantial increase (% to be determined) in impervious surface area from the existing total impervious surface area of

the site. Require the same elements for submittals on developed land that propose a substantial increase (% to be determined) in impervious surface area from the existing total impervious surface area of the site.

Case Study: The City of Ann Arbor, Michigan, re-wrote its unified development code to require that developers reduce the negative impacts of storm water runoff by minimizing the impervious surface area of the site. Any non-single-family residential project that increases the total impervious surface area of a site from its existing state triggers a site plan review by the City, which then returns the plan to the developer with notes on how to increase the vegetated area. Additionally, the City's standards for site plan approval in variance cases include conditions for open space provision and impervious surface reduction. Together, these code standards ensure that new development projects contribute as minimally as possible to the urban heat island effect and improve the overall urban environment, making it more conducive to outdoor recreation.

(Source: City of Ann Arbor, 2021, *Unified Development Code Chapter 5.30.1*)

Objective C.1.2: Increase the total vegetation across the neighborhood by planting and maintaining new trees to increase the urban tree canopy and by pursuing green infrastructure.

Recommendations:

- Policy
  - Move forward with the City's Urban Forestry Management Plan and prioritize new plantings in neighborhoods on the west side of the study area, as well as along the west side of Astrozon Boulevard.
  - Update the City's landscape design manual to incorporate green infrastructure and water capture into all new public projects.

Case Study: In 2006, the City of Denver launched the Mile High Million Tree Initiative to increase the urban tree canopy across the city and mitigate the urban heat island effect. Although the funding for the program ended before the City could achieve its goal, it ultimately planted between 250,000 and 500,000 new trees. Evaluation of the program revealed that the new trees helped mitigate the city's ozone problem, intercept solar radiation, increase humidity, and provide direct shade for pedestrians. Overall, the increase in vegetation helped relieve individual neighborhoods and the city as a whole from the negative impacts of the urban heat island effect.

(Source: Mile High CRE, 2020, *The Benefits of Denver's Urban Forest Initiative*)

Objective C.1.3: Write new land use requirements, such as vegetated buffers, into code for industrial land uses to minimize negative heat and air quality impacts and improve the immediate environment for pedestrians and cyclists.

Recommendations:

- Policy
  - Modify the Code of Ordinances to require vegetated buffers between all industrial land uses and any adjacent right of ways.

Case Study: The City of Gainesville, Georgia, requires all non-residential developments to build a 6-foot vegetated buffer between the property line and the public right-of-way in all areas zoned as a Neighborhood Business District. This standard was established to reduce the noise and air pollution coming from industrial and heavy-commercial land uses across the city, which were interfering with pedestrians' ability to safely and comfortably access amenities. The buffers create a visual screen between pedestrians and industrial buildings, mitigate the negative impacts of air pollution, and provide relief from the urban heat island effect in highly impervious areas. Overall, this code change has made it easier for pedestrians to pursue active transportation and access the goods necessary to support a healthy lifestyle.

(Source: City of Gainesville, 2021, *Unified Development Code Chapter 9-16-1*)

Recommendation Quick-Chart

	Recommendations	(A) Connectivity	(B) Access	(C) Environment	Associated Objectives
Policy	Inventory the existing right-of-way along Hancock Expressway, Astrozon Boulevard, S Academy Boulevard, and S Circle Drive. Examine the right-of-way use, speed, and configuration to determine the appropriate locations for infrastructure improvements and lane reconfigurations.	●	●		A.1.1 A.1.3
	Conduct a safety audit of intersections within the study area.	●			A.1.1 A.1.2
	Prioritize Neighborhood Traffic Calming Program improvements in the northwest and southeast portions of the study area.	●			A.1.2
	Conduct a walking audit of the study area to identify locations that are critical for pedestrian infrastructure improvements and catalogue pedestrian destinations.	●			A.1.3
	Commission a parking reduction study that examines the parking capacity and usage for several land use types that are common in the study area, as well as across the city: automotive wash, automotive repair, convenience food sales, and hotel/motel. Lower the respective minimum parking requirements under the Code of Ordinances if supported by the parking study.	●	●		A.1.4
	Expand the parking reduction conditions in the Code of Ordinances to offer reductions in exchange for the provision of bike, transit, or multi-modal facilities.	●			A.1.4
	Increase or remove the maximum parking reduction (%) in the Code of Ordinances.	●	●		A.1.4
	Inventory vacant and city-owned parcels across the study area. Identify those that are both close to residential neighborhoods and inexpensive to develop, either because they are owned by a partner agency (e.g. Xcel Energy) or city-owned.		●		B.1.1 B.3.1

	Create and adopt a Healthy Food Business Licensing Overlay district that requires all “convenience food sales” businesses that require a Liquor and Beer License to dedicate a certain percentage (e.g., 5%) of their total floor area to healthy staple foods, defined by the City Code to include a diversity of fresh produce, dairy, eggs, breads, etc. Apply the district to the study area and prioritize enforcement along arterial roads, such as S Union Boulevard, S Circle Drive, Hancock Expressway, and Academy Boulevard.		●		B.2.1
	Modify the Code of Ordinances to include a section on healthy foods that provides expedited entitlement and building permit review (rapid response review) for mixed-use projects that include a specified amount of grocery sales area, provided that the grocery includes healthy staple foods.		●		B.2.2
	Modify the Code of Ordinances to create a new overlay zone that protects community gardens from development pressures when applied to an area, similar to the Historic Preservation Overlay. Apply the overlay district to the study area to protect the Deerfield Hills Community Garden and any new gardens should they arise.		●	●	B.2.3
	Conduct a mobility analysis of the study area to find where arterial roads prevent residents from easily accessing parks by foot or on a bicycle (such as the intersection at Verde Drive and Chelton Road). Identify the improvements that would be needed to make a safe connection across the road and increase ease of access.	●	●		B.3.2
	Prioritize locating new small parks or pocket-parks in the neighborhood between Astrozon Boulevard and Jet Wing Drive.		●	●	B.3.1
	Modify the Code of Ordinances to include a statement that new urban park lands shall be designed in a manner that is universally accessible and reflective of the surrounding neighborhood’s culture and needs.		●		B.3.3

	Study existing park space in the study area to determine if any amenities are under-used and could be redesigned to better match the neighborhood's culture and needs.		●	●	B.3.3
	Modify the Code of Ordinances article on plan submittals and review to require that the information on landscaping, irrigation, vegetation retention, and maintenance be included for all submittals on undeveloped land that propose a substantial increase (% to be determined) in impervious surface area from the existing total impervious surface area of the site. Require the same elements for submittals on developed land that propose a substantial increase (% to be determined) in impervious surface area from the existing total impervious surface area of the site.			●	C.1.1
	Move forward with the City's Urban Forestry Management Plan and prioritize new plantings in neighborhoods on the west side of the study area, as well as along the west side of Astrozon Boulevard.			●	C.1.2
	Update the City's landscape design manual to incorporate green infrastructure and water capture into all new public projects.			●	C.1.2
	Modify the Code of Ordinances to include an additional clause that buffers be required between all industrial land uses and any adjacent right of ways.		●	●	C.1.3
Investment	Construct necessary improvements that would increase safety for all roadway users by providing refuge for non-automotive users and increasing sight lined for automotive users – curb bump-outs, vegetated extensions, pedestrian islands, lane reductions, etc.	●			A.1.1
	Construct improvements that slow and channel vehicular traffic, such as bump-outs or chicanes, and decrease the likelihood of collisions for all roadway users.	●			A.1.2

	Fill sidewalk gaps along arterial roads then improve existing deficient sidewalks on local roads by making them wider and ADA-accessible. Prioritize notable gaps in the network and those that would create new connections to parks, trails, and green space, as well as grocery stores.	●	●		A.1.3 B.3.2
	Install mid-block crosswalks (signage, ADA ramps, and striping) at points along arterial roads that would create key connections from residential areas to open space.	●	●		B.3.2
Partnership	Create a list of contacts at food recovery nonprofits and proactively incorporate representatives into the planning process, using their expertise to assess where new healthy food locations are needed.		●		B.1.1
	Partner with healthy food nonprofits to assess if the planned distribution centers will serve the study area, and to what geographic extent. Pursue an agreement that would provide a small, satellite distribution truck/stand in the parts of the study area not served by the larger distribution centers in exchange for City program support.		●		B.1.2
	Partner with community garden nonprofits and/or primary schools to expand community garden space and offer garden training.		●	●	B.2.3

Healthy Food – Municipal Strategy Resources

- Municipal Strategies to Increase Food Access (Massachusetts Department of Public Health)
- Grocery Stores and Infill Development (Sustainable Development Code)
- Municipal Options for Healthy Food Access in Stores and Restaurants (Healthy Food Policy Project)
- Healthy Places Zoning (United States Centers for Disease Control and Prevention)

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Appendix

Citywide Maps

Figure 10: Healthy People Index Citywide Map

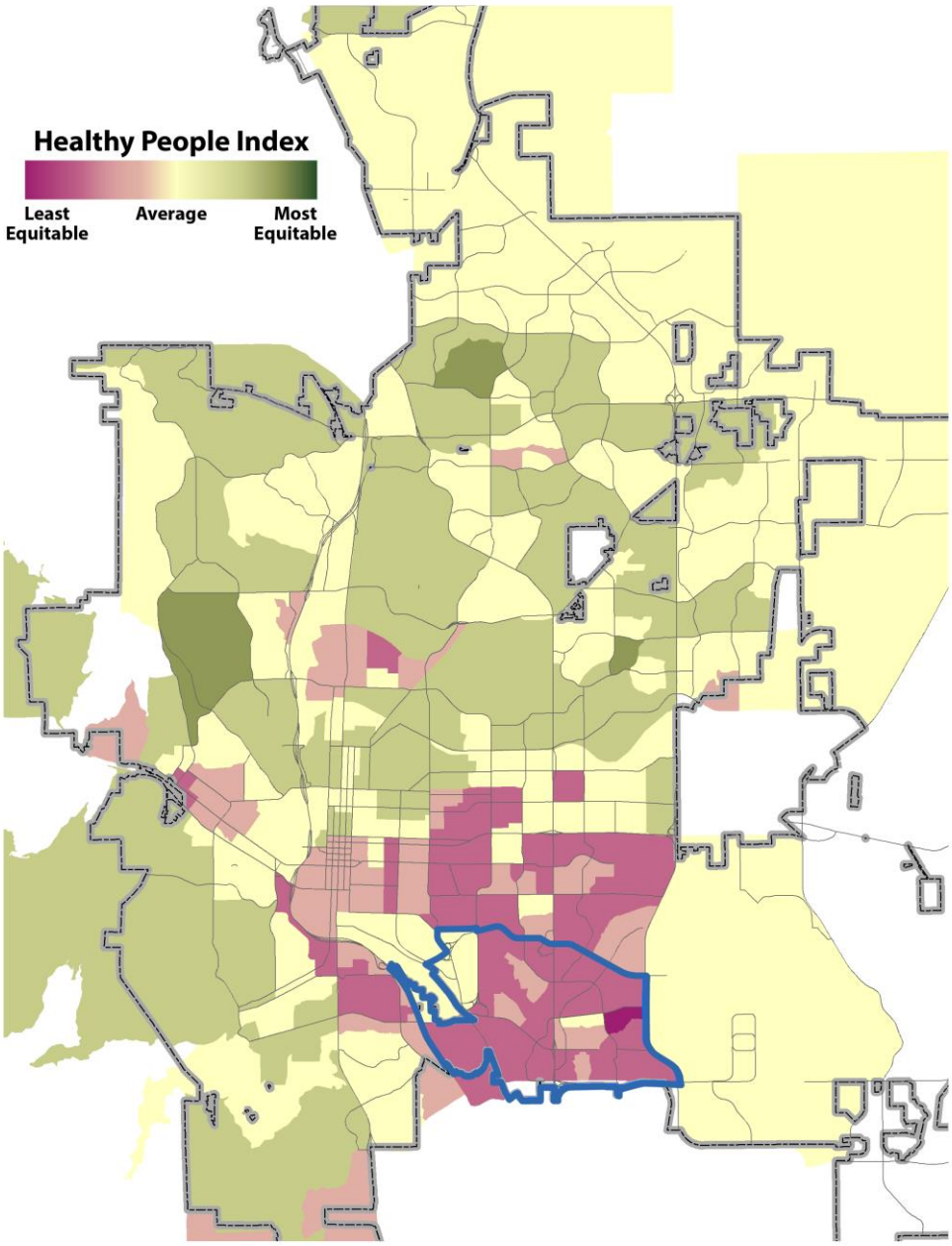
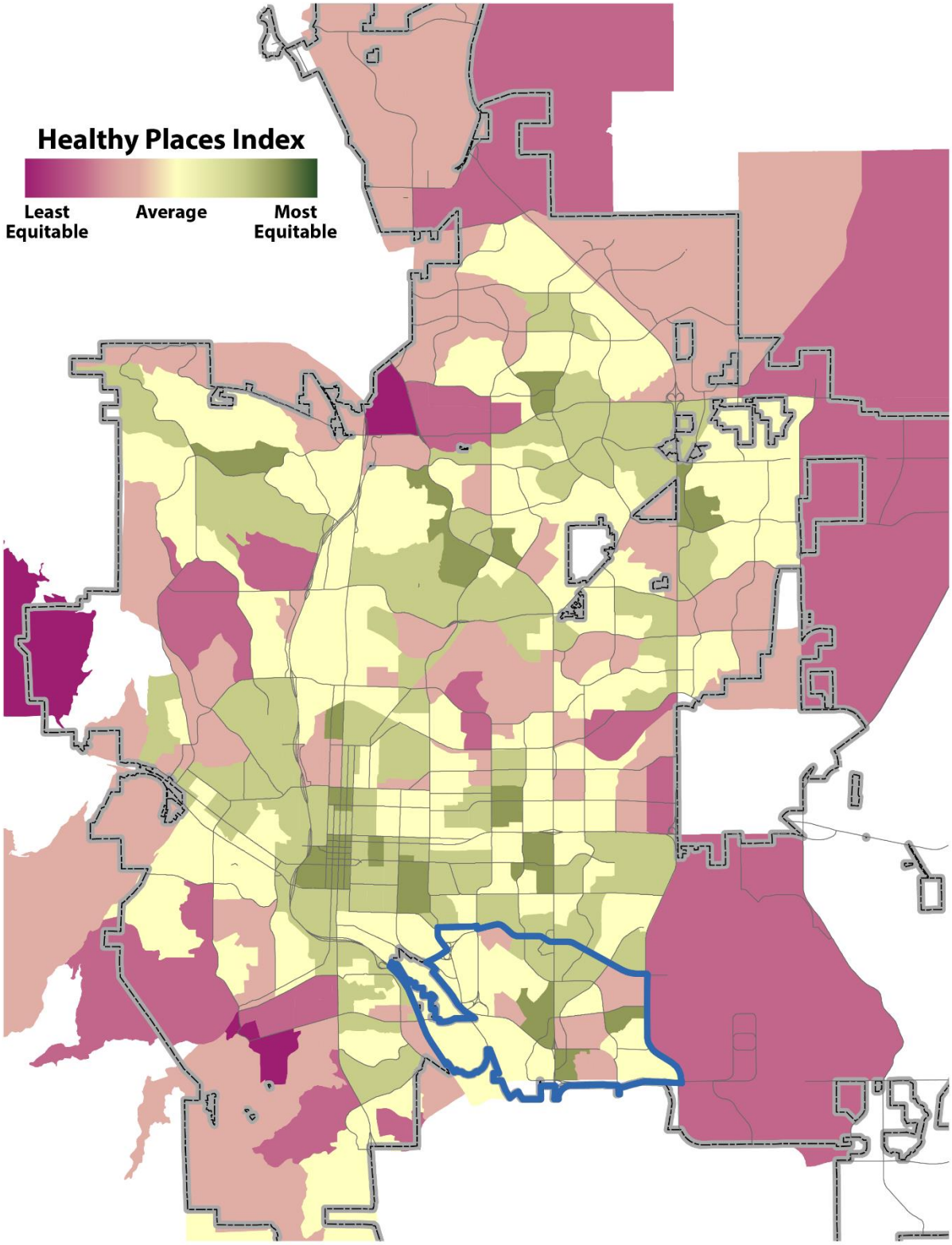


Figure 11: Healthy Places Index Citywide Map



Educational Attainment

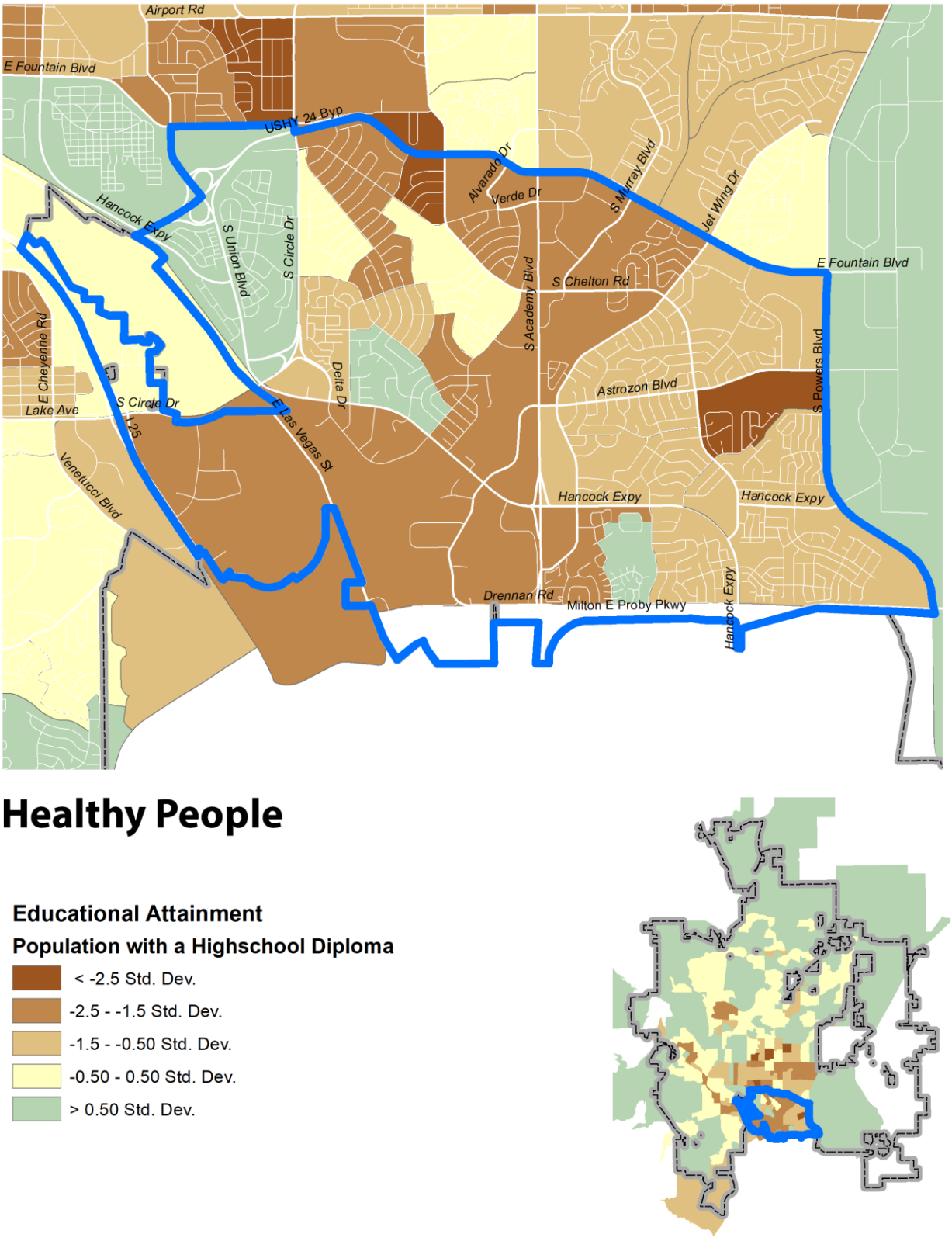
What Is It and Why Is It Important?

Educational attainment refers to the highest level of education completed. In the United States, education rates from 2000 to 2019 have increased at each level of attainment, including high school, associates, bachelors, or higher degrees among 25- to 29-year-olds. (National Center for Education Statistics.) With higher education attainment, life expectancy is shown to increase since higher education leads to higher income and higher-income families have the time to exercise more regularly, the ability to pay for healthier food, the access to better healthcare, transportation to basic amenities, and less risk of housing insecurity. (Quynh)

Trends

In the study area, most Block Groups have lower than average educational attainment for population with a high school diploma as shown in Figure 12. Of these, two Block Groups have a significantly lower than average ranking and are among only a few that are that low for the whole City. Compared to the City average, the study area has a higher rate of residents with no diploma, with the exception of the similarly-sized area of the City directly north of the study area that also has slightly lower than average attainment.

Figure 12: Educational Attainment



Families Below Poverty

What Is It and Why Is It Important?

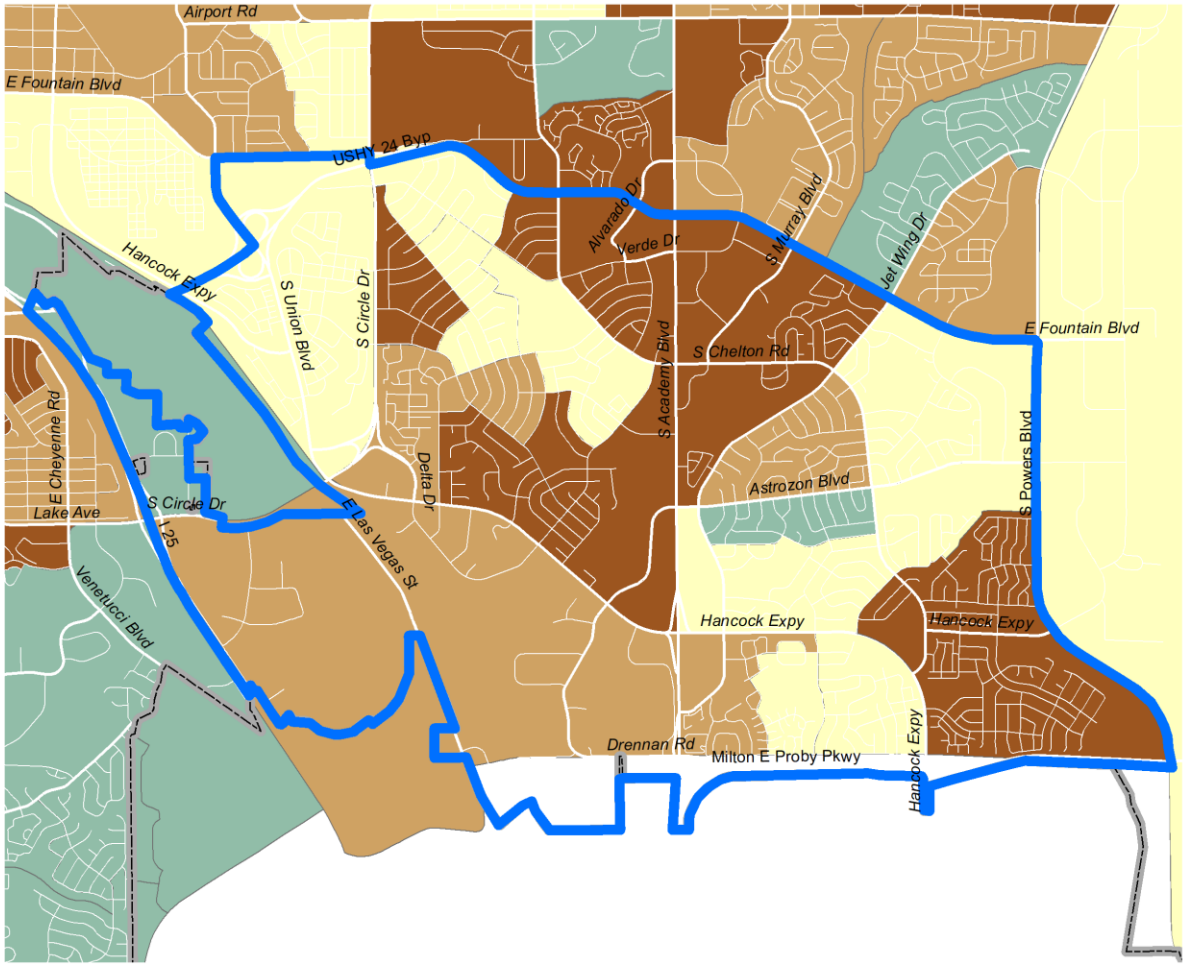
The Centers for Disease Control and Prevention (CDC) defines poverty as a condition in which "a person or group of people lack human needs because they cannot afford them" (CDC). In the United States, the Department of Housing and Urban Development states that, "a family with one full-time worker earning the minimum wage cannot afford the local fair-market rent for a two-bedroom apartment anywhere in the United States," and according to the U.S. Census Bureau in 2019, there were 34 million people in poverty, which is approximately 4.2 million fewer people than in 2018 (U.S. Census Bureau).

People living in poverty usually lack access to medical care facilities with professional doctors. Prenatal care and nutrition are often unavailable to mothers during pregnancy. Therefore, children can't reach their full potential since they don't have the proper care against diseases, infections, or malnutrition (Uedoi).

Study Area Trends

The majority of the study area is made up of Block Groups where a higher percentage of families are below the poverty line, as shown in Figure 13. Only one Block Group in the study area was above average, located just south of Astrozon Boulevard and west of Chelton Road. Compared to the City, the study area has a higher percentage of residents in poverty except for the similarly-sized area directly north of the study area boundary that also contains a majority of below poverty Block Groups.

Figure 13: Families Below Poverty

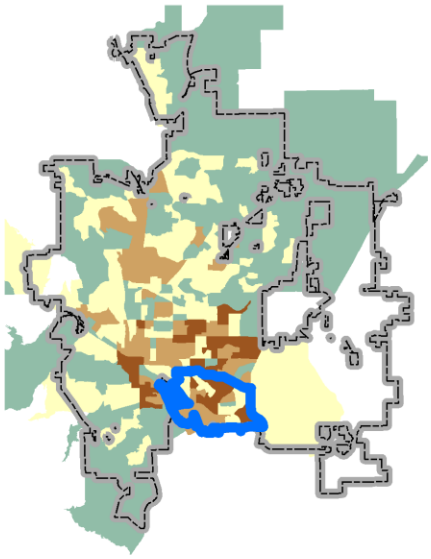


Healthy People

Families in Poverty

Percent Populatin in Poverty

- < -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- > 0.50 Std. Dev.



Cost-Burdened Households (Housing and Transportation Costs)

What Is It and Why Is It Important?

Cost-burdened families are defined by the Department of Housing and Urban Development as those “who pay more than 30 percent of their income for housing,” while severe rent burden is defined as paying more than 50 percent of one’s income on rent (HUD-rental burdens).

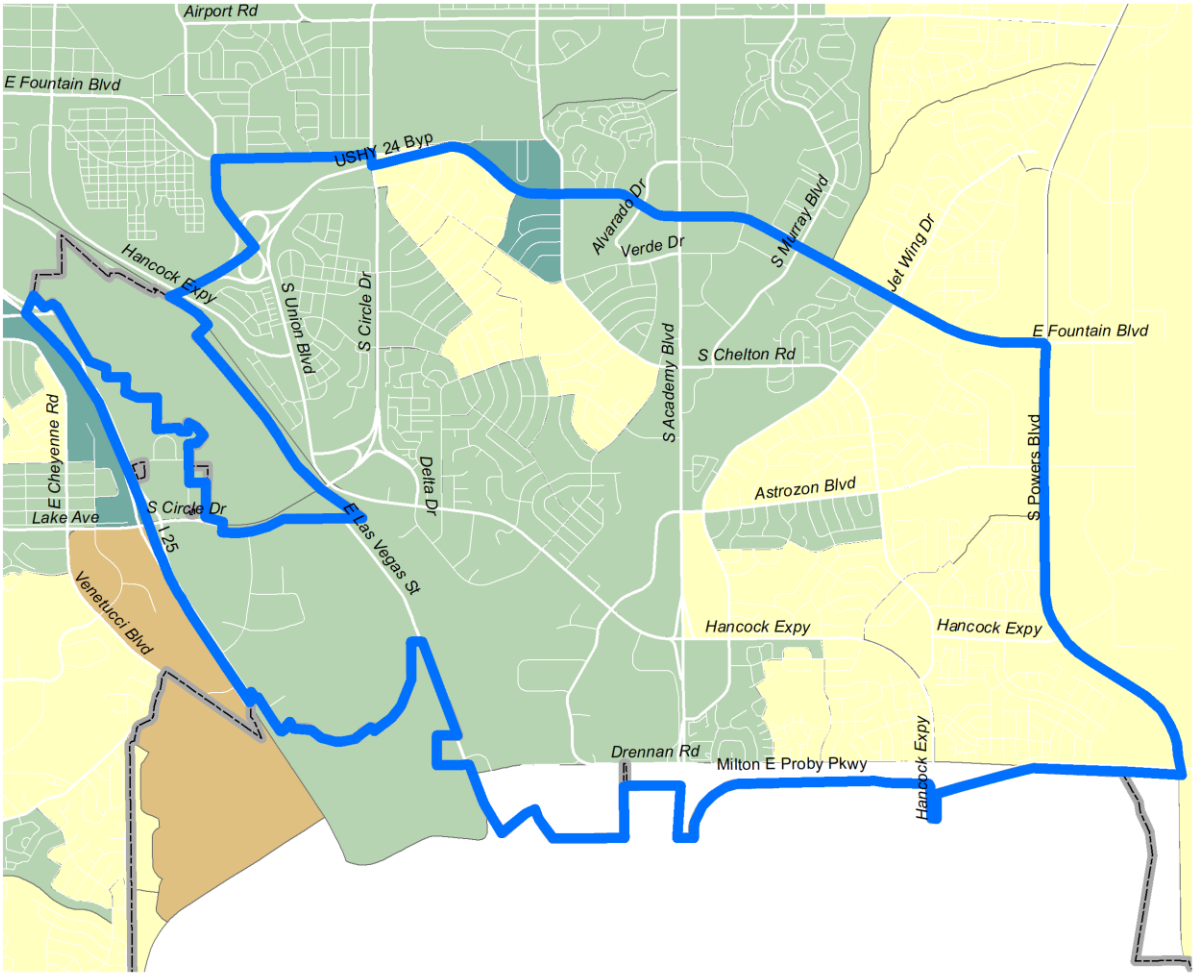
Along with housing costs, the average household in the United States spends almost 20% of its total income on transportation expenses. For low-income households, this average can be as high as 30%. (Vaidyanathan) The Center for Neighborhood Technology estimates that 15% average median income is an attainable goal for transportation affordability. When this is combined with the 30% for housing, it results in 45% of total income spent on housing and transit (CNT).

High housing costs can force families to live in unsafe or overcrowded housing and to move away from neighborhoods where they have family connections and opportunities for good education and jobs. With most of their income going to housing and transportation, families may have difficulty affording necessities such as food, clothing, and medical care. Many of these cost-burdened households are just one unforeseen event, such as an illness, job loss, or financial crisis, away from losing their homes and all the stability their homes provide (Robert Wood Johnson Foundation).

Study Area Trends

Most households in the study area spend an average or slightly less than average amount of income on housing and transit and are comparable to most of the center area of the City, as seen in Figure 14. The perimeter of the City has areas that spend more on housing and transit, which could be a result of living further away from downtown and employment areas within the City. The lower percent of income spent on housing could also be a result of lower cost of living or a larger amount of the population not living on a fixed income. The City average of 47% total income spent on housing and transit is quite a bit lower than the national average of 51%, but still slightly higher than 45%, the target deemed affordable.

Figure 14: Cost Burdened Households

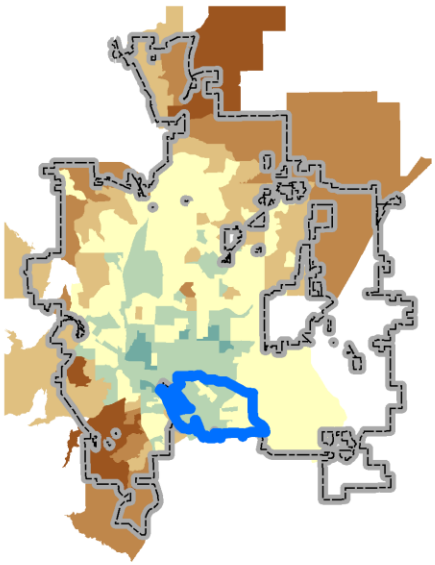


Healthy People

Cost Burdened Households

Percent of Income Spent on Houseing & Transportation

- < -2.5 Std. Dev.
- -2.5 - -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- 0.50 - 1.5 Std. Dev.
- > 1.5 Std. Dev.



Adult Obesity

What it is and why is it important?

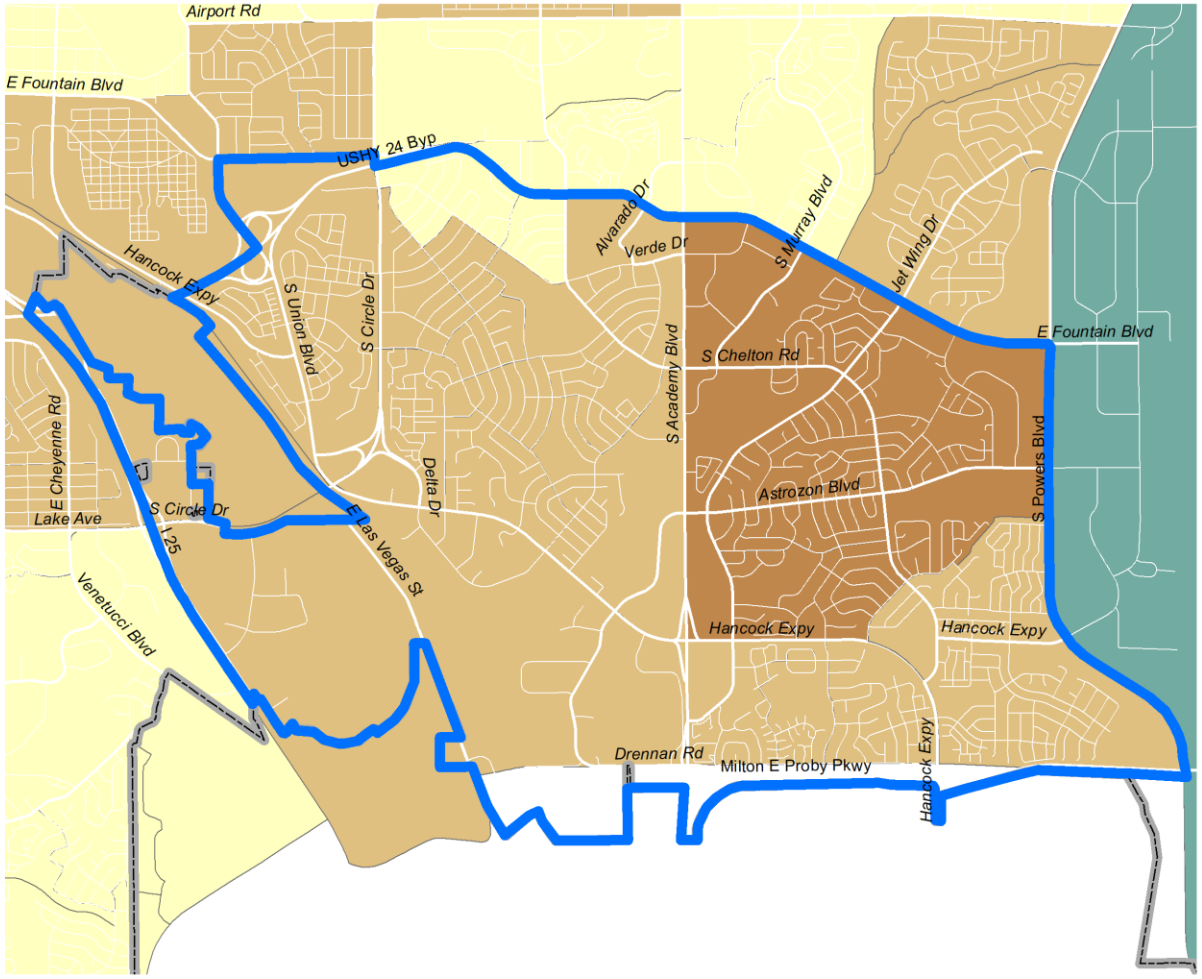
The World Health Organization (WHO) defines Adult Obesity as an abnormal or excessive fat accumulation that may impair health. The body mass index (BMI) is a simple index of weight-for-height that is used to measure this. BMI is calculated as a person's weight in kilograms divided by the square of their height in meters (kg/m^2). A BMI that is greater than or equal to 25 is considered overweight, while a BMI that is greater than or equal to 30 is considered obese by the WHO. BMI provides the most useful population-level measure of obesity, as it is the same for the full spectrum of genders, identities, and ages. However, BMI should be considered a rough guide as weight is distributed differently in everyone (WHO).

Obesity-related health conditions include heart disease, stroke, Type 2 diabetes, and certain types of cancer. These conditions are some of the leading causes of preventable, premature death. From 1999 to 2018, the prevalence of obesity increased from 30.5% to 42.4%, with the prevalence of severe obesity increasing from 4.7% to 9.2%. The estimated annual medical cost of obesity in the United States was $147 billion in 2008, with the medical cost for people who have obesity being $1,429 higher than those of normal weight (CDC. Adult Obesity Facts).

Study Area Trends

Much of the study area is slightly more obese than average, as shown in Figure 15. The neighborhood of Southborough on the east of the study area is the highest obesity scoring Block Group in the City. This score is diametrically opposed to the Block Group directly east of South Powers Boulevard, which includes the airport and a small amount of housing. This Block Group has a significantly lower than average amount of obesity. Compared to the City overall, the study area has slightly higher rates of obesity.

Figure 15: Adult Obesity

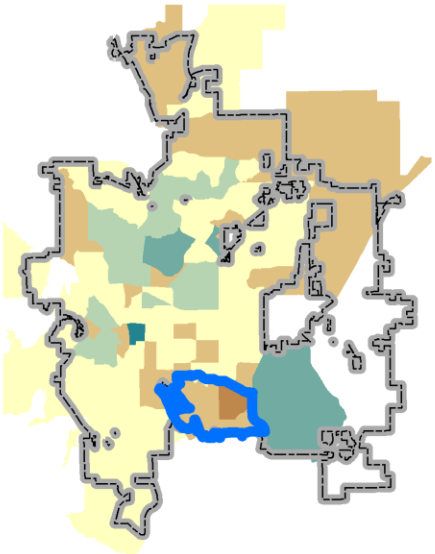


Healthy People

Adult Obesity

Percent of Population Considered Obese

- < -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- 0.50 - 1.5 Std. Dev.
- 1.5 - 2.5 Std. Dev.
- > 2.5 Std. Dev.



Life Expectancy

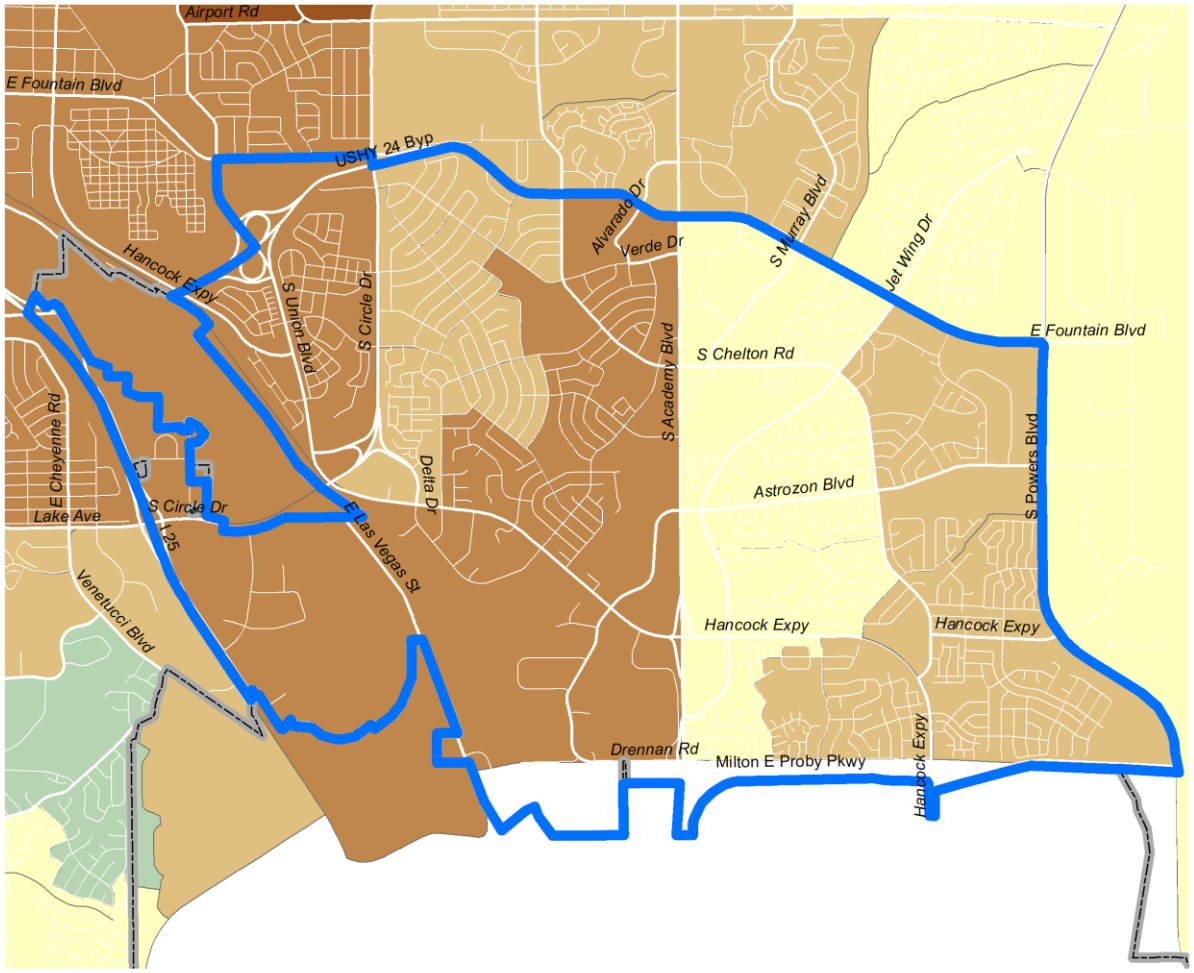
What Is It and Why Is It Important?

Life Expectancy refers to the number of years that a person can expect to live. Life expectancy is based on an estimate of the average age that members of a particular population group will be when they die. (Ortiz-Ospina) In the first half of 2020, life expectancy at birth for the total United States population was 77.8 years, declining by 1.0 year from 78.8 in 2019. Life expectancy at birth for males was 75.1 years in the first half of 2020, declining 1.2 years from 76.3 years in 2019. For females, life expectancy declined to 80.5 years, decreasing 0.9 years from 81.4 years in 2019 (CDC Provisional Life Expectancy Estimates). Life expectancy is a key metric for assessing population health, as improvements in nutrition and services like healthcare are linked to longer life spans. Life expectancy is a quick extrapolation of the present living conditions and is used to analyze trends over time (Murillo).

Study Area Trends

The study area shown in Figure 16 is mostly split along South Academy Boulevard, with the western side having a lower life expectancy than the eastern side. The eastern side of the study area has an average and slightly below average life expectancy, which is comparable to much of the City center. The Southeast Community has a life expectancy four years lower than the rest of the City. This deficit is concentrated in the study area and the areas northwest of the study area.

Figure 16: Life Expectancy

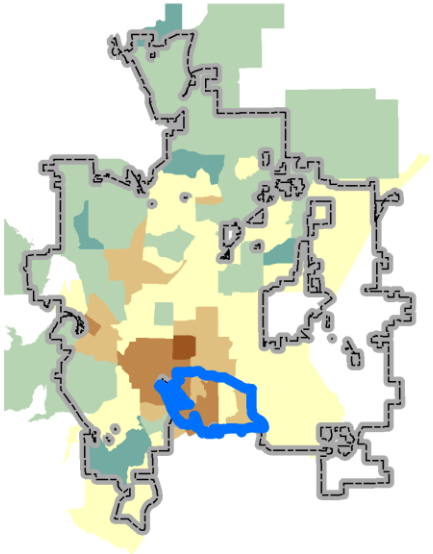


Healthy People

Life Expectancy

Average Life Expectancy

- < -2.5 Std. Dev.
- -2.5 - -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- 0.50 - 1.5 Std. Dev.
- >1.5 Std. Dev.



Use of Health Care

What Is It and Why Is It Important?

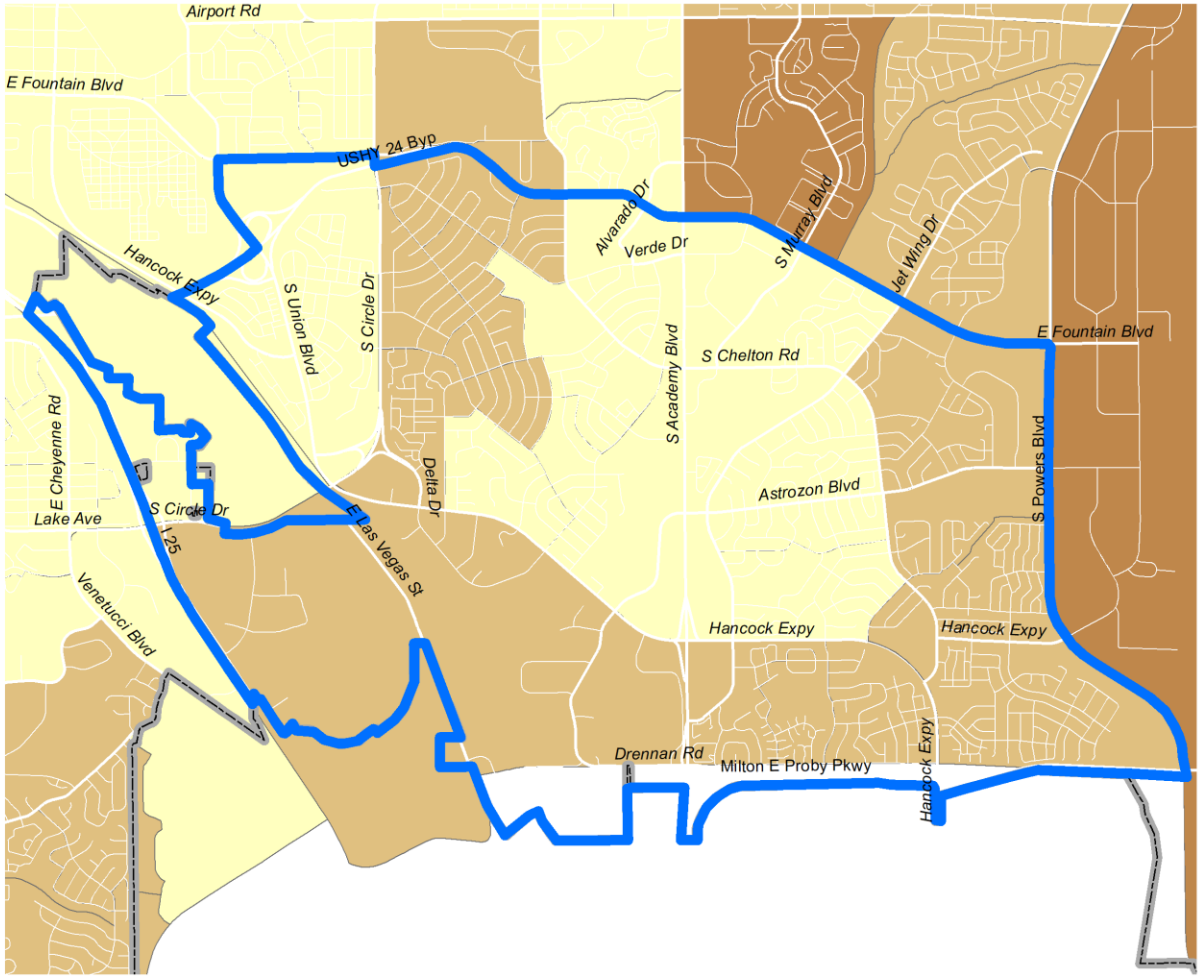
The National Academies of Sciences, Engineering, and Medicine (formerly known as the Institute of Medicine) defines access to healthcare as the "timely use of personal health services to achieve the best possible health outcomes." Out-of-pocket medical costs may cause individuals to delay or forgo necessary care such as doctor visits, dental care, and medications. Medical debt is common among both insured and uninsured individuals. Vulnerable populations are particularly at risk for insufficient health insurance coverage as people with lower incomes are often uninsured and minorities account for over half of the uninsured population (ODPHP).

Uninsured adults are less likely to receive preventive services for chronic conditions such as diabetes, cancer, and cardiovascular disease. Similarly, children without health insurance coverage are less likely to receive appropriate treatment for conditions like asthma or critical preventive services such as dental care, immunizations, and wellness visits that track developmental milestones (Institute of Medicine).

Study Area Trends

The study area is split between average and slightly lower than average for populations with no regular medical checkup, as shown in Figure 17. The central average part of the study area has a ring of lower than average areas around it. This may in part be swayed by the commercial development along South Academy Boulevard. The study area is somewhat comparable to the City overall, with a mix of average and slightly lower than average block groups. The southwestern edge and parts of the northern area of the City scored higher than average. This could be related to income or means of transportation to access healthcare.

Figure 17: Use of Health Care

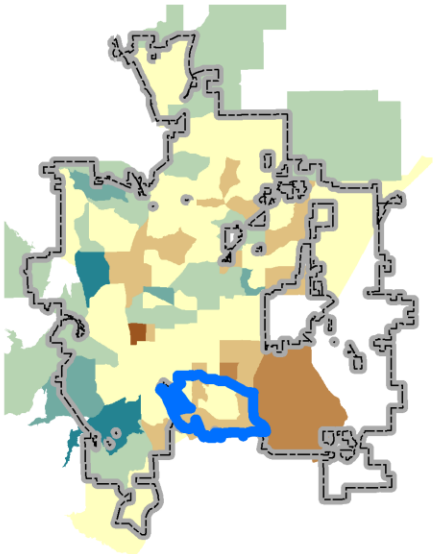


Healthy People

Use of Health Care

Population with no Regular Medical Check Up

- < -2.5 Std. Dev.
- -2.5 - -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- 0.50 - 1.5 Std. Dev.
- 1.5 - 2.5 Std. Dev.
- > 2.5 Std. Dev.



Sidewalk Connectivity

What Is It and Why Is It Important?

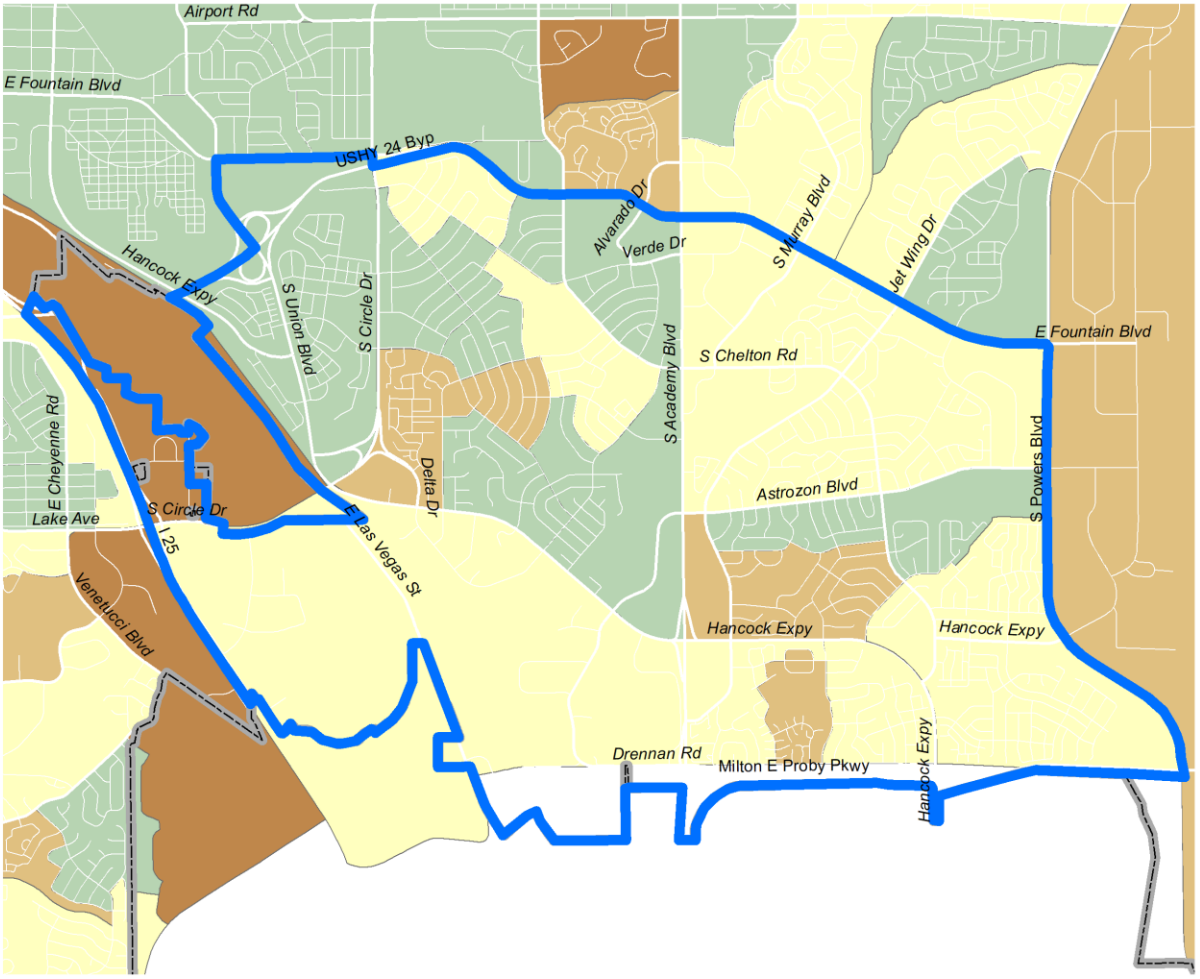
As conduits for pedestrian movement and access, sidewalks enhance connectivity and promote walking. As public spaces, sidewalks serve as the front steps to the City, activating streets both socially and economically. Safe, accessible, and well-maintained sidewalks are a fundamental and necessary investment for cities and have been found to enhance general public health and maximize social capital (Nacto).

Well-connected multimodal networks are characterized by seamless bicycle and pedestrian infrastructure, direct routing, accessibility, few dead-ends, and few physical barriers. Increased levels of connectivity are associated with higher levels of physical activity from transportation. Health benefits from improved sidewalk connectivity include decreases in chronic disease and the improvement of equity, physical activity, safety, and access to health-supportive resources (USDOT).

Study Area Trends

The study area is mostly above average for dwelling units within 50 feet of a sidewalk, as shown in Figure 18, with a few areas that are lower than average. The development of the study area is suburban, which generally has sidewalks along residential roads and collectors that lead to commercial areas. The study area is similar to the majority of the central City. Overall, the City is average or slightly above average for dwelling units within 50 feet of a sidewalk.

Figure 18: Sidewalk Connectivity

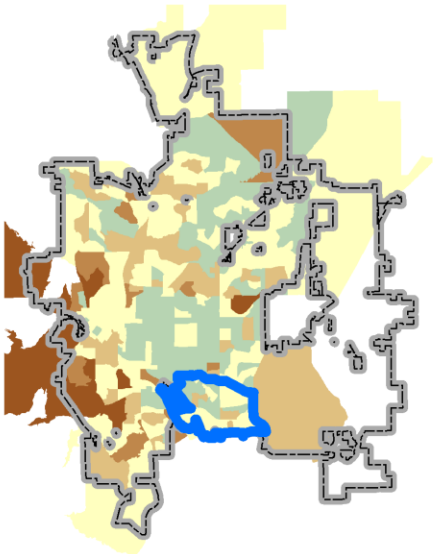


Healthy Places

Sidewalk Connectivity

Dwelling Units within 50ft of a Sidewalk

- < -2.5 Std. Dev.
- -2.5 - -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- > 0.50 Std. Dev.



Bike Connectivity

What Is It and Why Is It Important?

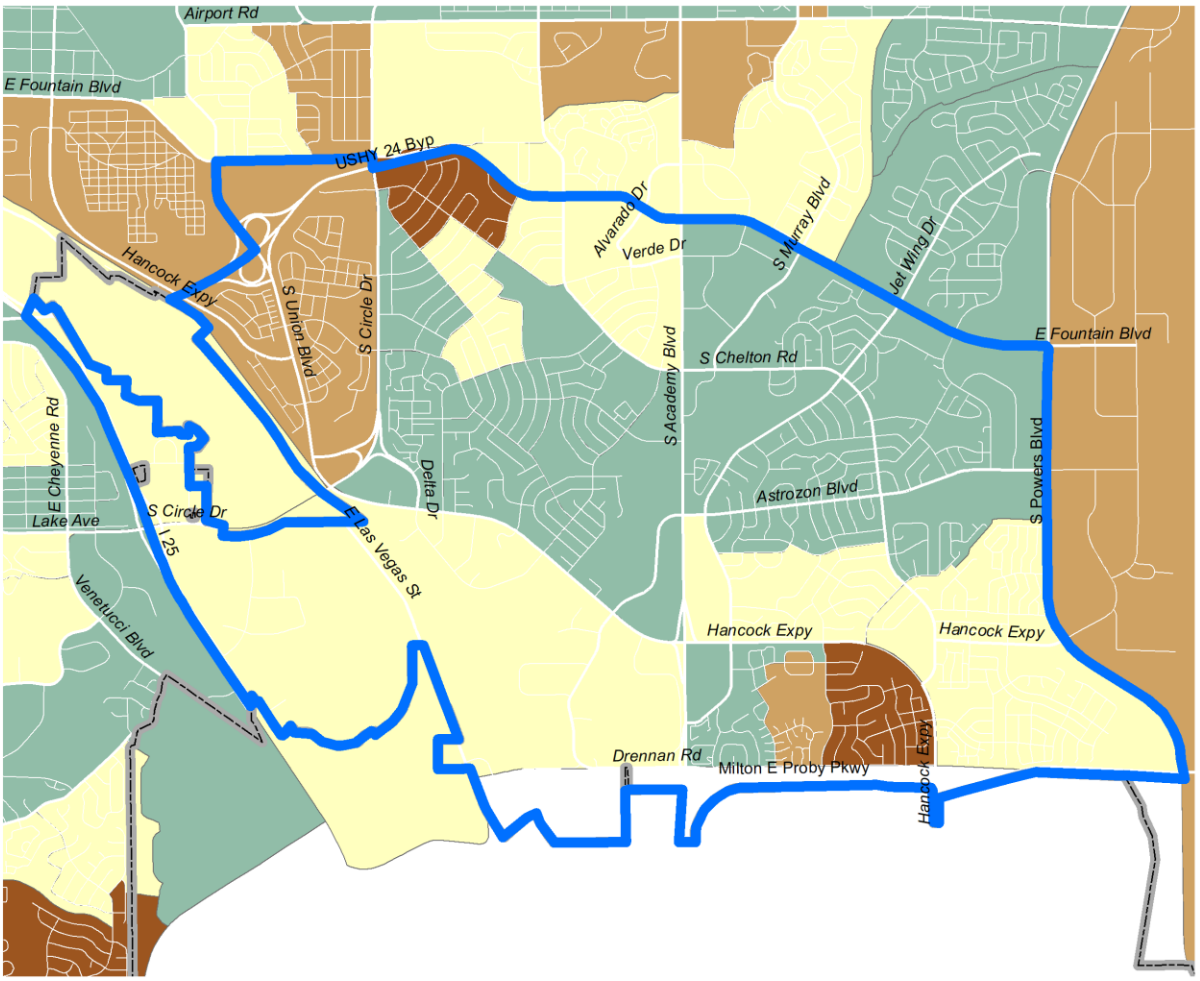
Expanding and improving bicycle and pedestrian infrastructure means ensuring that a network is in place to make bicycling or walking viable modes of travel. It also means ensuring that the infrastructure is safe and comfortable to use. This can promote health by providing additional opportunities for physical activity from transportation. This strategy is related to and supportive of Safe Routes to School, Complete Streets, and Encouraging Bicycling and Walking programs (USDOT).

Like Sidewalk Connectivity, well-connected multimodal networks are characterized by seamless bicycle and pedestrian infrastructure, direct routing, accessibility, few dead-ends, and few physical barriers. Increased levels of connectivity are associated with higher levels of physical activity from transportation that can lead to improved health (USDOT).

Study Area Trends

Much of the study area is average or above average for dwelling units within a quarter mile of a low-stress bicycle facility, as shown in Figure 19. Like sidewalk proximity, this could be partially due to the suburban development of the area that produces lower traffic volumes on neighborhood streets. There are two areas that are much lower than average: one being the eastern half of Deerfield Hills and the other being in Pikes Peak Park North along Highway 24. The study area is higher than average like the center and west parts of the City, while the east and parts of the north and south of the city are lower average.

Figure 29: Bike Connectivity

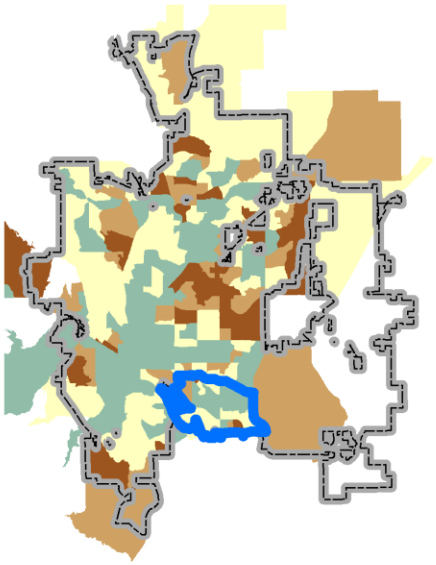


Healthy Places

Bike Network Connectivity

Dwelling Units within 1/4 miles of Low Stress Bike Facility

- < -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- > 0.50 Std. Dev.



Mode Share

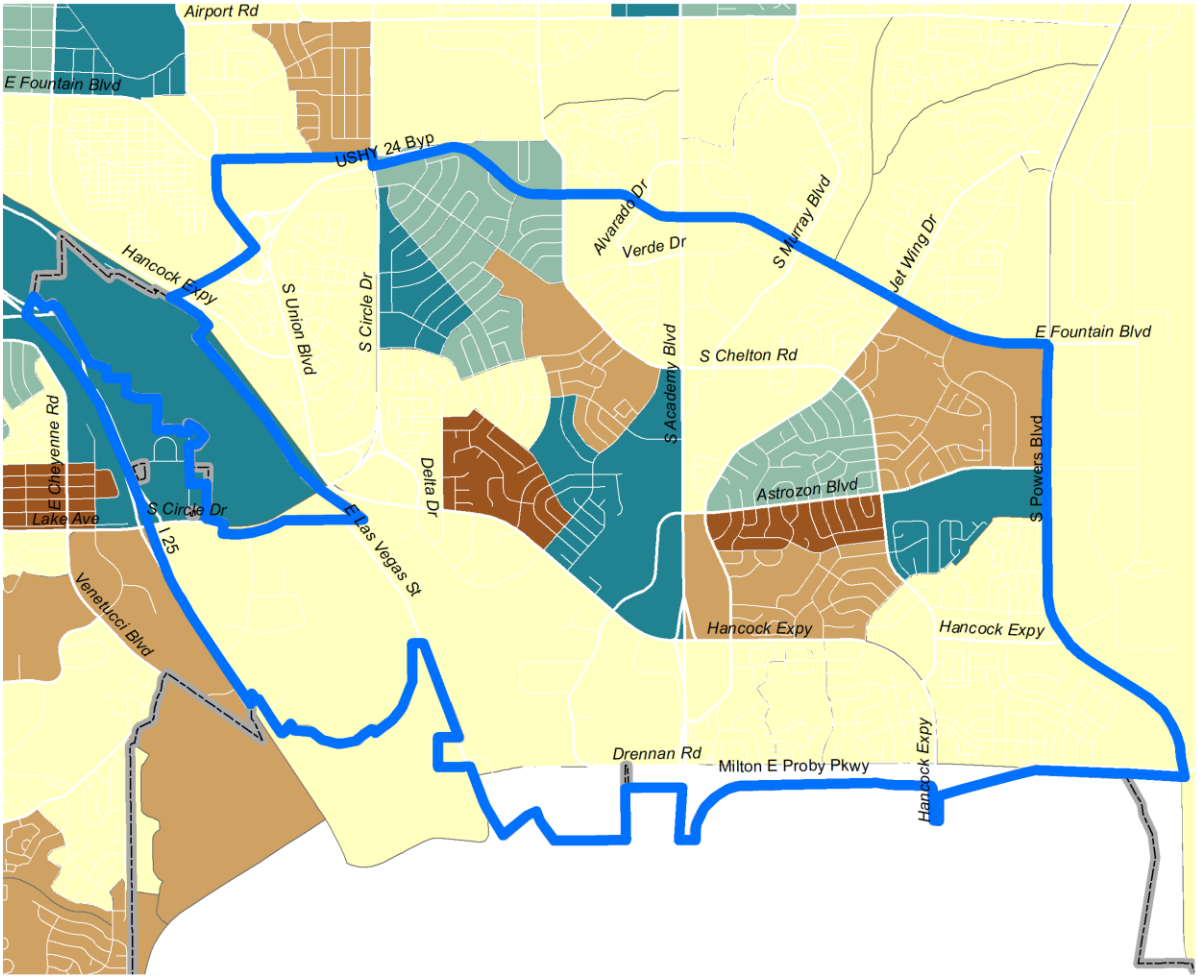
What Is It and Why Is It Important?

Commute patterns are directly tied to the economy (where jobs are located relative to housing). Commute mode share is linked to environmental conditions and contributing factors that affect health outcomes, such as air pollutant emissions that vary by transportation mode. Motor vehicle emissions contribute to nearly a quarter of the world's energy-related greenhouse gases. Reducing motor vehicle usage and increasing active transportation can mitigate harmful environmental impacts caused by a large amount of vehicle use (Xia).

Study Area Trends

Approximately 60% of the study area is average for mode share (defined as the amount of the population that drives alone to work), as shown in Figure 20. The area southeast of Circle Drive at US 24 shows a concentration of lower than average single occupancy vehicle percentage, while the rest of the study area has high rates next to low rates. The City has higher single occupancy vehicle percentages north of Woodmen Road and a concentration of lower percentage Block Groups around downtown and around the Academy Boulevard and Austin Bluffs Boulevard area.

Figure 20: Mode Share

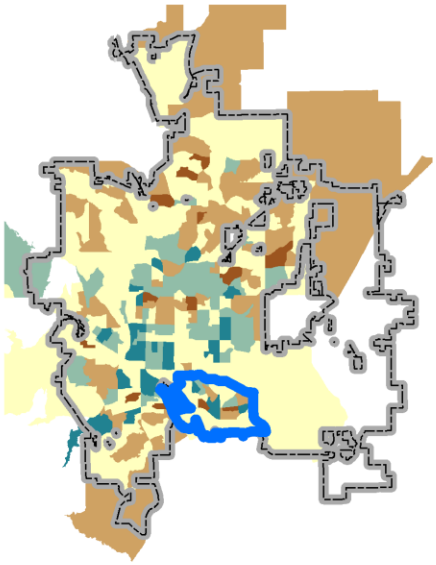


Healthy Places

Mode Share

Population That Does Not Drive Alone to Work

- < -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- 0.50 - 1.5 Std. Dev.
- > 1.5 Std. Dev.



Access to Parks

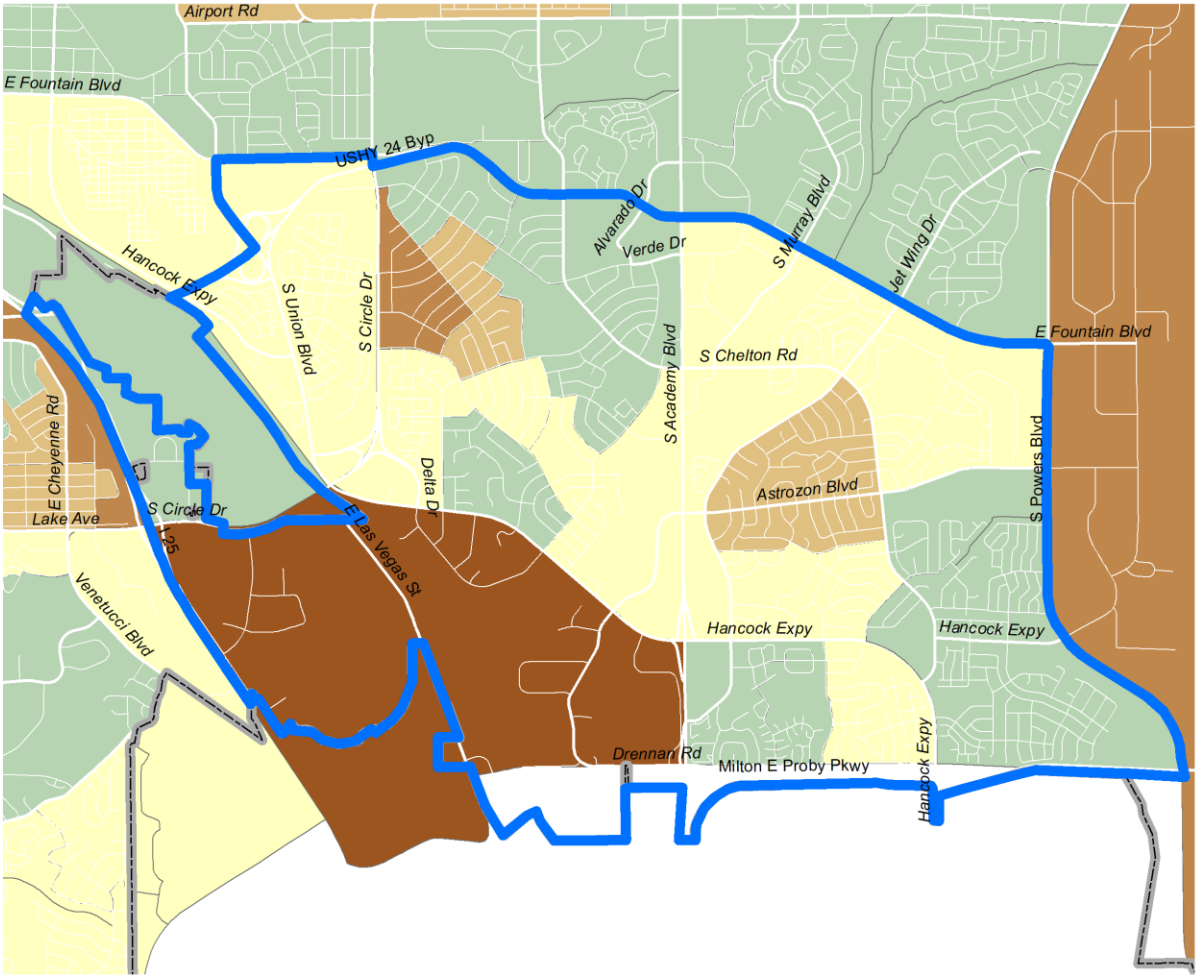
What is it and why is important?

The five-minute walk, also known as the pedestrian shed, is considered to be the distance people are willing to walk before opting to drive. Based on the average walking speed, a five-minute walk is represented by a radius measuring a quarter of a mile or about 400 meters. (morphcode) This rule of thumb is used to calculate public transport catchment areas or to determine access to destinations within neighborhoods. The pedestrian shed is usually placed around a community center or a common destination such as a school or a public plaza, where social and commercial activity is focused. In urban planning, the five-minute walk sets a scope for collecting both quantitative and qualitative data at a human scale.

Study Area Trends

Approximately 80% of the study area is split between average and slightly higher than average access to parks, which is represented by dwelling units within a quarter mile of a park as shown in Figure 21. The remaining 20% is much lower than average. This area is comprised of most of the Pikes Peak Park South neighborhood and a few Block Groups in the Pikes Peak Park North and Southborough neighborhood. The area in the southwest of the Pikes Peak Park South neighborhood is an industrial area with a significantly lower than average access to parks due to the lack of residential area.

Figure 21: Access to Parks

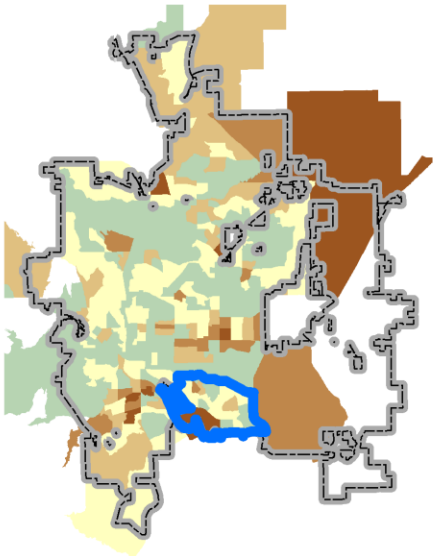


Healthy Places

Access to Parks

Dwelling Units within 1/4 mile of a Park or Open Space

- < -2.5 Std. Dev.
- -2.5 - -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- > 0.50 Std. Dev.



Existing Grocery Store Access

What Is It and Why Is It Important?

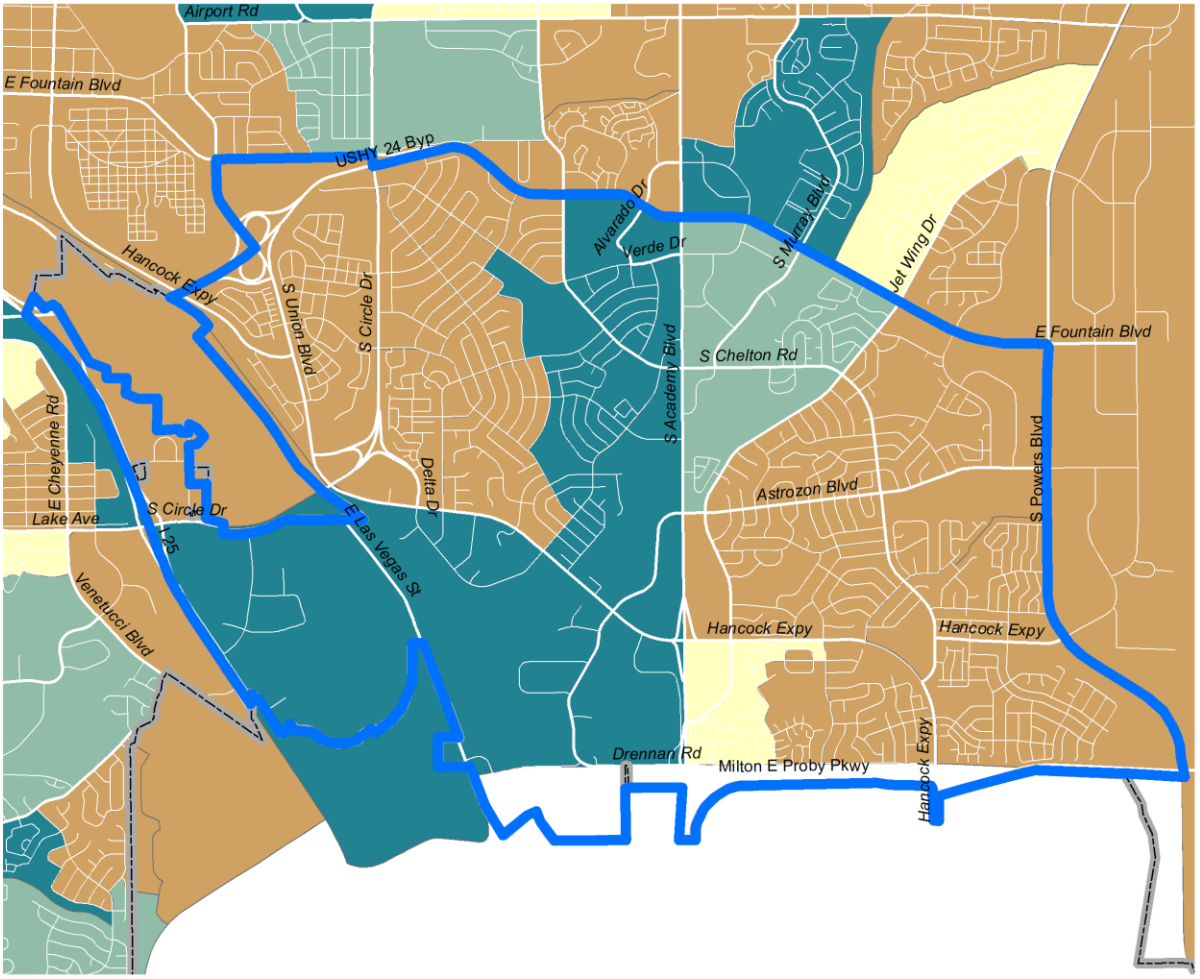
Consumer choices regarding food spending and diet are likely to be influenced by the accessibility and affordability of food retailers, including travel time to shopping, availability of healthy foods, and the food prices themselves. Some people, especially those with low income, may face greater barriers in accessing healthy and affordable food retailers which may negatively affect their diet and food security (ERS).

Households with fewer resources (including households participating in the Supplemental Nutrition Assistance Program or the Women, Infants, and Children nutrition program, along with food-insecure households) are considerably less likely than households with more resources to have and use their own vehicle for their regular grocery shopping. Those without cars may have their food choices and purchases constrained by how much they can carry when walking or using public transit. Consumers without cars may also be limited to one large shopping trip a month driven by a friend or family member to buy most of their food, which could result in the purchase of fewer perishable items like fresh produce. Shorter trips to a store that sells affordable and healthy food results in less time, money, and energy spent accessing healthy food options and promotes active lifestyles that can help reduce health conditions like asthma and cardiovascular disease (HUD).

Study Area Trends

The study area is split, with roughly 50% of the area being slightly lower than average as shown in Figure 22. These areas are in the northwestern part of the Pikes Peak Park North neighborhood, the mid-soutwestern part of the Southborough neighborhood, the eastern half of the Deerfield Hills neighborhood, and the entire Soaring Eagles neighborhood. The remaining areas along the commercial corridor of South Academy Boulevard are higher than average. The City is mostly below average, with average and higher than average areas closer to commercial corridors.

Figure 32: Existing Grocery Store Access

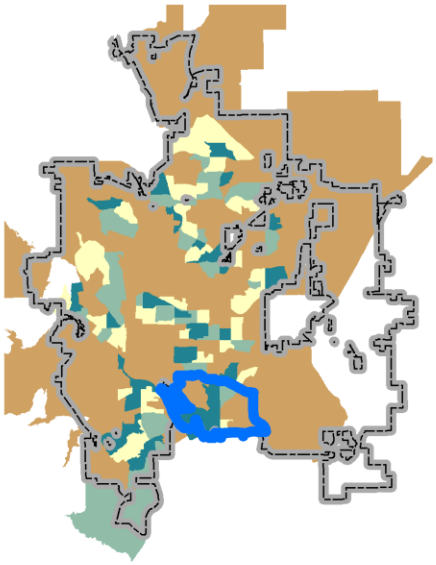


Healthy Places

Existing Grocery Store Access

Dwelling Units within 10 min Walk of a Grocery Store

- < -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- 0.50 - 1.5 Std. Dev.
- > 1.5 Std. Dev.



Potential Grocery Store Access

What Is It and Why Is It Important?

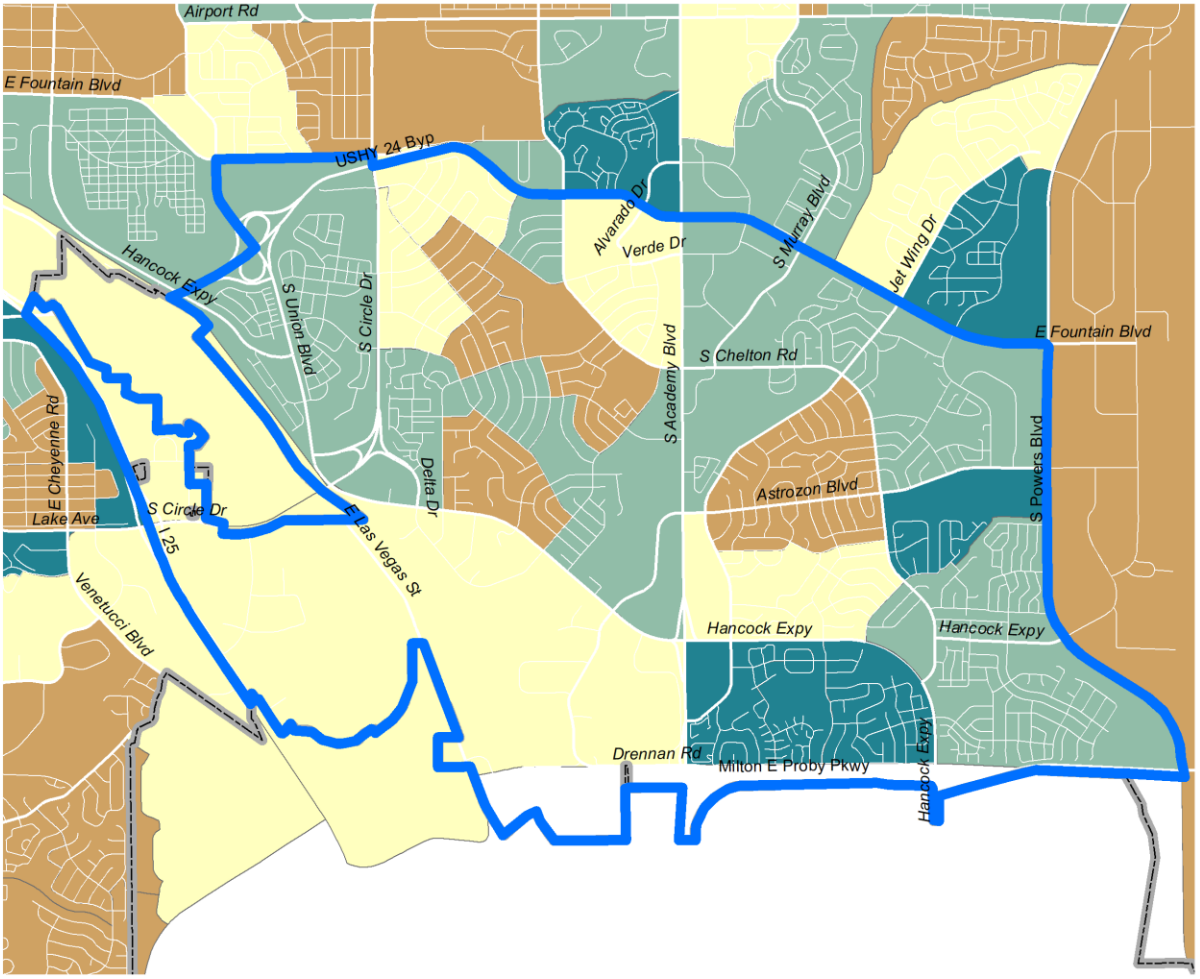
Local governments can use their zoning powers to address the health and welfare of residents who do not have access to healthy food. Zoning policies can control the food environment by regulating the land use of a community to allow the designation of community food gardens and farmers markets, and by limiting commercial food retail such as fast-food businesses or allowing as-of-right or incentives to those businesses that increase access to healthy food (CDC. Zoning).

Municipalities can use a range of policy options to support, encourage, or require retailers to improve healthy food offerings in existing locations such as grocery stores, corner markets, and bodegas. Policy can also be used to improve the siting of new stores throughout communities or in specific areas that lack sufficient access to healthy food. Policy can also be employed to empower consumers with the necessary knowledge to make healthier choices.

Study Area Trends

Approximately 80% of the study area is split evenly between average and slightly higher than average regarding potential grocery store access based on zoning of areas that could allow grocery stores as shown in Figure 23. The average area is mostly concentrated in the southwestern part of the study area in Pikes Peak Park South, while the slightly higher than average area is in Pikes Peak Park north, Southborough, and Soaring Eagles. There are a few areas that are much higher than average: one in Southborough and the other in the entire neighborhood of Deerfield Hills. The area where the Hancock Expressway meets Chelton Road is listed as a Community Activity Center on the Colorado Springs 2020 Land Use map and could be a potential site for a grocery store that would provide more access to residents in the Soaring Eagles and Deerfield Hills neighborhoods.

Figure 43: Potential Grocery Store Access

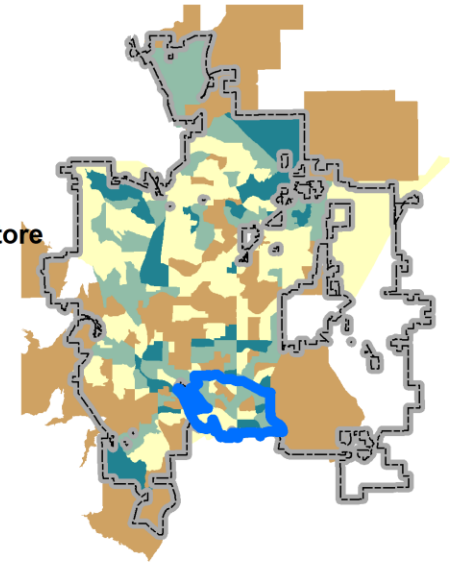


Healthy Places

Potential Grocery Store Access

Percent Block Group that is Zoned for Potential Grocery Store

- < -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- 0.50 - 1.5 Std. Dev.
- > 1.5 Std. Dev.



Food Swamps

What Is It and Why Is It Important?

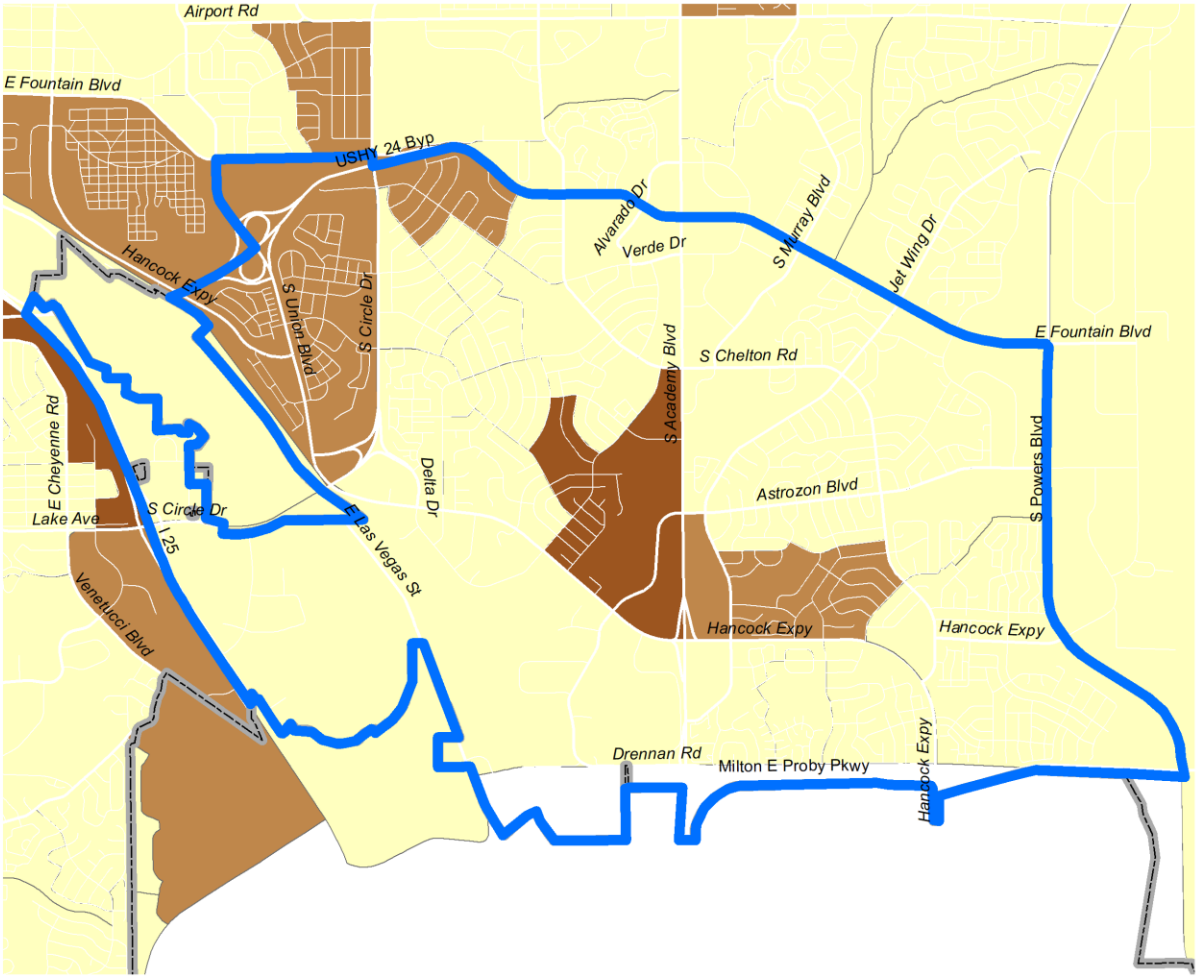
Food swamps are described as areas with a high density of establishments selling high-calorie fast-food and junk food relative to healthier food options. The presence of a food swamp is likely a stronger predictor of obesity rates than the absence of full-service grocery stores. Food deserts can be described as geographic areas where residents' access to affordable and healthy food options (especially fresh fruits and vegetables) is restricted or nonexistent due to the absence of grocery stores within a convenient traveling distance. Sometimes areas classified as food deserts have healthy food options, such as community gardens and distribution organizations, but these are not enough to adequately serve the general population of the area (F.E.P).

Evaluating the impact of opening new grocery stores has shown that while perceived access to healthy food improves, diet quality and BMI do not. These findings suggest that the influence of introducing healthier foods into a neighborhood may be tempered by the continued accessibility of unhealthy foods (Cooksey-Stowers).

Study Area Trends

The study area has a low number of fast-food restaurants per capita, as shown in Figure 24, with a concentration of fast-food restaurants along the commercial area of South Academy Boulevard and the northwest part of the study area around the Interstate 25 and Highway 24 interchanges. This pattern is seen along other commercial areas and highways throughout the City.

Figure 54: Food Swamps

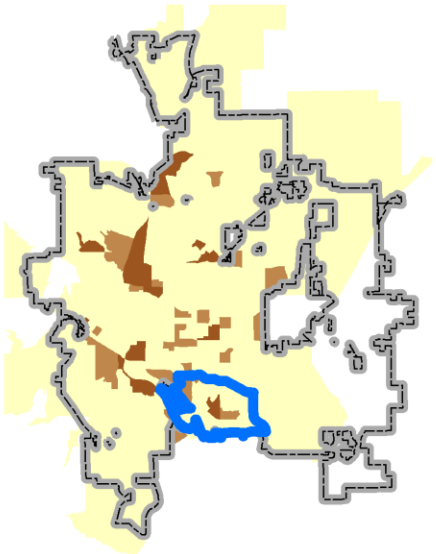


Healthy Places

Food Swamps

Fast Food Locations per Capita

- < -2.5 Std. Dev.
- -2.5 - -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- > -0.50 Std. Dev.



Acres of Park Per Capita

What Is It and Why Is It Important?

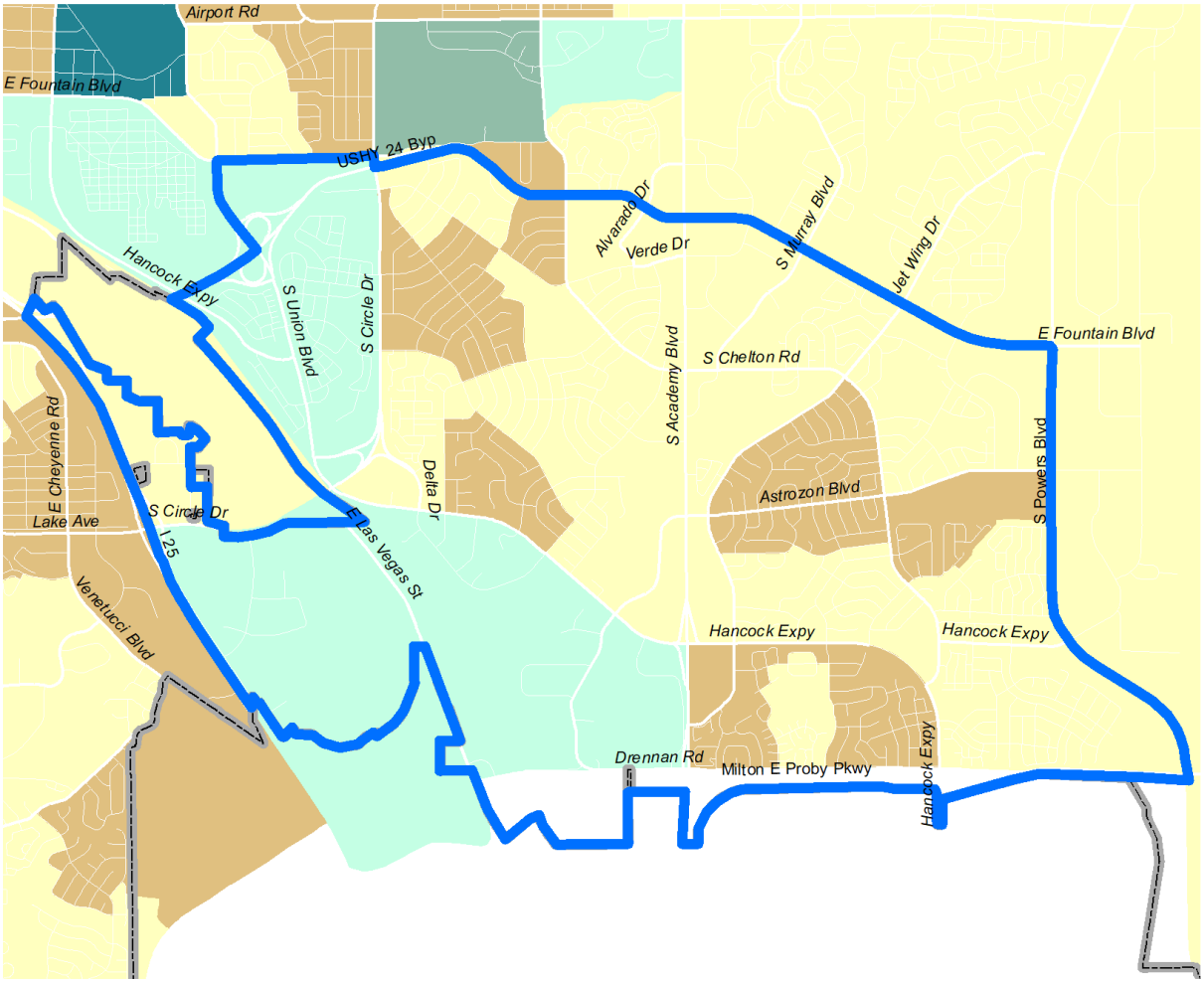
Acres of park per capita is the accessibility of parks per the number of residents, typically measured by 1,000 people per a certain distance (usually between a quarter and a half mile). The measurement serves as a comparative tool for cities to gauge how the accessibility of the parks they manage compares to other cities, and whether their city is falling behind as the populations grows and shifts.

It is a measure of equity, not merely equality, since some cities might have a large park that many residents might not have easy access to, although it may seem like there is a lot of open and recreational space in the city.

Study Area Trends

The middle and eastern part of the study area is below average for acres of parks per capita, as shown in Figure 25, and comprises of approximately 70% of the study area. The remaining 30% is average for acres of park per capita and is comprised of Pikes Peak Park South and the western half of Pikes Peak Park North. The City overall has mostly below average acres of park per capita, with a few slightly higher areas in close proximity to larger parks.

Figure 65: Acres of Park Per Capita

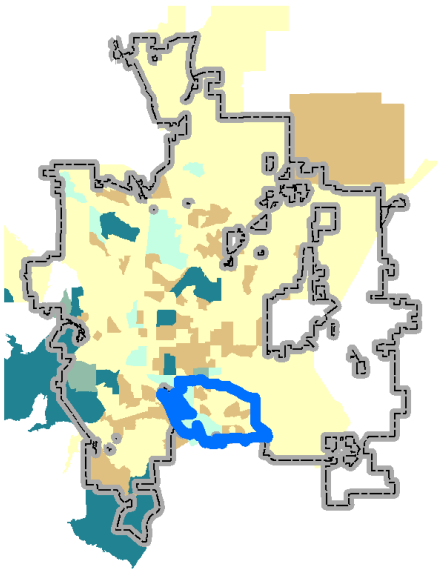


Healthy Places

Parks per Capita

Acres of Parks per Capita

- No Parkland
- < 0.50 Std. Dev.
- 0.50 - 1.5 Std. Dev.
- 1.5 - 2.5 Std. Dev.
- > 2.5 Std. Dev.



Home Water Consumption

What Is It and Why Is It Important?

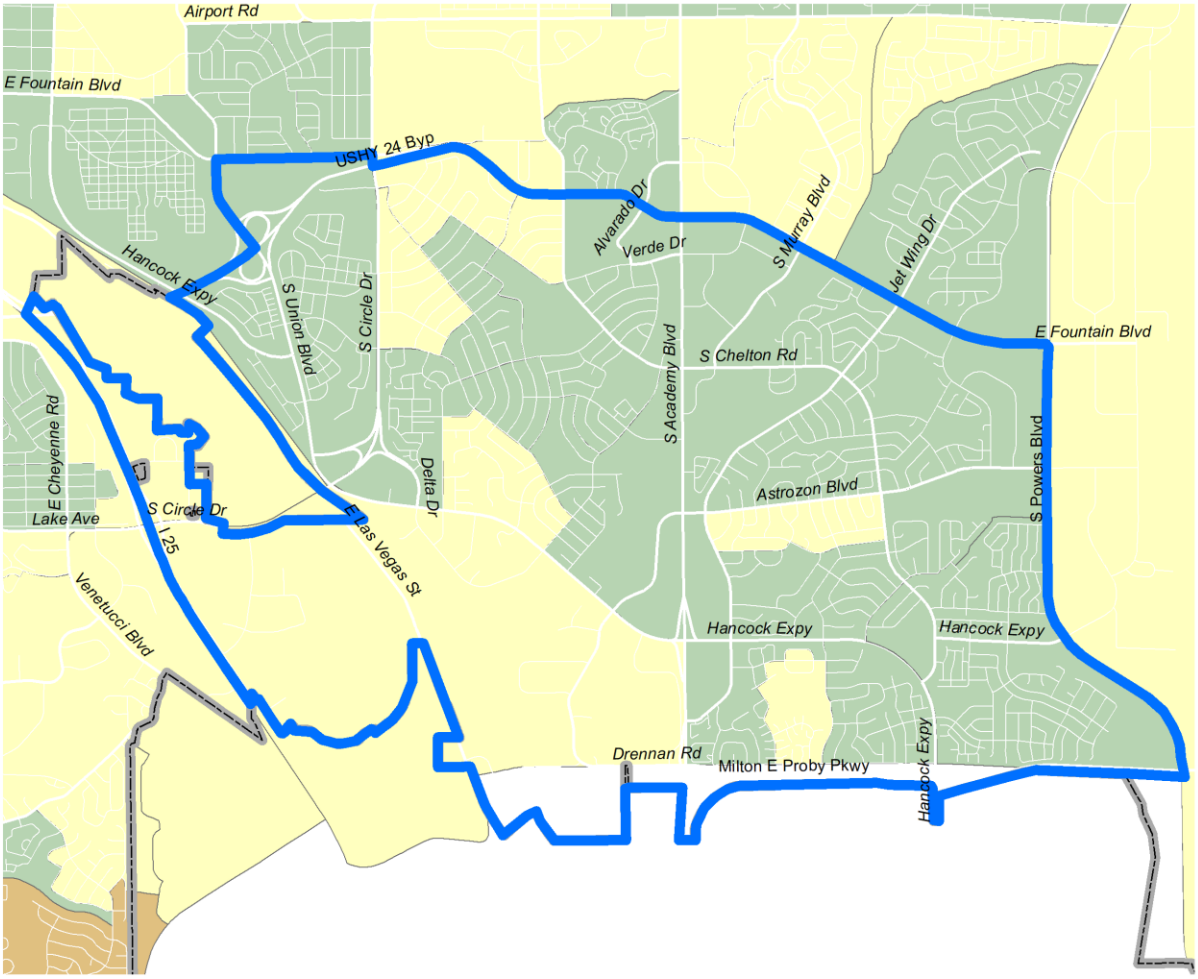
The average American family uses more than 300 gallons of water per day at home, with roughly 70% of this use occurring indoors. Nationally, outdoor water use accounts for 30% of household use, although this can be much higher in drier parts of the country or in more water-intensive landscapes. For example, the arid West has some of the highest per capita residential water use because of landscape irrigation. EPA

Drinking water can prevent dehydration, a condition that can cause unclear thinking, mood change, overheating, and lead to constipation and kidney stones. Water helps the human body by keeping a normal temperature, lubricating and cushioning joints; protecting the spinal cord and other sensitive tissue; and getting rid of waste through urination, perspiration, and bowel movements. (CDC)

Study Area Trends

Home water consumption for the study area is average or slightly less than average, as shown in Figure 26, with most of the study area consuming the average or slightly less than average amount of water. The City overall has its areas of highest water consumption in the middle, south, and northwest areas which correlates with the location of golf courses.

Figure 76: Home Water Consumption

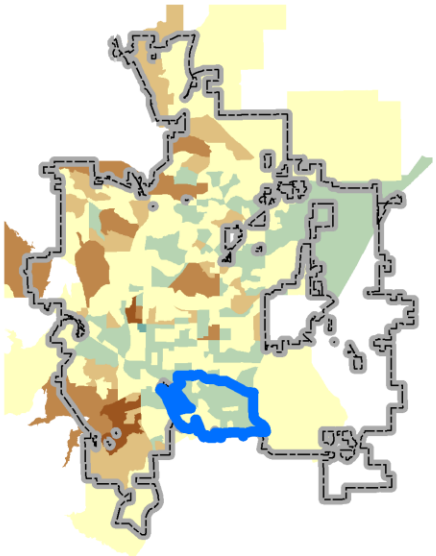


Healthy Places

Home Water Consumption

Average Daily Household Water Consumption per Capita

- < -2.5 Std. Dev.
- -2.5 - -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- 0.50 - 1.5 Std. Dev.
- > 1.5 Std. Dev.



Urban Heat Island Effect

What Is It and Why Is It Important?

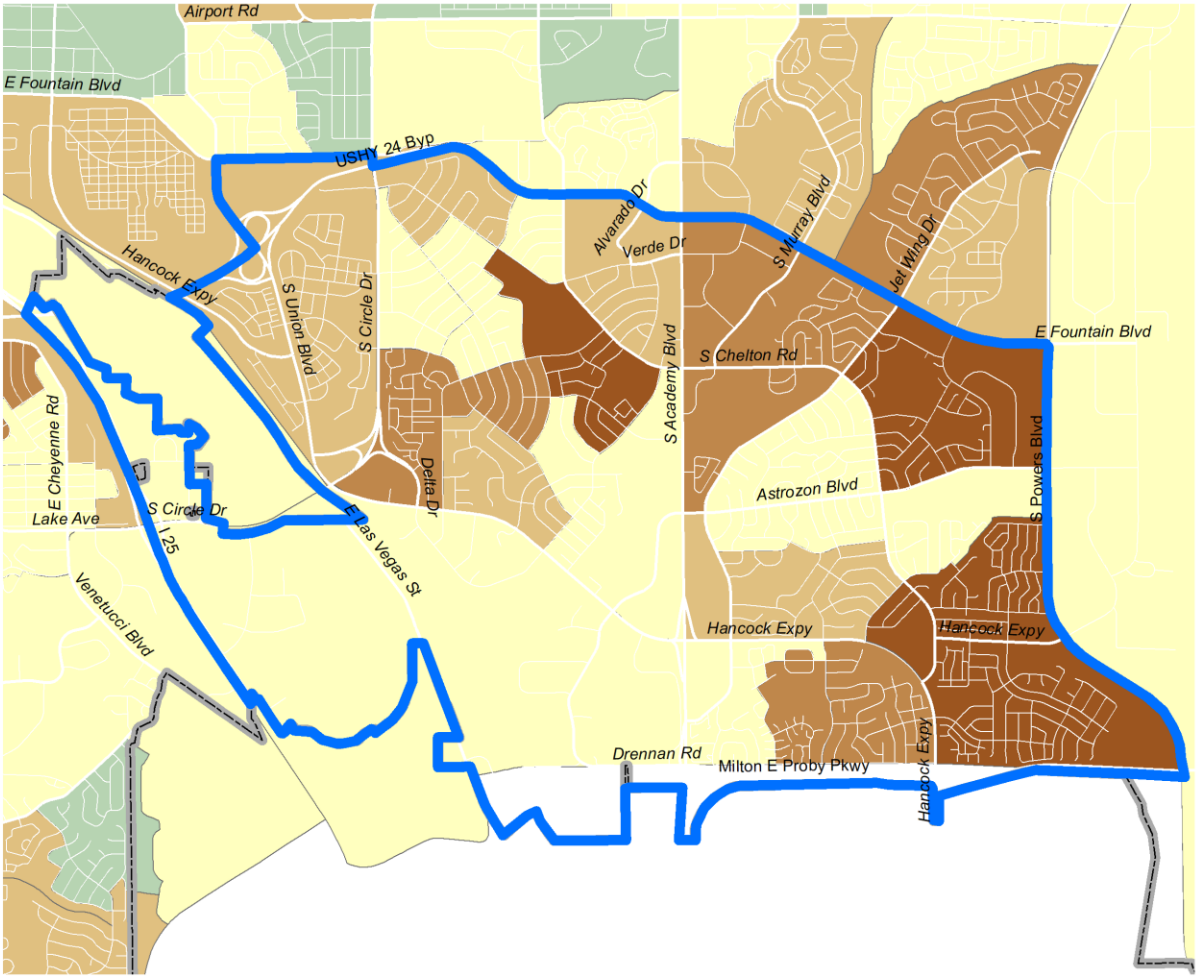
Heat islands are urbanized areas that experience higher temperatures than outlying areas. Structures such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies. Urban areas where these structures are highly concentrated and greenery is limited become islands of higher temperatures relative to the outlying areas. Daytime temperatures in urban areas are about one to seven degrees Fahrenheit higher than temperatures in outlying areas and nighttime temperatures are about two to five degrees Fahrenheit higher. EPA

Heat islands increase the demand for air conditioning to cool buildings, resulting in increased overall electricity demand and peak energy demand. Power plants are typically fossil fuel-powered. With this increased demand comes increased emissions that can cause harmful health effects from ground-level ozone (smog), fine particulates, and acid rain. Heat islands contribute to higher daytime temperatures, reduced nighttime cooling, and higher air-pollution levels. These, in turn, contribute to heat-related deaths and heat-related illnesses such as general discomfort, respiratory difficulties, heat cramps, heat exhaustion, and non-fatal heat stroke. These health risks disproportionally affect communities that live in areas with higher percentages of impervious surfaces such as parking along with lower numbers of parks. EPA

Study Area Trends

Much of the study area is below or severely below average for areas affected by the urban heat island effect as shown in Figure 27. These low-equity areas are on the eastern and northern part of the study area, and comprise the entire neighborhood of Soaring Eagles, the eastern half of Deerfield Hills, and much of Southborough and Pikes Peak Park North. These areas along the eastern boundary of the study area are near South Powers Boulevard and the industrial areas that buffer the neighborhood from the airport. The City overall is mostly higher than average and average, with a few areas that are slightly below average throughout.

Figure 87: Urban heat Island Effect

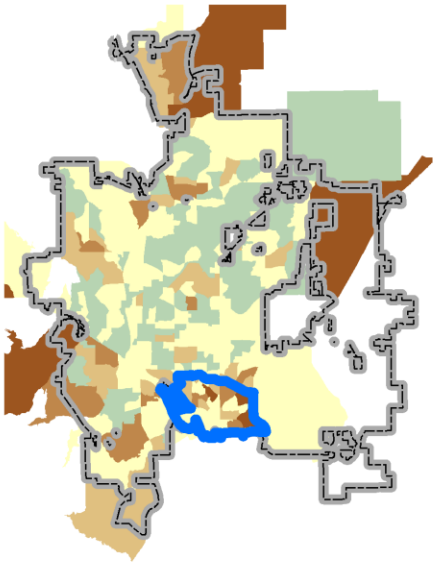


Healthy Places

Urban Heat Island

Areas with Lower Heat Island Effects

- < -2.5 Std. Dev.
- -2.5 - -1.5 Std. Dev.
- -1.5 - -0.50 Std. Dev.
- -0.50 - 0.50 Std. Dev.
- > 0.50 Std. Dev.



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