

# Rural Community Food and Physical Activity Environment

## Bonanza Audit Results Maps 2013



The information contained in this report can be used to drive decisions about land use and siting for new resources, to secure funding to improve the community food system, parks and recreation resources, and transportation planning. It can also be used by community members to seek out locally available and affordable healthy food and physical activity options.

## **GROW Healthy Kids & Communities Background Information**

GROW HKC partners with rural people, organizations, and communities to generate local options to support weight healthy lifestyles – healthy eating and physical activity every day – for all children and families.

GROW engages people in the communities we serve in assessing the conditions that most affect them where they live, learn, work and play. We do this to identify what changes will best support weight healthy behaviors for children and families and improve food and physical activity resources in the community.

HEAL MAPPS, one of the GROW programs, helped residents to tell their story of life in the community, their personal experiences or encounters with food and physical activity resources as either supporting or hindering weight healthy choices and habits.

*People's lived experiences are very important for understanding how and why healthy habits develop.*

In order to have the most complete picture of the food and physical activity environment, we need to know about all of the available resources: who makes food and physical activity available, what types of food and physical activity are available, where are they located, and is there a cost?

The Rural Community Food and Physical Activity Environment Audit is a participatory survey of all of the food and physical activity resources in the community. The auditors use camera-enabled GPS units and photomapping methods to document and survey resource availability and location. These surveys were done twice: first in 2013 and then again in 2016.

OSU faculty integrate community data with other geographic information systems (GIS) data to provide a visual report of the relationship between the location and types of food and physical activity assets and where most people live in the community.

# GPS-Assisted Observational Survey Tool

## GROW HKC

### Community Food Environment Audit

Please use the provided Garmin (GPS) unit, in conjunction with this survey, to map, photograph, and log information about all the food environment and resources in your community. If you do not have access to a Garmin unit, you may use any other GPS mapping device, such as a QStarz or GPS app on your smartphone, along with a camera. For each photograph that you take, **please take care not to include people in your photographs.**

Specifically, you will map, photograph and log information about all possible food resources in your community. Once you complete the audit of your sector, please check off all of the food resource categories that you encountered in your sector.

- A. Grocery Stores
- B. Convenience Stores
- C. Roadside or Dockside Retailers
- D. Restaurants
- E. Vending Machines (in public spaces)
- F. Food Banks and Food Pantries
  - Food Assistance Programs, including:
    - G. Meals on Wheels
    - H. Gleaners
    - I. Free Meal Sites
    - J. Summer Meal Service Programs
- K. Farm Stands / U-Pick Operations
- L. Farmers Markets
- M. Community Gardens
- N. Hunting, Fishing and Foraging Supports
- O. Home-Based Food Retailers
- P. Other Community Food Resources

#### A. Grocery Stores

Name of Store: \_\_\_\_\_

A *grocery store* is a retailer where people buy most of their food for meals and snacks.

**Photographs and Logs:** Please photograph and log (with the Garmin unit) each grocery store you come across in your sector.

Take a photo of the front of the grocery store. Take a single photo, if you can capture the entire store and the sign with the store's name in a single shot. If you need to take more than one photo to capture the entire store and the sign, take the shot looking straight ahead, and as needed, 1-2 shot(s) looking to the left and to the right. Record your photo code(s), below.

- looking straight ahead DSC \_\_\_\_\_ .JPG
- looking to the left (as needed) DSC \_\_\_\_\_ .JPG
- looking to the right (as needed) DSC \_\_\_\_\_ .JPG

Take additional photographs that describe the access to this store. Examples of photographs to take are listed below. For each feature that is present, please take no more than one photo.

- Bike rack at the store DSC \_\_\_\_\_ .JPG
- Bus stop adjacent to the store DSC \_\_\_\_\_ .JPG
- Parking at the store. Also, note the type of parking, below. DSC \_\_\_\_\_ .JPG
  - Streetside
  - Parking lot
- Handicapped parking spaces at the store DSC \_\_\_\_\_ .JPG
- Ramps / curb cuts that promote handicap accessibility DSC \_\_\_\_\_ .JPG
- Evidence of walking access to the store
  - Sidewalk leading to store DSC \_\_\_\_\_ .JPG
  - Crosswalks DSC \_\_\_\_\_ .JPG
- Sign or poster that states the store hours DSC \_\_\_\_\_ .JPG
- Sign or poster that states that the store takes SNAP, EBT or Oregon Trail DSC \_\_\_\_\_ .JPG
- Sign or poster that states that the retailer is a WIC-authorized vendor DSC \_\_\_\_\_ .JPG
- Other access feature (Describe: \_\_\_\_\_) DSC \_\_\_\_\_ .JPG

**Food Retailer Description:** Please categorize this food retailer, by answering the questions below to the best of your knowledge.

Is a membership required to shop in this store (e.g., Bi-Mart, Costco, Sam's Club)?  
 Yes  No  I don't know

Can you purchase products in bulk in this store?

Community Audit activities yield rich attribute data that can be associated with resource photos and tracks. Community members collect this information while mapping by using a survey that integrates two research-based measures: the rural active living assessment and the community food security assessment. OSU researchers included additional items known to be influential in the rural food and physical activity systems, such as hunting, fishing, and foraging supports.

# Rurality and Weight Health



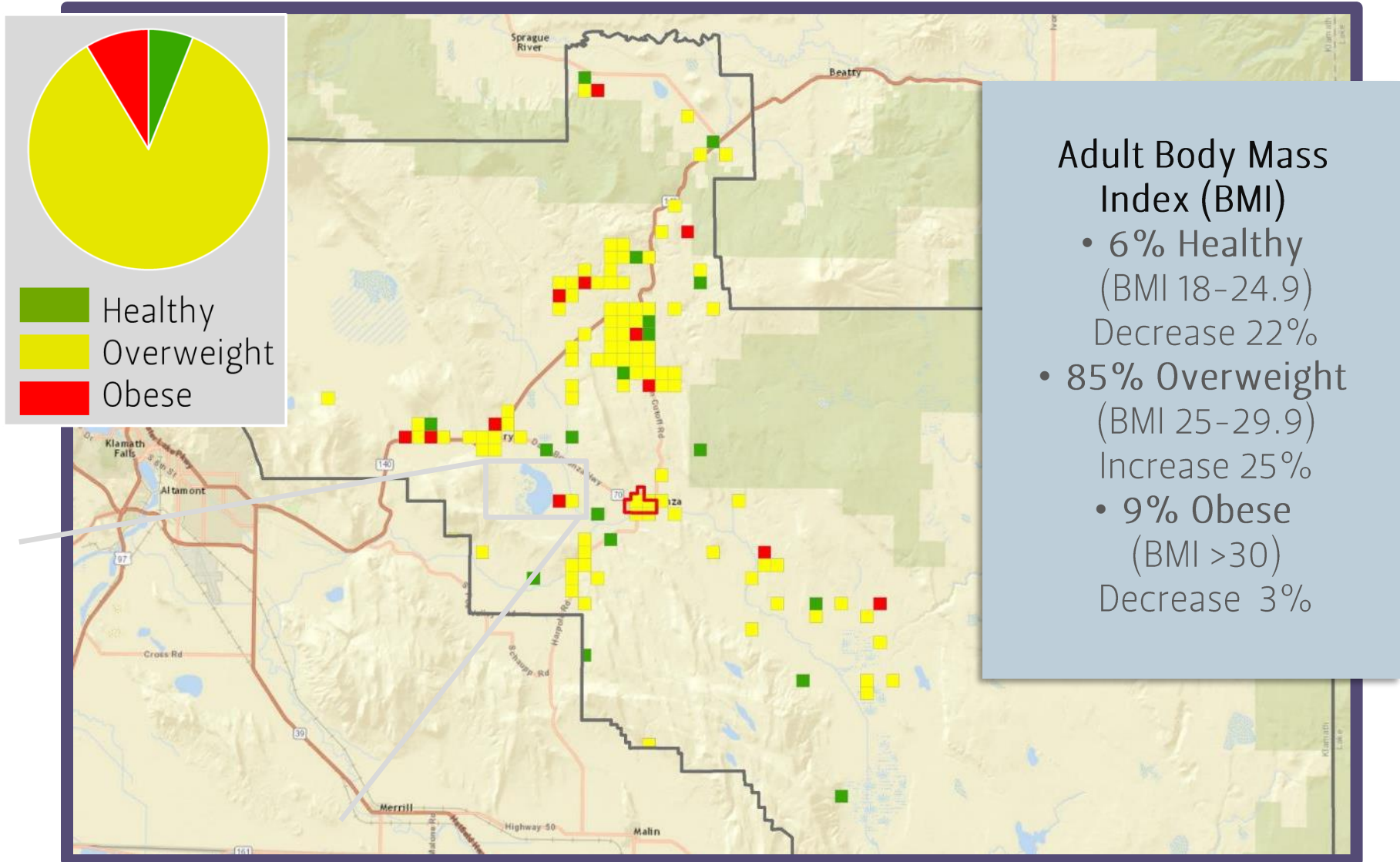
Many risk factors have been associated with childhood obesity, including rural residency

- Overweight/obesity prevalence is higher among children living in rural (36%) compared to urban (30%) areas
- Weight health and habits carry over into adulthood
- Rural communities face unique environmental challenges that can impact residents' healthy eating and physical activity lifestyle patterns
- Environmental strategies found to prevent obesity have focused on more urban areas



# Bonanza Community - Adult Weight Health (BMI)

Visualizing weight health in Estacada was enabled by the \*Oregon Environmental Public Health Tracking Program



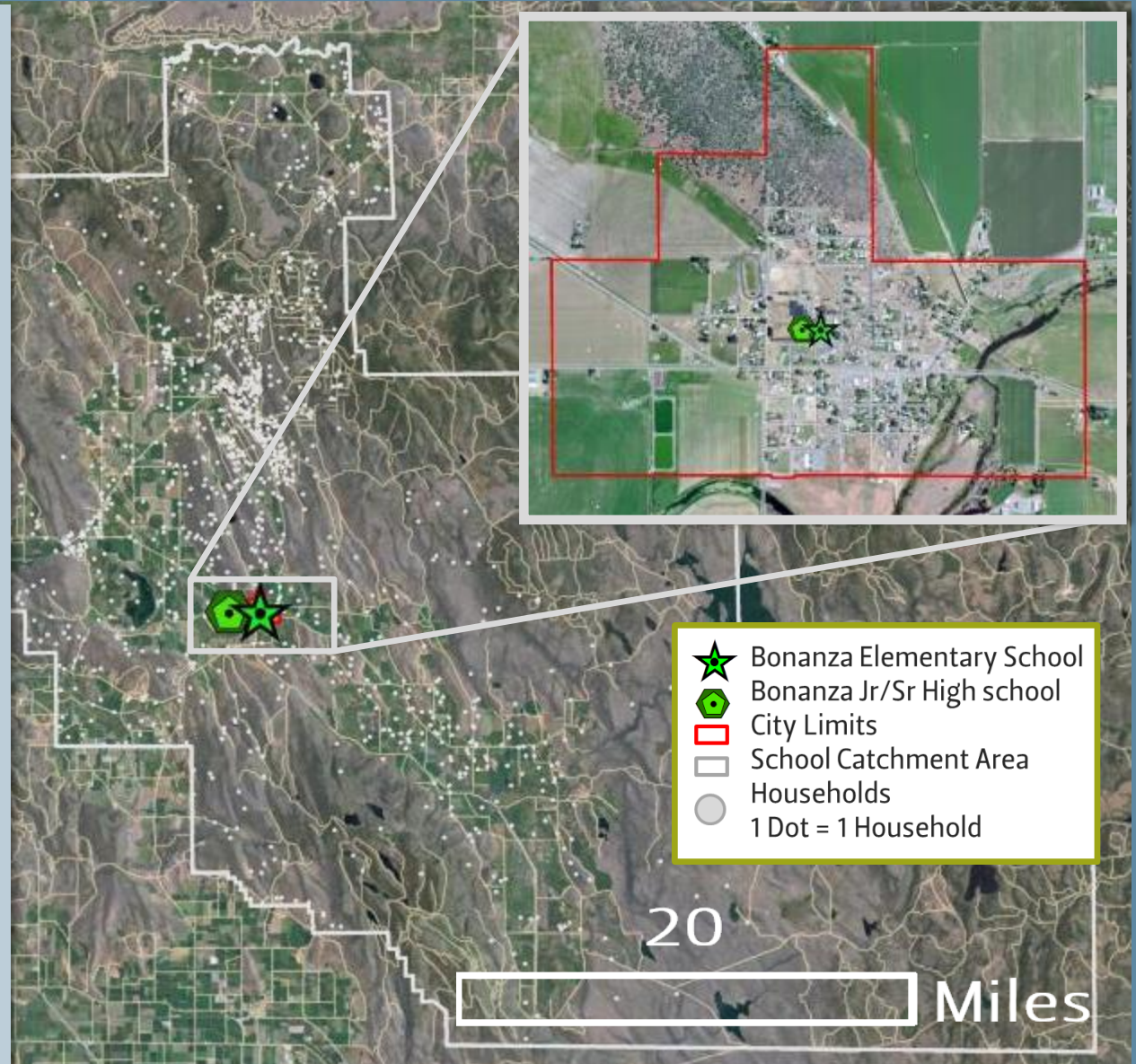
\*DMV records used to calculate BMI reliably illustrate the BMI distribution despite underestimation

# Where people live matters for easy access to resources

Community boundaries include the School District Catchment for two schools and city limits

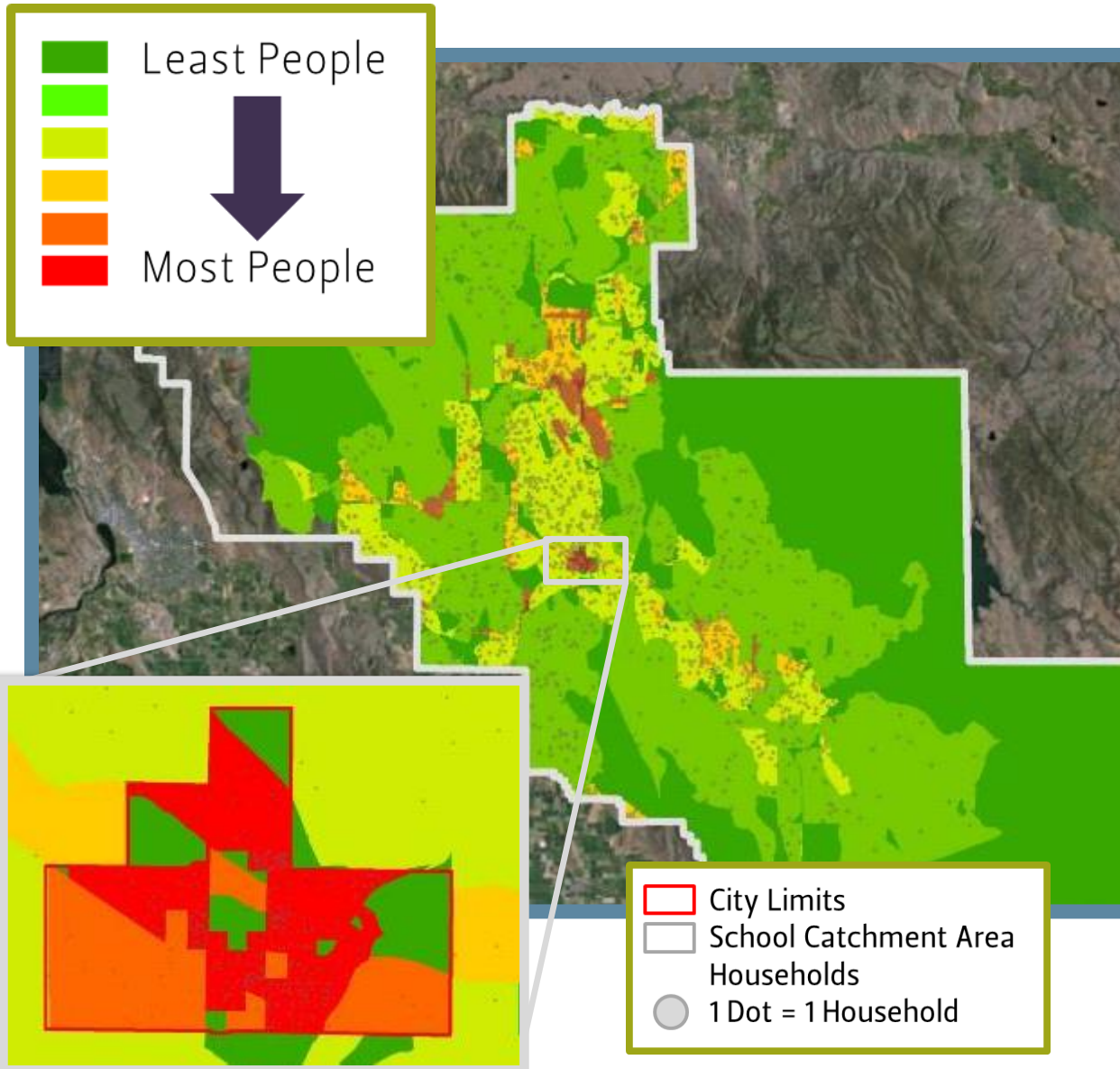
Bonanza includes 3048 people living in 1456 households (2010 census) spatially dispersed in an area of about 700 sq. mi.

Easy access to locally available resources is determined by proximity, transportation mode, ability to drive, cost & household income, etc., which will vary among families





# Using Maps to Show Where Most People Live...



Within audit boundaries, we calculated statistically significant clusters of population based on population density

The geographic centers of these clusters were used to create network buffers, ranging in size from 2 to 5 miles, that captured 85% or more of the community population

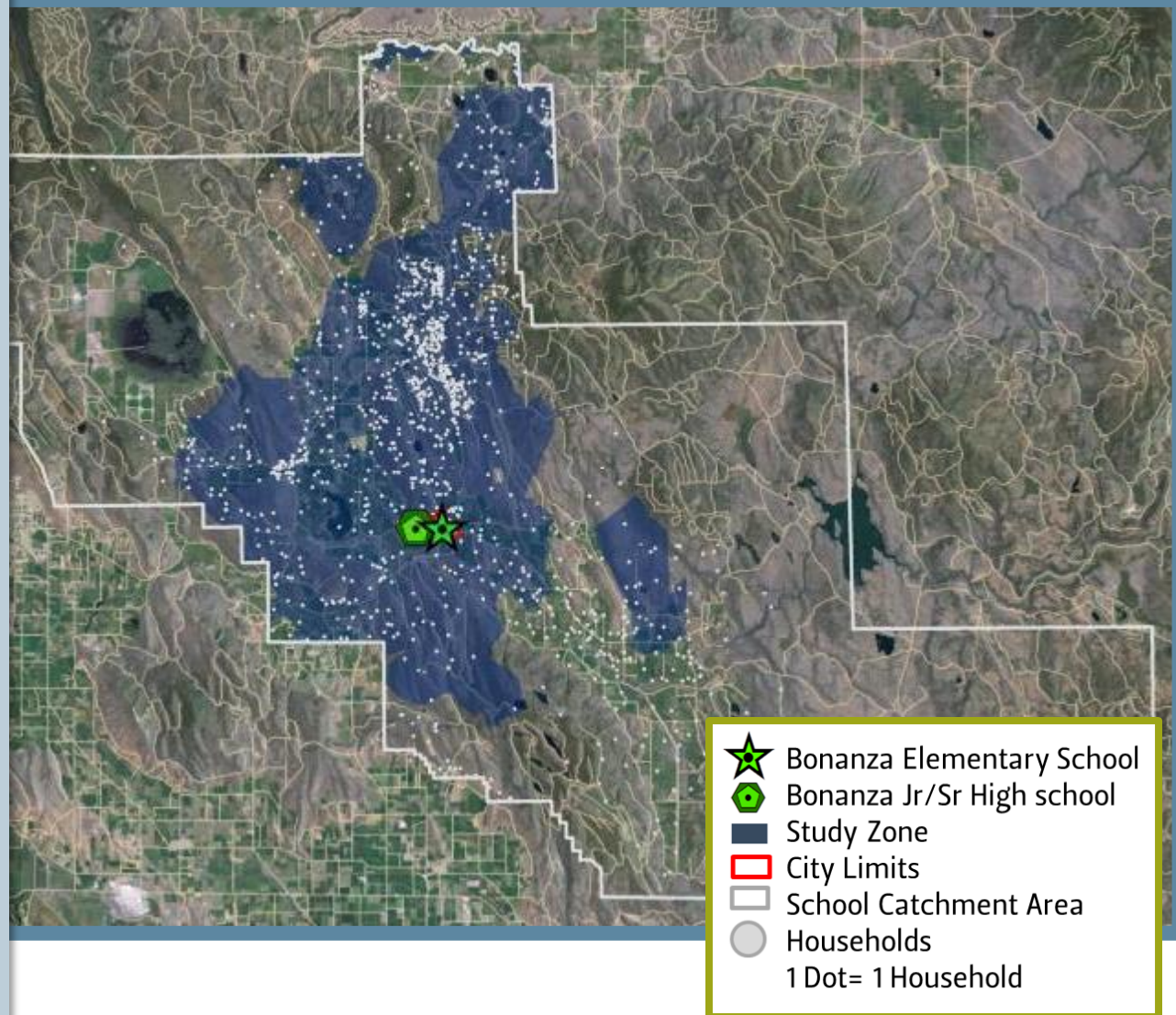
The yellow to red areas are the most highly populated; Bonanza is sparsely populated (greens) throughout much of the boundary area.

# Using Maps to Show Where Most People Live: Study Zone

Most populated areas were used to define the “study zone” to determine the food and PA resources relevant to where most people live.

The study zone (blue) captures 90% of Bonanza’s population

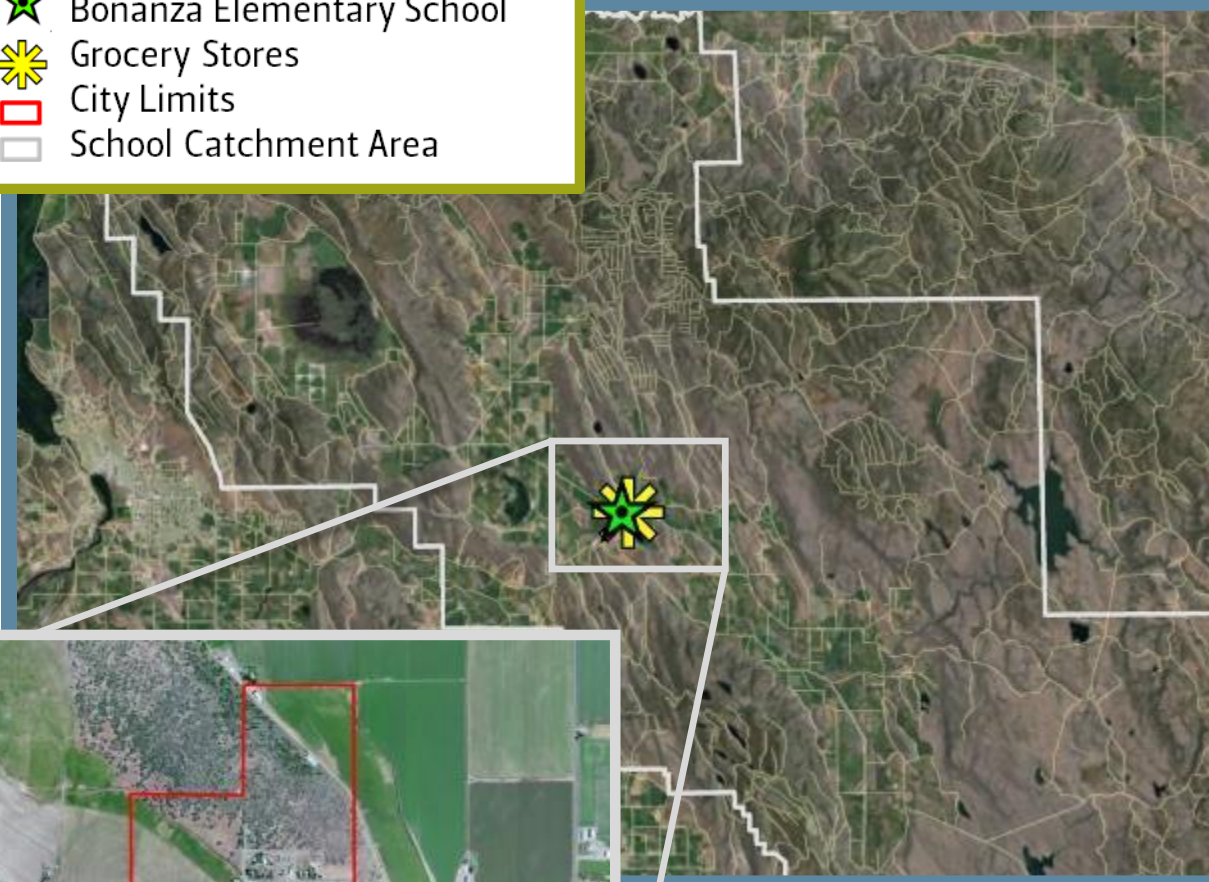
Defining the study zone helped limit time and travel distance for Bonanza community members who mapped resources and collected survey data, while not limiting the ability to capture data that is important to the community.





# Grocery Store Locations

- ★ Bonanza Elementary School
- ✱ Grocery Stores
- City Limits
- School Catchment Area



According to the Healthy Food Financing Initiative, a food desert is an area where a larger proportion of people have low or no access to a supermarket or grocery store

Bonanza has a small grocery store in town. However, Bonanza is still considered a food desert, as most residents must travel 10 miles or more to reach a store.

Based on a measure of availability of healthy food options, the “Modified Retail Food Environmental Index,” Bonanza scored “0” on scale ranging from 0 (no access to healthy food) to 100 (only access to healthy food)

# Resources for Groceries Shown by Location

The Bonanza General Store is a small grocery located within city limits and is one of the SNAP retailers in town

SNAP, or the Supplemental Nutrition Assistance Program, is a federal program that offers nutrition assistance to income eligible families and individuals

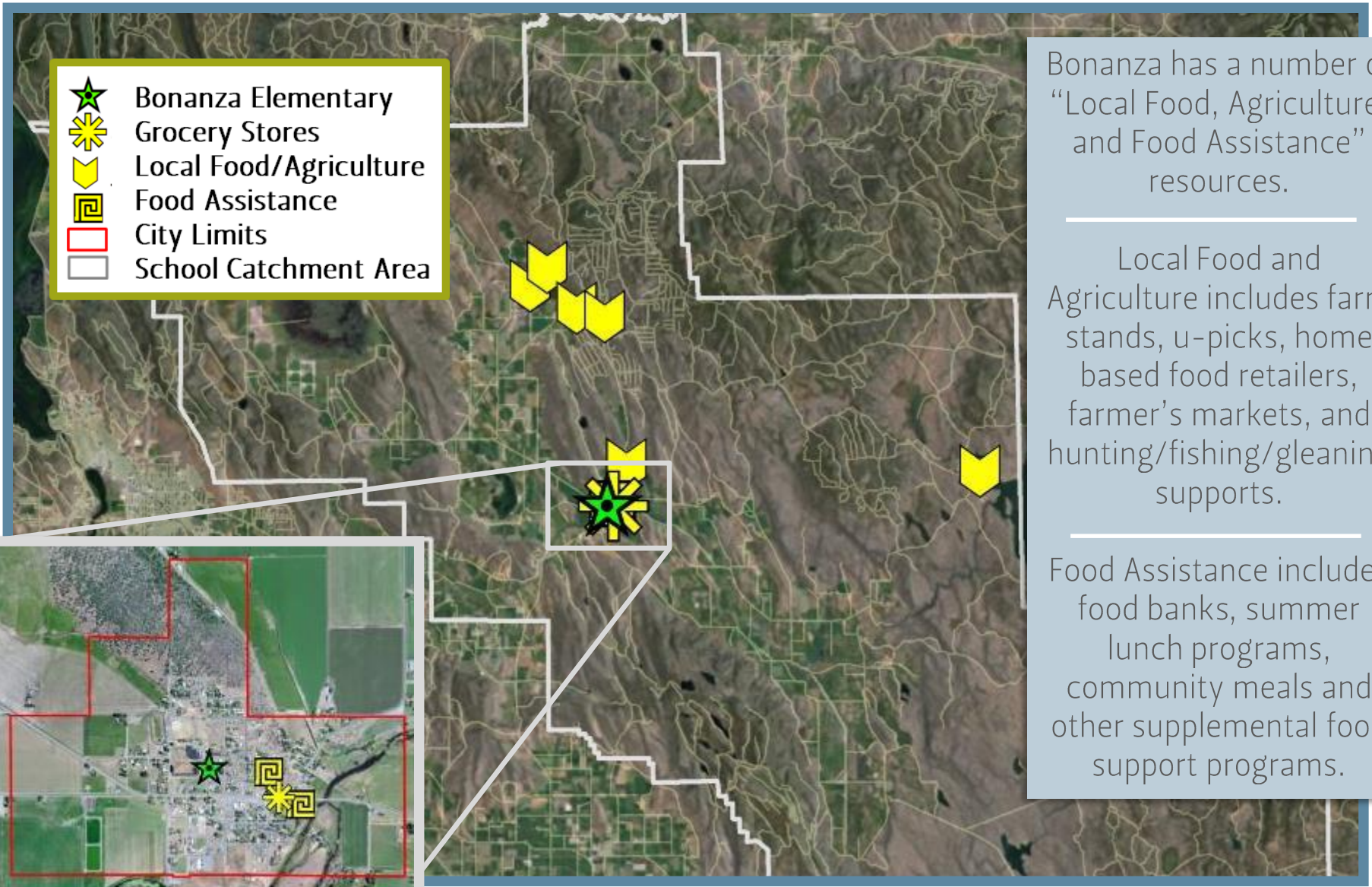
Limited access to affordable fresh produce is a barrier to healthy eating for people living in Bonanza

The nearest full service grocery or supermarket is located 25 miles west of Bonanza, meaning grocery access is car dependent for most of Bonanza



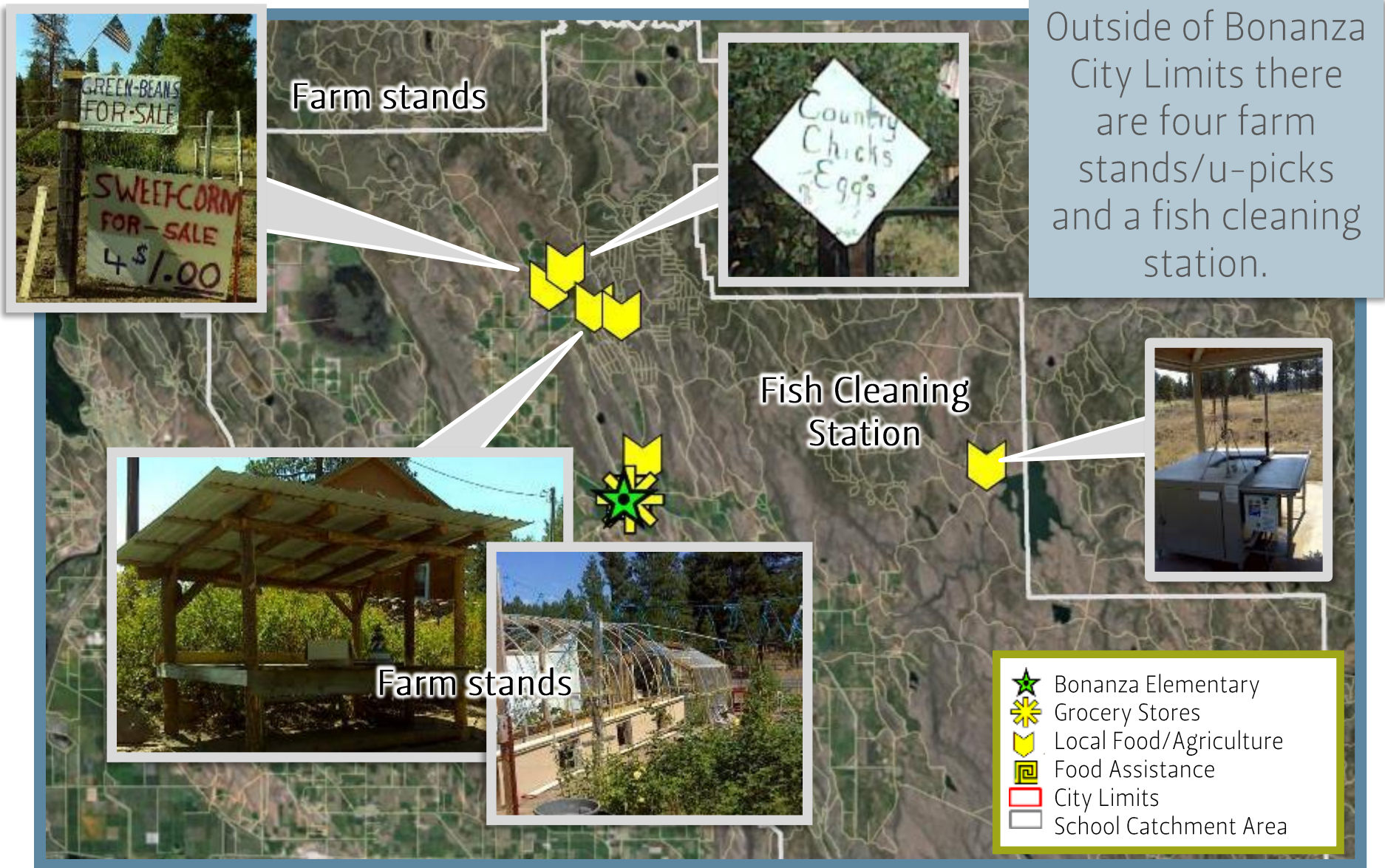


# Local Food, Agriculture, and Food Assistance





# Resources for Local Food, Agriculture & Food Assistance Shown by Location





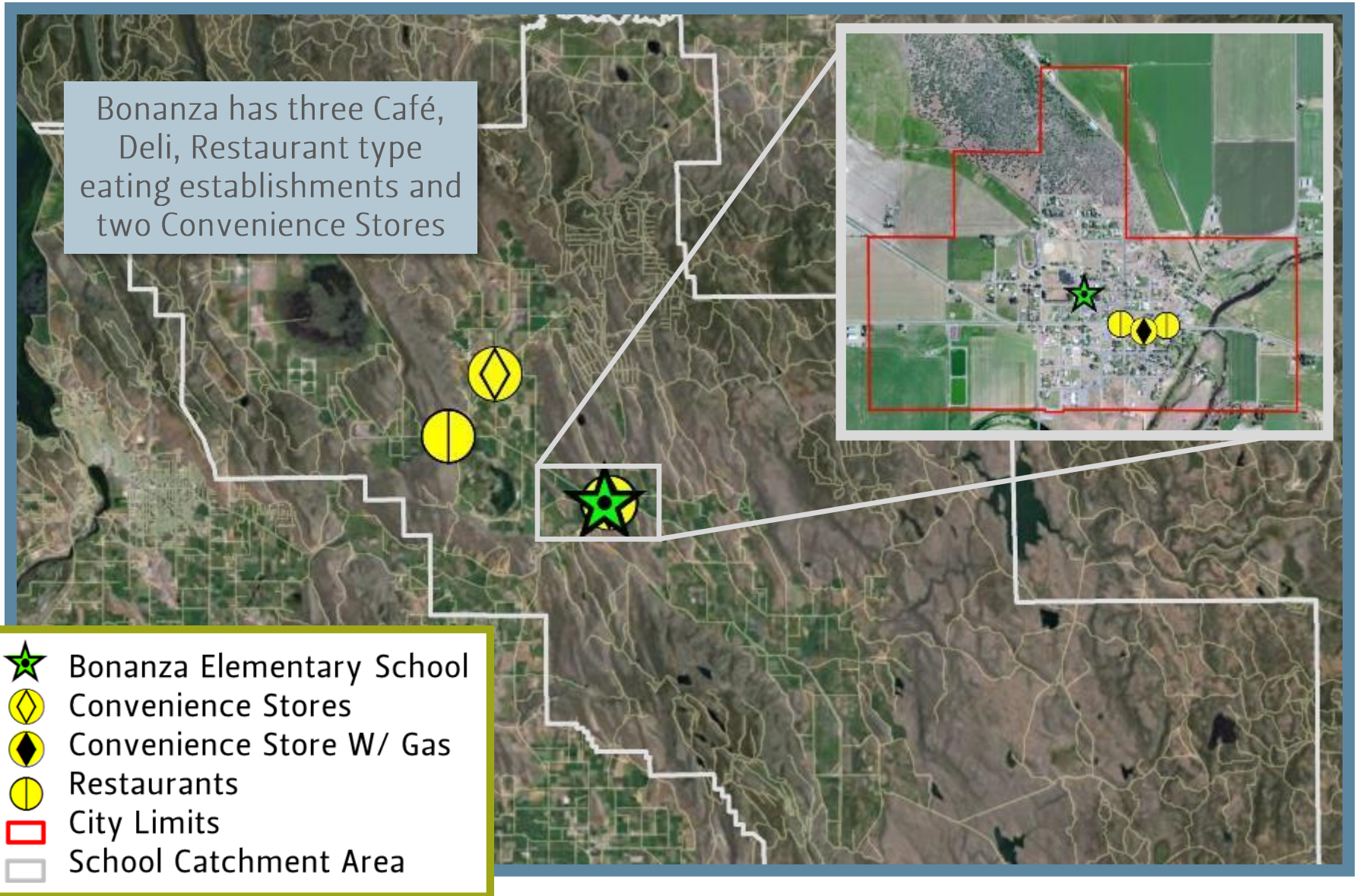
# Resources for Local Food, Agriculture & Food Assistance Shown by Location

Bonanza has two resources within city limits that offer the community members food assistance: The Chuck Wagon Food Bank/Pantry as well as a summer meal program that happens at Big Springs Park



- ★ Bonanza Elementary
- ✱ Grocery Stores
- 🌾 Local Food/Agriculture
- 🏠 Food Assistance
- 📏 City Limits
- 📏 School Catchment Area

# Cafés, Delis, Restaurants, & Convenience Stores





# Resources for Cafés, Delis, Restaurants, and Convenience Stores Shown by Location



# Resources for Cafés, Delis, Restaurants and Convenience Stores Shown by Location

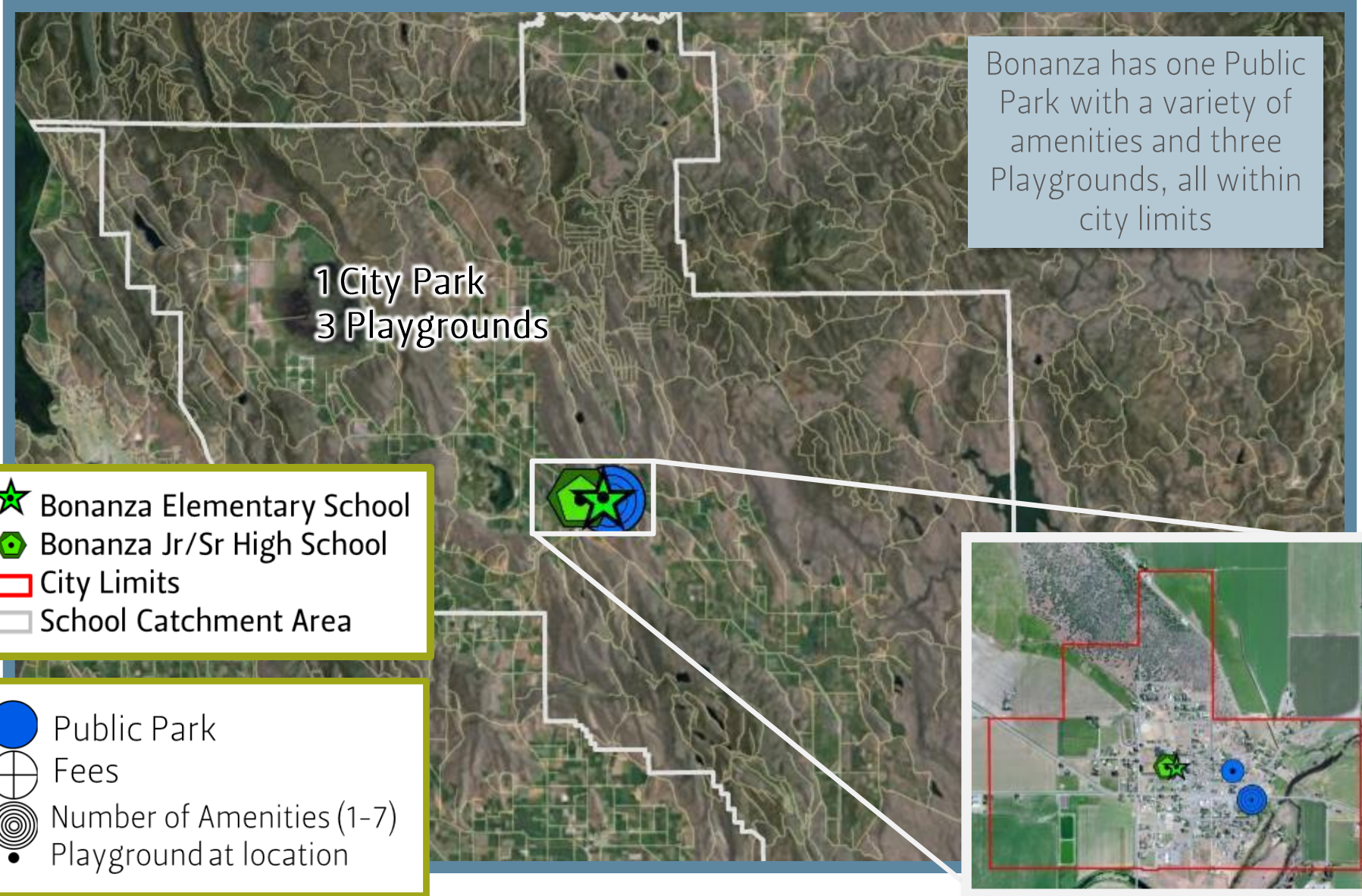
Within city limits there is one Convenience Store and two Sit-down restaurants with wait staff

- ★ Bonanza Elementary School
- ◊ Convenience Stores
- ◊ Convenience Store W/ Gas
- Restaurants
- ▭ City Limits
- ▭ School Catchment Area





# Public Parks and Playgrounds



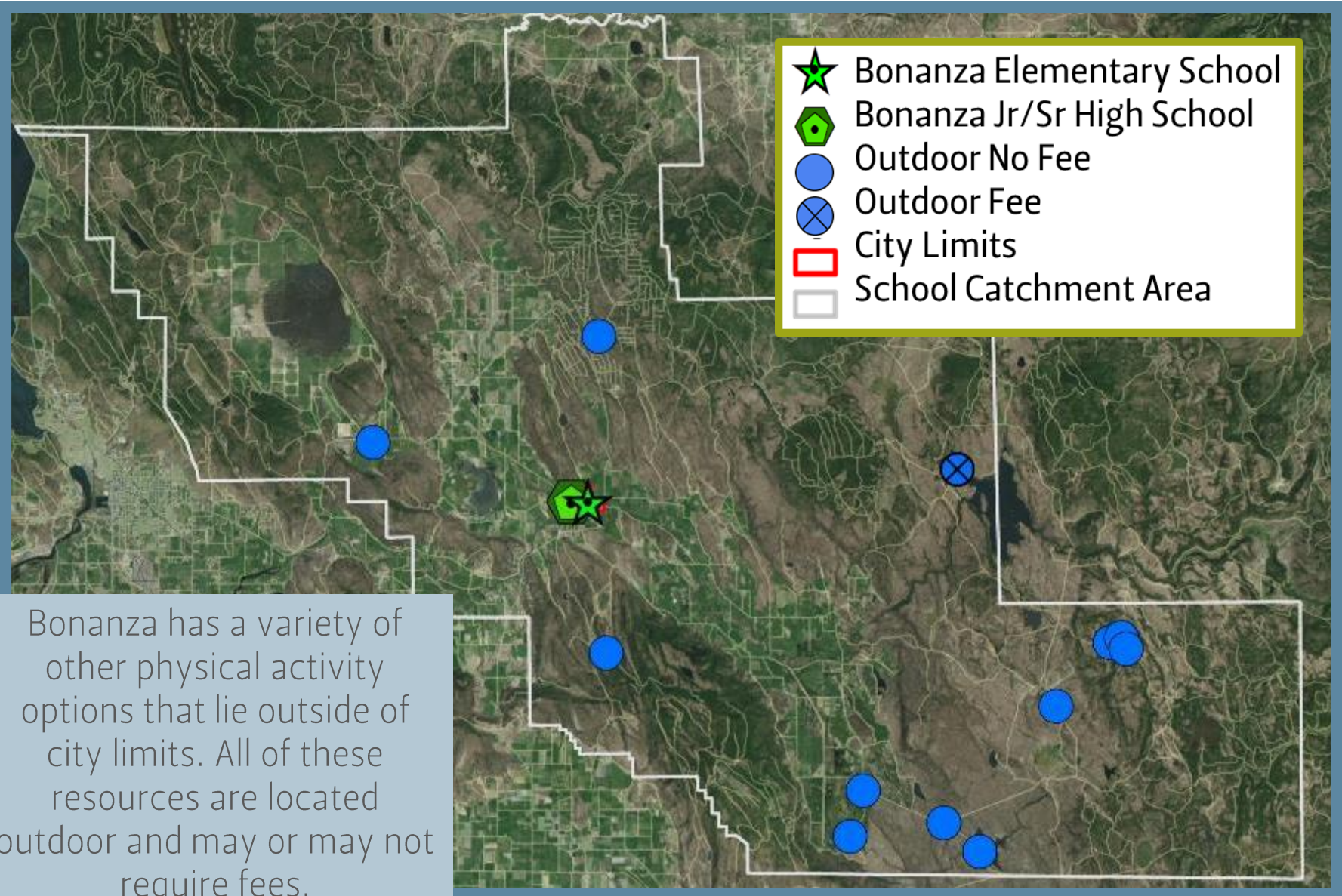


# Resources and Amenities for Public Parks and Playgrounds Shown by Location





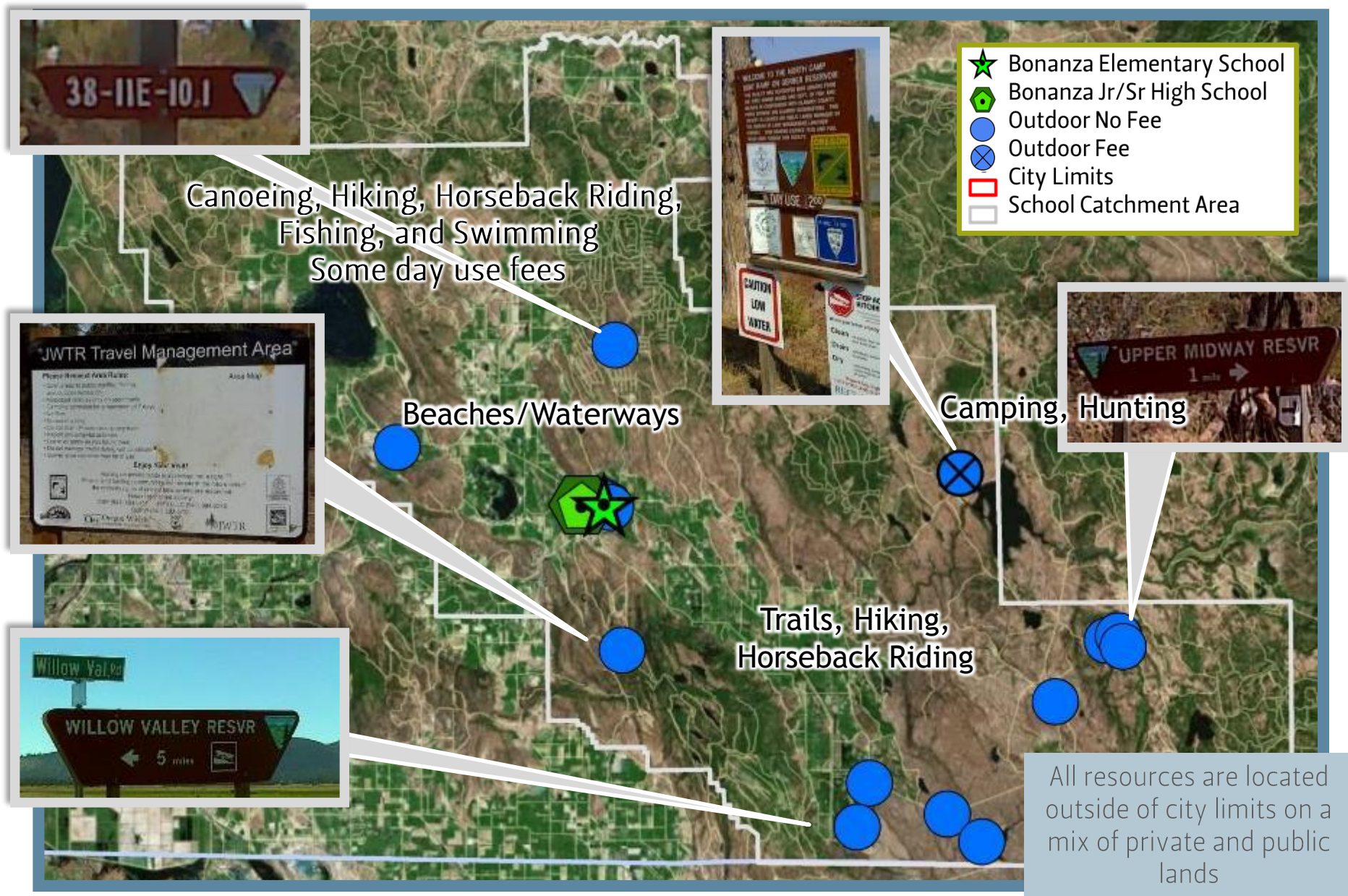
# Other Physical Activity Resources



Bonanza has a variety of other physical activity options that lie outside of city limits. All of these resources are located outdoor and may or may not require fees.



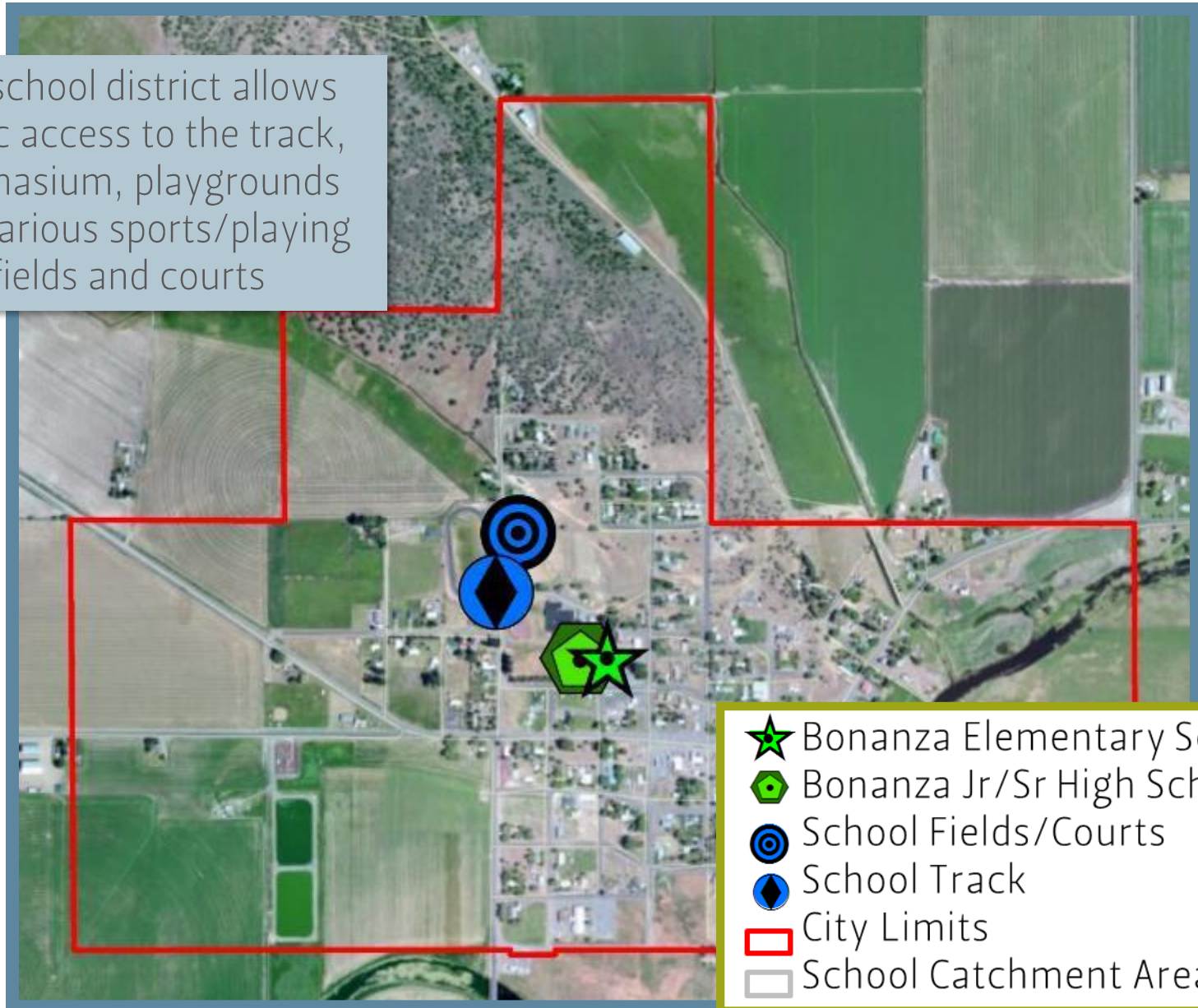
# Resources and Amenities for Other Physical Activity Shown by Location





# School Physical Activity Resources

The school district allows public access to the track, gymnasium, playgrounds and various sports/playing fields and courts





# Resources for School Physical Activity Shown by Location



- ★ Bonanza Elementary School
- ⬠ Bonanza Jr/Sr High School
- 🎯 School Fields/Courts
- ⬠ School Track
- 📐 City Limits
- 📐 School Catchment Area



School Fields/Courts

**BONANZA SCHOOLS SPORTS COMPL**

Please help us maintain this facility by abiding by the following:

- No Vehicles
- No Animals
- No Bikes/Skateboards/Roller Blades
- No Alcohol or Drugs
- No Tobacco
- No Firearms
- Please Pick up Litter
- Joggers and Walkers, Please Use Lanes 4,5,6 ONLY

Your efforts in helping to keep this a nice and usable facility are very much appreciated!

# Ease of Access to Resources

- Spatial accessibility is relative: if you have a car and gas money, your spatial access to resources is potentially only limited by how much time you want to spend in the car. As our goal is to include all potential community members, not just those with a means of transportation, we analyzed the proportion of community members who have “Easy Access” to resources.
- We described Easy Access as being located within a ¼ mile distance to a resource category.
- While Bonanza does have some food and physical activity (PA) resources located close-in, the bulk of the PA and Local Food resources are located outside of city limits.
- Resources have been aggregated into 6 categories: ● Low/No Cost Outdoor PA, ● Low/No Cost Indoor PA, ● Fee-Based Outdoor PA, ● Fee-Based Indoor PA, ● Local Agriculture, Grocery and Food Assistance, ● Fast Food/Convenience Store and Restaurant

## Low/No Cost PA Resources

Community Centers  
Public lands/Parks & Playgrounds  
Sports Fields/Courts

## Fee-Based PA Resources

Golf Courses  
Equestrian centers  
Exercise/Fitness centers

## Local Agriculture

Farm stands/U-picks  
Farmer’s markets  
Home-based sales (Eggs, Milk, Veggies)  
Hunting/Fishing/Gleaning Supports



# Ease of Access to Resources

Analyzed via a 1/4 mile network buffer: approximately a 5 to 10 minute walk

## Low/No Cost PA Resources

Community Centers  
Public lands/Parks & Playgrounds  
Sports Fields/Courts

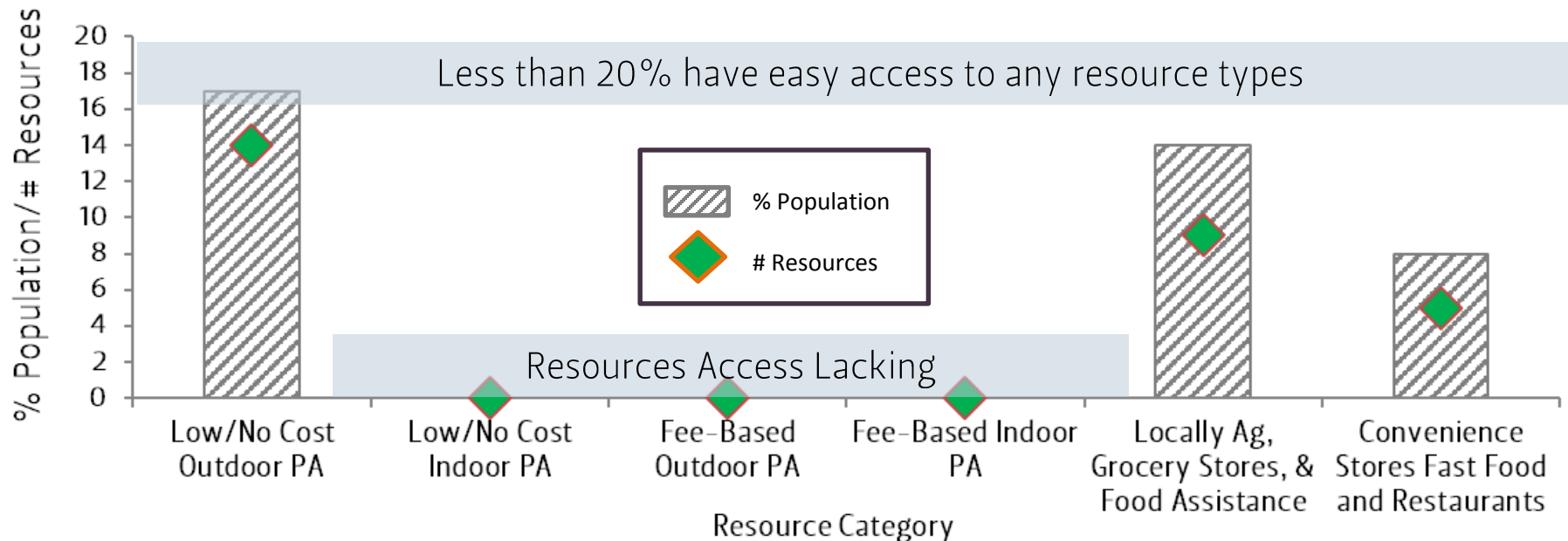
## Fee-Based PA Resources

Golf Courses  
Equestrian centers  
Exercise/Fitness centers

## Local Agriculture

Farm stands/U-picks  
Farmer's markets  
Home-based sales (Eggs, Milk, Veggies)  
Hunting/Fishing/Gleaning Supports

## Proportion of Bonanza Population within 1/4 mile of Food and Physical Activity Resources

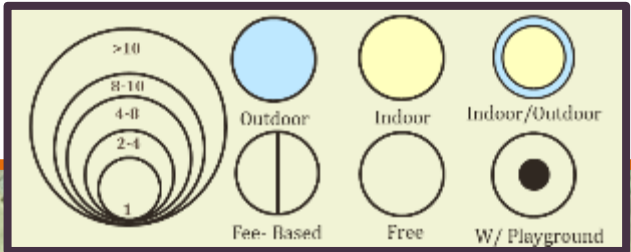


# Conclusions

In rural communities, a lack of available resources and accessibility to existing resources may make developing and maintaining healthy dietary and activity habits difficult.

## Food Resources

Resources are available, but spread out and often located far from the town center, making them inaccessible to those without a means of transportation. Supports need to be affordable and accessible from where people live and work



  City Limits  
  School Catchment Area

## PA Resources

