Rural Community Food and Physical Activity Environment

Estacada 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.
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.

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.
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.
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.
Estacada Community - Adult Weight Health (BMI)

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

Adult Body Mass Index (BMI)
- **12% Healthy** (BMI 18-24.9)
- **88% Overweight** (BMI 25-29.9)
- **<1% Obese** (BMI >30)

*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 3 schools and city limits.

Estacada has 10,516 people living in 4,246 households (2010 census) spatially dispersed in an area of about 70 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.
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; Estacada is sparsely populated (greens) throughout much of the boundary area.
Using Maps to Show Where Most People Live: Study Zone

The most populated areas were used to define the “study zone” to determine the Food and Physical Activity resources relevant to where most people live.

The study zone (purple) captures 95% of Estacada’s population.

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

Estacada has four grocery stores, three within city limits and one outside. However, Estacada is still considered a partial food desert.

Based on a measure of availability of healthy food options, the “Modified Retail Food Environmental Index,” Estacada scored “12.5” on scale ranging from 0 (no access to healthy food) to 100 (only access to healthy food).
Estacada has one grocery store outside of city limits. The View Point Grocery is a small store and one of the SNAP authorized dealers in the Estacada Area.

SNAP, or the Supplemental Nutrition Assistance Program, is a federal program that offers nutrition assistance to income eligible families and individuals.
Resources for Groceries Shown by Location

Within city limits Estacada has three grocery stores: a full service Thriftway, a discount or bargain outlet store, and a smaller market style grocery. All of these grocers are SNAP authorized retailers. Additionally, the Thriftway is also a WIC (Woman Infants and Children) authorized retailers.

WIC is a SNAP program that provides supplemental foods, health care referrals, and nutrition education for low income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk.
Local Food, Agriculture, & Food Assistance

Estacada has a number of “Local Food, Agriculture, and Food Assistance” resources

Local Food and Agriculture includes farm stands, u-picks, home-based food retailers, farmer’s markets, and hunting/fishing/gleaning supports

Food Assistance includes food banks, summer lunch programs, community meals and other supplemental food support programs
Estacada has eight local food/agriculture and food assistance options that lie outside of city limits including a farm stand/u-pick type operation, as well as a number of home based retailers that offer things like eggs and vegetables for sale. The lone food assistance resource are the community meals (monthly breakfasts) offered at the Springwater Grange.
Within city limits, Estacada has a seasonal farmer’s market, a food bank/pantry, supports for hunting, fishing and foraging, community meals (Sunday Pie @ First Baptist) and home based food retailers.
Convenience Stores

Estacada has six convenience stores, one located outside city limits and five located within.

Estacada’s “Modified Retail Food Environmental Index” score was 12.5. A lower score indicating a higher number of places that don’t typically have healthy food and lower numbers of places that would typically have healthy food options.
Resources for Convenience Stores Shown by Location

Estacada Elementary
City Limits
School Catchment Area
Convenience Store W/Gas
Convenience Store W/O Gas

Number of Stores

Not shown: Springwater Store located outside city limits
Estacada has six fast food establishments, all located within city limits.

For our purposes here, fast food is considered any place that sells prepared foods or drinks and does not have seating, or if it does have seating, then it also has a drive through.
Resources for Fast Food Shown by Location

Fast Food options in Estacada consist of drive through, coffee stands, Take and Bake pizza, and food trucks.
Estacada has 16 Café, Deli, Restaurant type eating establishments, all but two located within city limits.

There are three Coffee house/Bakeries, eleven Sit–down Restaurants with table service and two Deli/Sandwich Shops.
Outside of city limits there are two dining options: a deli/sandwich shop or a sit-down restaurant with wait staff.
Within city limits there are a variety of dining establishments from Cafés to full service Sit-Down restaurants.
Estacada has two Neighborhood or City Parks and a total of four playgrounds. The parks offer a variety of amenities and opportunities for physical activity (PA).
There are two City/Neighborhood parks and three playgrounds (not including those at the schools) within Estacada city limits.

The parks offer amenities like volleyball courts, baseball and disc golf fields, and beaches/waterways for swimming and fishing.
There are three other Public Parks in the Estacada area that offer a variety of amenities and options for recreation. These parks all lie outside of city limits and are managed by either the state or county.
Resources and Amenities include: picnic shelters, overnight camping, boating/fishing, areas to walk dogs, sports/playing fields and courts, a playground and restrooms. There are fees associated with certain amenities (e.g. camping) at Metzler and Milo McIver parks.
Estacada has a variety of other physical activity options that may or may not have fees associated with them. These are mainly outdoor resources located both within and outside of city limits.
Resources for Other PA Shown by Location

Resources consist of a golf course, beaches/waterways, equestrian centers and trails or logging roads on private timber land.

PA options include swimming, hiking, boating, fishing, and horseback riding.

*PA=Physical Activity
Resources for Other PA Shown by Location

Resources and amenities include a beach/waterway, basketball courts, a skate park, a community recreation center, and two martial arts studios.
School Physical Activity Resources

The School District allows public access to Gyms, Garden, the Track, Playgrounds, and various Sports/Playing Fields and Courts

- Estacada Elementary
- Estacada Middle School
- Estacada High School
- City Limits
- School Garden
- School Gymnasium
- School Fields/Courts
- School Gym, Fields/Courts, and Track
School Physical Activity Resources Shown by Location

- Estacada Elementary
- Estacada Middle School
- Estacada High School
- City Limits
- School Garden
- School Gymnasium
- School Fields/Courts
- School Gym, Fields/Courts, and Track
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 Estacada 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.
Ease of Access to Resources

Analyzed via a ¼ 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 Estacada Population within 1/4 mile of Food and Physical Activity Resources

- Less than 40% have easy access to most healthy food sources
- Less than 10% have easy access to any Indoor Physical Activity Resource

Resource Category:
- Low/No Cost Outdoor PA
- Low/No Cost Indoor PA
- Fee-Based Outdoor PA
- Fee-Based Indoor PA
- Locally Ag, Stores, & Food Assistance
- Grocery Convenience Stores
- Fast Food and Restaurants
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.

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.