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.
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.
Rainier Community - Adult Weight Health (BMI)

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

Adult Body Mass Index (BMI)
- 7% Healthy (BMI 18-24.9)
- 84% Overweight (BMI 25-29.9)
- 8% 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 2 schools and city limits.

Rainier includes 8,227 people living in 3,524 households (2010 census) spatially dispersed in an area of about 250 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; Rainier is sparsely populated (greens) throughout much of the boundary area.
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 96% of Rainier’s population.

Defining the study zone helped limit time and travel distance for Rainier 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.

Rainier has a small bargain outlet style grocery store in town. However, it is still considered a food desert.

Based on a measure of availability of healthy food options, the “Modified Retail Food Environmental Index,” Rainier scored “0” on scale ranging from 0 (no access to healthy food) to 100 (only access to healthy food).
The J&R Grocery Liquidator is a “bargain outlet” type store located within city limits and it is one of two SNAP retailers in Rainier.

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 Rainier.

The closest supermarket or full service grocer is located 17 miles away, in Longview WA. Meaning, grocery access is car dependent, and some form of transportation is needed to shop for food.
Local Food, Agriculture, & Food Assistance

Rainier 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
There are eight local food/agriculture options that lie outside of Rainier city limits: six are home-based operations, selling things like fruit, eggs, and veggies; the Rod and Gun club – a hunting support; and a school garden.
Rainer has a community garden and a food bank/pantry both at the same location (HOPE) within city limits. HOPE not only offers emergency food assistance, but also a variety of programs that assist community members in supplementing their food supplies.
Rainier has three convenience stores, two located outside city limits and one located within.

Rainier’s “Modified Retail Food Environmental Index” score was 0. 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.
The Chevron located in city limits is the second SNAP authorized retailer in Rainer.

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 Rainier.

The closest supermarket or full service grocer is located 17 miles away, in Longview WA. Making it likely that community members without access to transportation utilize these convenience stores regularly.
Rainier has three fast food establishment, 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.

Fast Food

Hudson Park Elementary
○ Fast Food Establishment
□ City Limits
□ School Catchment Area
Resources for Fast Food Shown by Location

Fast Food options in Rainier consist of a drive through coffee hut and two vending machines.
Rainier has 12 Café, Deli, Restaurant type eating establishments – all but one located within city limits.

There are eleven Sit-down Restaurants with table service and one Deli/Sandwich Shop.
Rainier’s dining establishments offer Mexican, Pizza, Deli/Sandwiches, and Chinese options to name a few.
Rainier has four Public Parks, all but one lying outside of city limits.
Resources and Amenities for Public Parks Shown by Location

Rainier Riverfront Park is a city park located within city limits. The park has a variety of amenities to enable many outdoor activities: swimming, boating, dog walking, playing a variety of sports, and skateboarding. There are some fees associated with parking and boating.
Rainier Has three Public Parks that lie outside of city limits: Trojan Park, run by Portland General Electric, offers Disk Golf, Fishing, Sports Fields and Picnic Shelters. The other two parks are run by Columbia County and offer a variety of amenities: Playgrounds, Sports Fields/Courts, Beaches/Waterways and Picnic Shelters. The two county parks have day use fees or fees for camping/cabin rentals or shelter reservations.
Rainier has a variety of other physical activity resources (19 in total) including indoor and outdoor options for recreation, the majority of which lie outside of city limits.
Resources consist largely of trails or logging roads on private timber land – which may be closed due to fire danger or logging activities.

PA options include Swimming, Hiking, Boating, Fishing, and Horseback Riding.

*PA=Physical Activity
Within city limits there are two indoor physical activity or healthy education options. One is the community owned recreation center that offers classes to the public for a fee and the other is the education programs offered by the Child and Family Development program. Rainier also has a free outdoor option: the Fox Creek Trail.

*PA=Physical Activity
School Physical Activity Resources

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

Hudson Park Elementary
Rainier Jr/Sr High
School Garden
School Gymnasium
School Fields/Courts
School Pool
School Track
The school hopes to use the garden plot to supplement school meals with fresh veggies.
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 Rainier 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

<table>
<thead>
<tr>
<th>Low/ No Cost PA Resources</th>
<th>Fee- Based PA Resources</th>
<th>Local Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Centers</td>
<td>Golf Courses</td>
<td>Farm stands/ U- picks</td>
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<tr>
<td>Public lands/ Parks &amp; Playgrounds</td>
<td>Equestrian centers</td>
<td>Farmer’s markets</td>
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<tr>
<td>Sports Fields/ Courts</td>
<td>Exercise/ Fitness centers</td>
<td>Home- based sales (Eggs, Milk, Veggies)</td>
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<tr>
<td></td>
<td></td>
<td>Hunting/ Fishing/ Gleaning Supports</td>
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</tbody>
</table>
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 Rainier Population within 1/4 mile of Food and Physical Activity Resources

Less than 40% have easy access to most abundant resource types

Less than 30% have easy access to a Healthy Food Resource

Less than 10% have easy access to any Indoor Physical Activity Resource

Low/ No Cost PA Resources
- Outdoor PA
- Indoor PA

Fee-Based Outdoor PA

Fee-Based Indoor PA

Locally Ag, Stores, & Food Assistance

Grocery

Convenience Stores

Fast Food and Restaurants

%-Population/#Resources

Graph showing comparisons of population and 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.

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.