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.

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

**Adult Body Mass Index (BMI)**
- **10% Healthy** (BMI 18 - 24.9)
- **72% Overweight** (BMI 25 - 29.9)
- **18% 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 three schools and city limits.

Chiloquin has 4593 people living in 3048 households (2010 census) spatially dispersed in an area of about 1900 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; Chiloquin 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 PA resources relevant to where most people live.

The study zone (purple) is captures 98% of Chiloquin’s population.

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

Chiloquin has a small grocery store in town and other smaller “country” stores located well outside of city limits. However, Chiloquin is still considered a food desert.

Based on a measure of availability of healthy food options, the “Modified Retail Food Environmental Index,” Chiloquin scored “0” on scale ranging from 0 (no access to healthy food) to 100 (only access to healthy food).
The Family Food Center is a small grocery store located within city limits and it is one of Chiloquin’s SNAP retailers.

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 Chiloquin.

The closest full service supermarket is 30 miles south of Chiloquin, meaning grocery access is car dependent, for most of Chiloquin.
Chiloquin 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 two resources that lie outside of Chiloquin city limits: the garden at Sage Charter school and a Food Bank/Pantry that offers the community members food assistance.
Within Chiloquin’s city limits, there is a seasonal Farmer’s Market as well as a Food Bank/Pantry that offers food assistance to community members.
Convenience Stores

Chiloquin has seven convenience stores.

Chiloquin’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.

Comparing the ratio of fast food establishments per 1000 people to the fact that Chiloquin has less than one grocery store per 1000 people, you can see why Chiloquin scores low on this index.
Resources for Convenience Stores Shown by Location

Most of Chiloquin’s Convenience Stores are located outside city limits.
The one convenience store in town is a WIC (Women, Infants, and Children) authorized vendor.

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.
Cafés, Delis, Restaurants and Fast Food

Chiloquin has six Café, Deli, Restaurant type eating establishments and one Fast Food establishment.

There are four Sit-down restaurants with table service, one Deli/sandwich shop, one all you can eat/buffet style establishment and one walk up burger stand.
Resources for Cafés, Delis, Restaurants, and Fast Food Shown by Location

Outside of city limits community members can dine at an All You Can Eat Buffet, a Deli, a Mexican Restaurant and a Resort Based Restaurant
Resources for Cafés, Delis, Restaurants and Fast Food Shown by Location

Within city limits community members can dine at the two sit down type restaurants as well as a walk up burger shop.
Chiloquin has four playgrounds and two public parks.
Resources and Amenities for City Public Parks and Playgrounds Shown by Location

Outside of city limits, Chiloquin has one Public Park and two Playgrounds. The Park offers amenities like Beaches/Waterways and Trails and allows for activities like Boating, Fishing, and Dog Walking.
Resources and Amenities include two Playgrounds and Sports/Playing Fields—all of which are free.
Other Public Parks

All of these parks are located outside of city limits.

These parks have nine unique amenities/activities associated with them:
- Boating
- Hiking
- Swimming
- Horseback Riding
- Skiing
- Dog Walking
- Picnic Shelters
- Playgrounds
- Camping

Fees may be associated with some resources.

Chiloquin has ten “Other Public Parks” under County, State or Federal administration.

Legend:
- Public Park
- Fees
- Number of Amenities (1-9)
- Playground at Location
Chiloquin has ten Public Parks that are managed by County, State, or federal entities. All of these are located outside of city limits and allow access to nine unique Physical Activity (PA) Amenities or Activities include: Camping, Boating, Swimming, Dog Walking, Hiking, Horseback Riding, Picnic Shelters, Playgrounds, and Skiing.
Resources and Amenities for Other Public Parks Shown by Location

- **Trails/Trailheads**
  - Kimball State Park
  - Day Use
  - Fees for some park amenities

- **Wood River**
  - Day Use
  - Beaches/Waterways

- **Fishing, Hiking, Swimming, and Boating**

Legend:
- Public Park
- Fees
- Number of Amenities (1-9)
- Playground at Location
Resources and Amenities for Other Public Parks Shown by Location

- **Day Use Areas**
- **Trails/Trailheads**
- **Fishing, Boating, Hiking, and Horseback Riding, Playground**
- **Campgrounds, Trails, Beach/Waterway**
- **Beaches/Waterways**

Fees for some park amenities.
Chiloquin has a variety of other physical activity options that take place both indoor and out, and may or may not require fees.
Resources and Amenities for Other Physical Activity Shown by Location

Canoeing, Hiking, Horseback Riding, Fishing, and Swimming

Beaches/Waterways

Canoe Trail

Trails, Hiking, Horseback Riding

Most located outside of city limits
Resources and Amenities for Other Physical Activity Shown by Location

Beaches/Waterways

Recreation Center
Aerobics, Dance, Yoga Classes

Sports/Playing Fields and Courts

Gym

Chiloquin Elementary School
Chiloquin High School
Sage Community Charter School
City Limits
School Catchment Area

Number of Resources
School Physical Activity Resources

The school district allows public access to the Track, Gymnasium, and various Sports/Playing Fields and Courts.
Resources for School Physical Activity Shown by Location

- Chiloquin Elementary
- Chiloquin High School
- Sage Charter School
- School Gymnasium
- School Fields/Courts
- School Track
- City Limits
- School Catchment Area
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 1/4 mile distance to a resource category.

- While Chiloquin 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 Resources</th>
<th>Fee-Based Resources</th>
<th>Local Agriculture</th>
</tr>
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<tbody>
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<td>Farm stands/U-picks</td>
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<td>Public lands/Parks &amp; Playgrounds</td>
<td>Equestrian centers</td>
<td>Farmer’s markets</td>
</tr>
<tr>
<td>Sports Fields/Courts</td>
<td>Exercise/Fitness centers</td>
<td>Home-based sales (Eggs, Milk, Veggies)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hunting/Fishing/Gleaning Supports</td>
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Ease of Access to Resources

Analyzed via a \(\frac{1}{4}\) mile network buffer: approximately a 5 to 10 minute walk

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Proportion of Chiloquin Population Within 1/4 mile of Food and Physical Activity Resources

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

Less than 20% have easy access to any other resource category

<table>
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<tr>
<th>Resource Category</th>
<th>% Population</th>
<th># Resources</th>
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<tbody>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
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<tr>
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<tr>
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<tr>
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</table>
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.