



## Chiloquin Community HEAL MAPPS™ Report

Chiloquin is a rural city located in Klamath County, Oregon. This community of about 700 residents is located on the northern edge of the Klamath Basin, resting on the eastern shoulder of the Cascade Mountains at the convergence of the Sprague and Williamson Rivers, at an elevation of about 4200 feet above sea level. Average temperatures range from the mid 80's in the summer to the low teens in the winter, and historical annual precipitation is about 16 inches, although recent droughts have affected the area and its water supply<sup>1</sup>. It is a forested area about 30 miles south of Crater Lake National Park, and just to the east and north of Agency and Klamath Lakes, respectively. Chiloquin is about 27 miles north of the city of Klamath Falls, where most shopping and services are located; but two grocery/convenience stores, a hardware store, a few restaurants located in and around town, and a Community Center with a branch library and art gallery, and 4 churches keep residents closer to home.

Surrounding the town center of Chiloquin are neighborhoods on both sides of the Williamson River, and further afield, up to 4000 rural residents who call it home. The 2010 US Census determined there were 695 people, 281 households, and 179 families residing in the city proper. About 64% of the families in Chiloquin include children under the age of 18. The median age of residents is about 43, and 40% of the residents are under 18. The racial makeup of the population as reported by the Census is divided between white (37%) and Native American (55%), with a Latino population of about 7%<sup>2</sup>. Chiloquin Elementary (180 students) is next door to Chiloquin Middle/High School (174 students), and these two schools, along with a charter K-8 school about six miles out of town (Sage Community School, with about 80 students), draw students from the immediate Chiloquin area, as well as from communities as far away as Fort Klamath (13 miles) and Sprague River (25 miles).

The area around Chiloquin (and originally extending into Northern California) is the traditional home of the Klamath, Modoc and the Yahooskin Band of Snake Paiute people (known today as "the Klamaths") which owned and managed the forests and fisheries until the U.S. Congress terminated their tribal status in 1961. In 1986, the Tribes regained their tribal status however this did not include their tribal land base. They retain rights to hunt, fish and gather food on previous reservation land. The annual "Restoration Days" celebration includes a pow wow, parade, a youth rodeo, and, most importantly, a positive vision of the future of the Tribes. Today, Tribal Administration is based in Chiloquin, with medical, social, and other services offered to Native Americans in Chiloquin and Klamath Falls. The Tribes are one of the major

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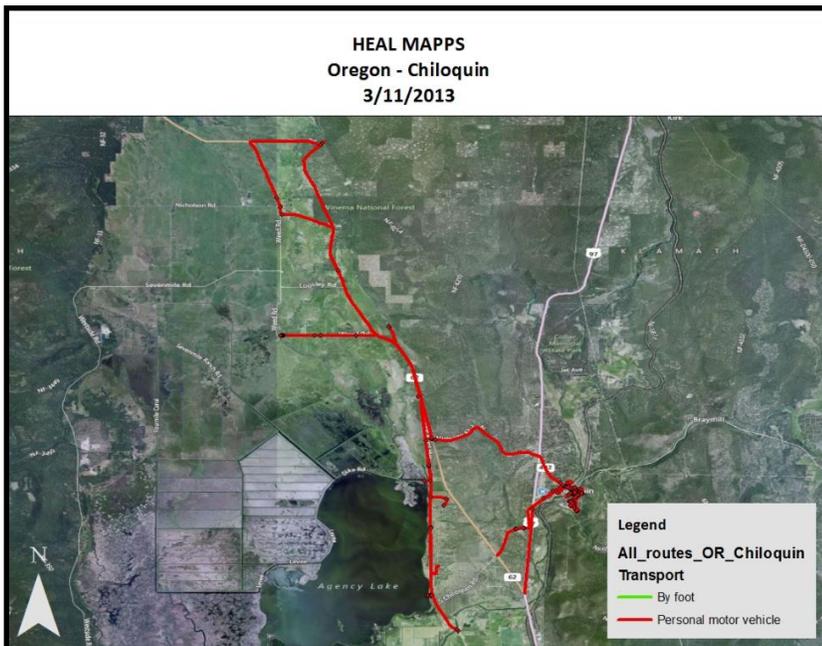
<sup>1</sup> Western Regional Climate Center, <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?or1571>

<sup>2</sup> US Census Bureau, American Factfinder, <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml>

employers in the area through Tribal administration and the operation of the KLaMoYa casino and travel center on Highway 97, just a few miles south of town.

Once-bustling Chiloquin's economy was hit hard by the decline of the timber industry in past decades, and now Jeld-Wen, a window and door manufacturer, is one of the only other large employers, and its future in the area is uncertain. According to the census, unemployment is at about 26%, nearly three times the Oregon rate of 9.8%, and as is the case in many rural communities, residents have multiple small jobs and are creative and entrepreneurial in securing financial resources to support their lives. A church provides a free meal each week and the monthly Food Pantry do a bustling business, with consistently 200-300 attendees.

Each summer, Chiloquin hosts a Rodeo and there is a small weekly Farmer's Market where local gardeners can sell their wares, but in general, it is a quiet and peaceful town year round.



**Generating Rural Options for Weight Healthy Kids and Communities (GROW HKC)** is a USDA-funded, participatory childhood obesity prevention study conducted by Oregon State University's Extension researchers in partnership with rural residents and communities. GROW HKC and the Chiloquin community have partnered to map features of the local environment and discuss residents' perceptions of the community supports and

barriers to regularly eating healthy and being physically active, particularly for children and families. Community members were mobilized and trained to use HEAL MAPPS™ (Healthy Eating Active Living: Mapping Attributes using Participatory Photographic Surveys), our community resource and readiness tool, to assess community resources for and readiness to improve and implement healthy eating and physical activity supports – environmental and policy actions to make easier these obesity preventing behaviors.

HEAL MAPPS™ projects conducted in partnership with rural communities across several Western States (AZ, CO, NM, NV, OR, WA) will provide evidence and insights that will drive the

development of a rural obesity prevention model. The model will be used as a framework for rural community actions aimed to promote healthy eating and physical activity behaviors, environments, and policies to prevent overweight and obesity among children and families.

The problem of obesity in children is in the forefront of nationwide research efforts and there are documented physical and mental health outcomes associated with childhood obesity that contribute to lifelong chronic health problems which may disproportionately affect people living in rural places. Rural residency tends to increase the risk of overweight and obesity for children and adults; the prevalence of childhood overweight and obesity is higher among children living in rural areas.

To date, most evidence-based strategies to combat the childhood obesity epidemic have been developed and tested in non-rural settings and target either individuals or environments. The overall goal of the GROW Healthy Kids and Communities (HKC) project is to learn more about the factors influencing health behaviors in rural places in order to prevent obesity in rural children **by improving their behavioral environments – at home, in school, and in the community** – to make healthy eating and activity options their easy and preferred choice.

### **Relevance for Chiloquin Community**

According to the US Census Bureau, the percentage of families in Chiloquin with children under the age of 18 is 35.75%. The median household income is \$25,417, compared to Oregon's \$49,260 and the poverty rate is 40.7%. In 2012, 94.4 percent of Chiloquin elementary-aged children qualified for free or reduced lunch. The state average obesity rate for low-income preschoolers is 14.2%; the adult obesity rate in Klamath County is 24% compared to 25.6% for Oregon. According to Oregon Healthy Teens 2007-2008 Survey for Klamath County<sup>3</sup>, less than 21% of 8<sup>th</sup> and 11<sup>th</sup> graders are getting the recommended amount of fruits and vegetables per day and about one in four 8<sup>th</sup> and 11<sup>th</sup> graders did not meet the daily physical activity recommendation. Approximately 40% of 8<sup>th</sup> graders and 46.5% of 11<sup>th</sup> graders watched two or more hours of TV per day, and "screen time" in rural youth has been shown to be higher than their non-rural counterparts.<sup>4</sup>

Helping children develop healthy habits and providing healthy eating and activity supports to balance their energy intake with energy expenditure is an important aspect to maintaining healthy weight, preventing overweight and obesity, and minimizing chronic disease risk.

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<http://public.health.oregon.gov/BirthDeathCertificates/Surveys/OregonHealthyTeens/results/2007/county/Documents/klamathlake11.pdf>

<sup>4</sup> <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3111847/>

Because obesity prevention among rural populations requires an understanding of the supports and barriers to healthy eating and active living within and among rural communities, we are pleased to provide this report of resources and readiness to prevent childhood obesity for the community Chiloquin.

## **Methods and Preliminary Results**

A HEAL MAPPS™ team (n=9) comprised of Chiloquin community members with an interest in creating a healthier community volunteered and were first trained to individually photograph and map the Chiloquin community features that they perceived as either supports or barriers to eating healthy and being physically active most every day. Collectively, over 167 photographs were taken and mapped along 12 routes that represented the community's active (i.e. walking, bicycling, skateboarding, etc.) and motor vehicle transportation system. The 'mappers' covered approximately 90% of the land area included within the 4 square miles of the city of Chiloquin and included features in the surrounding unincorporated areas (see Figure 1).<sup>5</sup> The HEAL MAPPS™ team reconvened to discuss the photographs and maps during a focus group meeting. The most relevant 35 photographs, based on group consensus, were included in a presentation to provoke a larger community conversation. Over 30 Chiloquin residents and stakeholders attended and participated in a community dinner and discussion held at the Chiloquin Community Center on March 12, 2013. The community conversation was facilitated by a member of the GROW HKC team trained to conduct HEAL MAPPS™ processes. Following the community dinner, photographs were displayed, participants were polled as to whether the feature made eating healthy or being physically active easier or harder for themselves or others in the community, and discussed their thoughts and feelings that led to their ratings.

## **Community Readiness**

Communities differ in many ways including their readiness to take action on an issue and implement relevant programs. The level of community readiness is a major factor in determining whether a particular program can be effectively implemented and supported by a community. Assessing the level of readiness for obesity prevention efforts is thereby a critical component of obesity prevention program planning and evaluation.

The Community Readiness Assessment Model is a tool we used to gain an understanding of Chiloquin community's resources and readiness for obesity prevention efforts. The assessment is divided into six dimensions that influence a community's readiness to take action on an issue. The six dimensions are: community knowledge about the issue; community efforts; community knowledge of the efforts; local leadership; community climate; and local resources related to

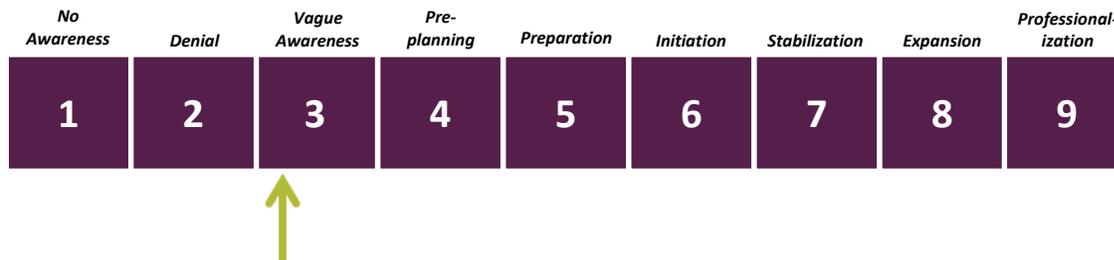
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<sup>5</sup> The 'mappers' individually determined the community boundaries as within the city and unincorporated land approximately served by the Klamath County school district.

the issue. Questions representing each dimension were asked during the Chiloquin Community Conversation and the participants shared their perception of Chiloquin’s readiness and preparedness for change. Each dimension was then scored by two independent evaluators and combined to identify the overall stage of readiness.

Local efforts in Chiloquin to increase supports for healthy eating include recent improvements in the school food environment. Several Chiloquin community organizations, such as the elementary school, Klamath tribes and Chiloquin Visions in Progress (CVIP) emerged as supports for promoting healthy eating and physical activity among local youth. These organizations contributed positively to the readiness score of the community. Some barriers perceived by residents to healthy eating and physical activity include a lack of bike lanes and crosswalks, few indoor recreation opportunities, limited access to affordable fresh fruits and vegetables and a lack of access to public/wild land to hunt and forage for native and traditional food. Participants cited the local issue of water rights as a significant barrier to healthy eating. Without access to specific quantities of water farmers, ranchers and individuals can’t produce locally grown food and tribal members are unable to harvest plants, wildlife and fish species which they reserved the right to harvest in the Treaty of 1864. Overall, responses at the Community Conversation suggest that community members are only vaguely aware of the link between the community *built* environment and obesity. The conversation was at times more focused on how environmental factors such as pollutants, toxins and GMOs contaminate food resources and cause health problems, such as obesity and heart disease. All of these factors indicate that Chiloquin’s stage of readiness to implement environmental and policy strategies to prevent obesity falls on the lower end of stage 3 as indicated by the arrow on the Stages of Readiness graph.

### Stages of Community Readiness



Based on the Community Readiness Assessment Model, community efforts should focus on:

- 1) Raising awareness that the community can do something about the problem.

2) Providing suggestions on where and how efforts should be focused based on resident input and identified barriers.

- Present information at local community events and to unrelated groups
- Launch a media campaign - post flyers, posters, and billboards.
- Begin to initiate events and present information on the issue.
- Gather more information from other community people, publish newspaper articles and editorials with general information related to local situation.
- **Build and communicate Chiloquin's capacity to change – *Our Community can GROW Healthy Kids.***

For more information about the Community Readiness Model, stages of community readiness, and stage-based strategies to increase community readiness to address health issues visit: <http://www.colostate.edu/Dept/TEC/article3.htm>.

## **Summary of Results based on the Chiloquin Community Conversation**

### ***Physical Activity***

#### Supports

- School recreation programs/initiatives include youth sports, gym facility, sports fields and track.
- Active leisure supports include activities taught at the community center, such as yoga and dance.

#### Barriers

- Crime issues and community aesthetics, such as garbage and vandalism, discourage residents from participating in physical activity in city parks and discourage business development.
- Public parks and playgrounds are not well maintained, “the playground equipment is scary for me to put my little kids on.”
- Barriers to active leisure include few indoor recreation opportunities.
- Lack of bike lanes and crosswalks.

### ***Healthy Eating***

#### Supports

- Food assistance programs include the food pantry, food stamps and local church donations.
- Recent improvements in school food environment, such as incorporating more vegetables into school lunches.

#### Barriers

- Limited access to affordable fresh fruits and vegetables, “Fresh fruits and veggies are almost impossible to get. When you do see them they are poor quality, and almost 3 times as much as you pay at the market.”
- Lack of access to public/wild land to hunt and forage for native and traditional food.
- Issues with water rights are perceived as barriers to the availability and accessibility of native, and locally grown food.
- Lack of local food production, e.g. lack of a community garden or farmers market.
- Residents consider toxins, pollutants, and GMOs to be barriers to eating healthfully.

- Crime and perceived lack of interest from residents deter business owners from opening businesses, such as grocery stores and restaurant that could potentially support healthy eating behaviors for residents.

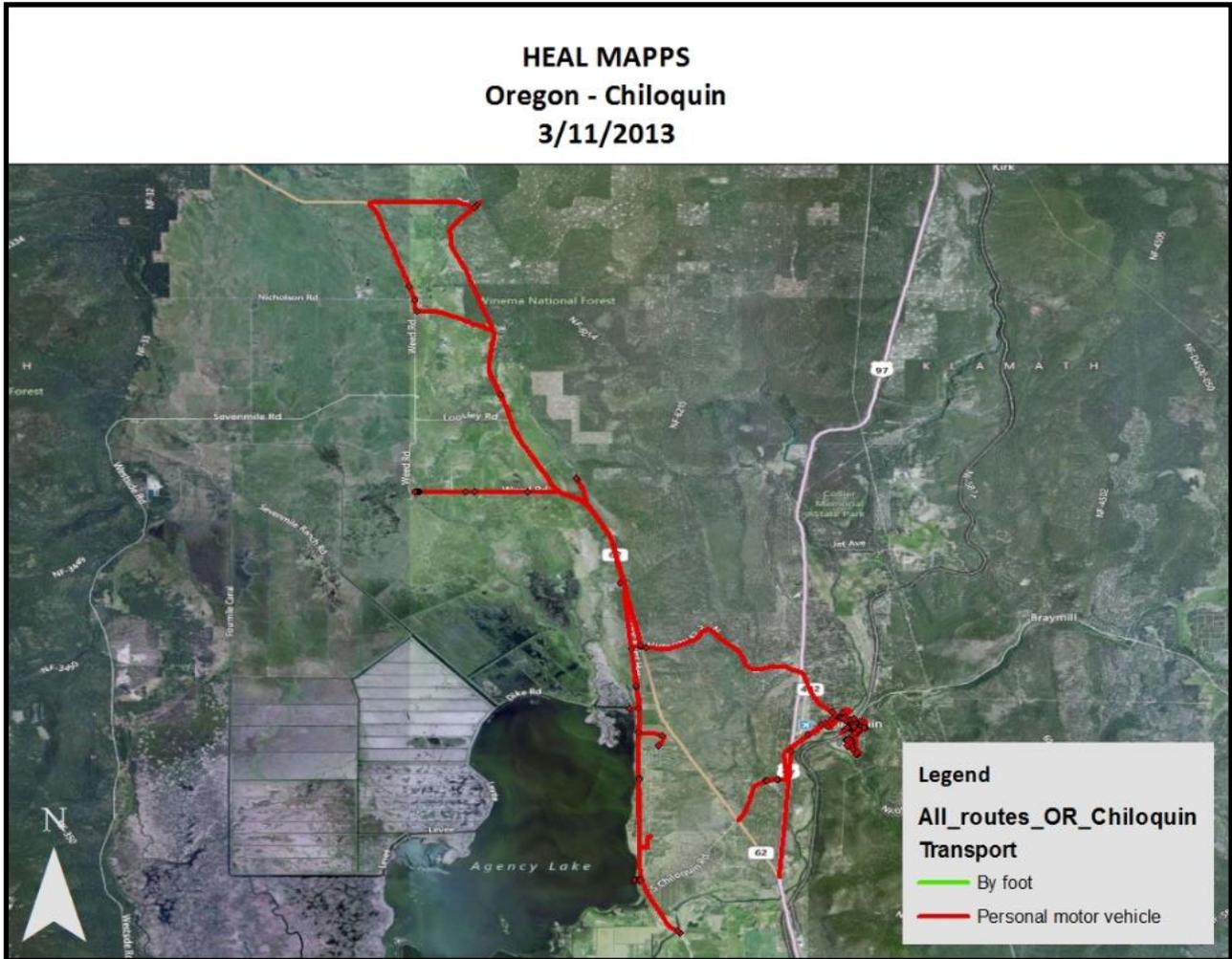
### **Resident-Informed Recommendations for Community Change**

The following recommendations emerged from the data generated during the Chiloquin community conversation and represent those of the Chiloquin community members who shared their ideas during the facilitated discussion of the photographed community features. These recommendations do not represent those of the GROW Healthy Kids and Communities project members or Oregon State University.

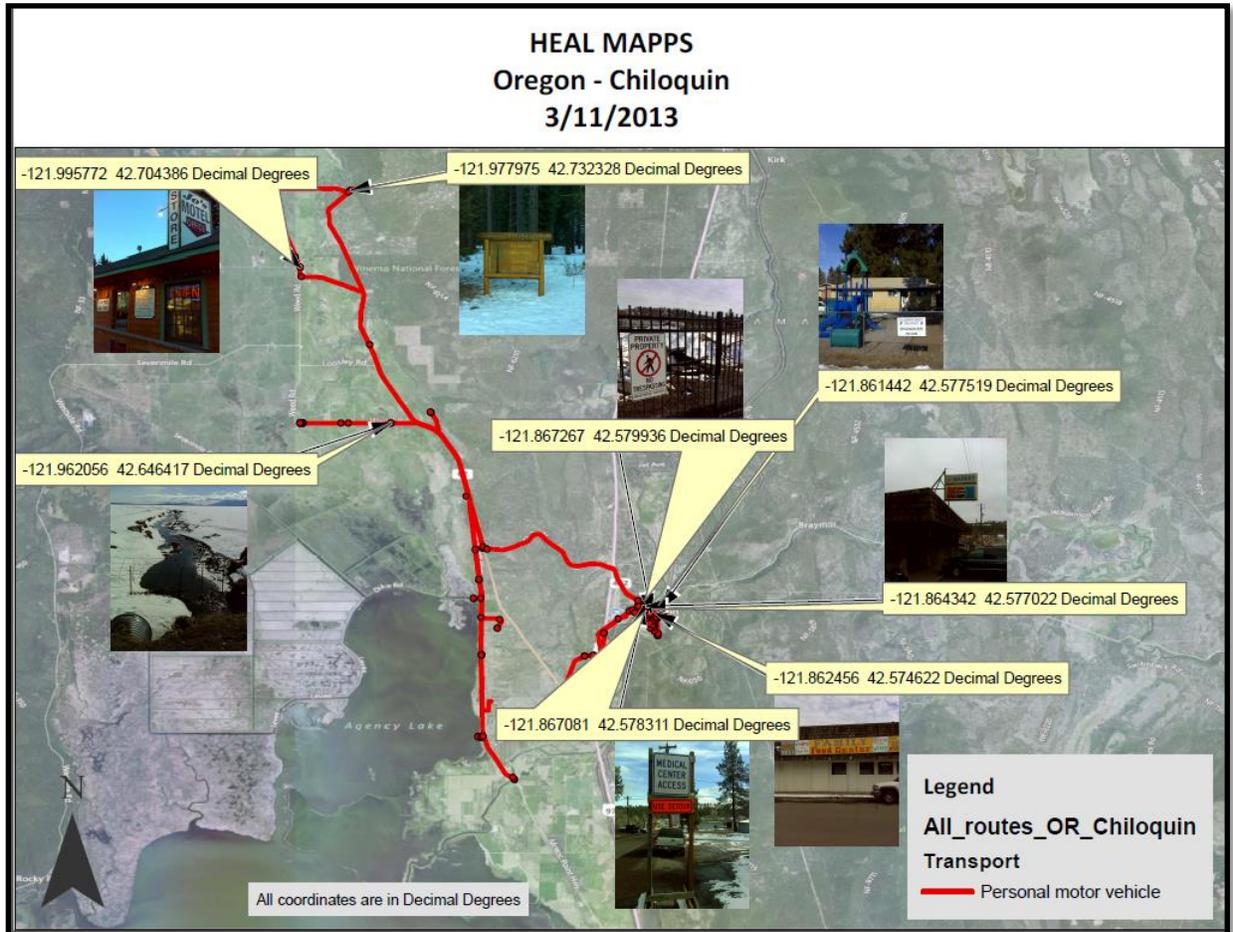
- Incorporate trails and paths in the community and in community parks.
- Create a shuttle service or public transportation to transport residents from Chiloquin to other communities for grocery shopping or medical visits.
- Coop with a grocery store in another community or regional farmers to transport produce to Chiloquin.
- Grow local and indigenous foods and create a farmers market to sell locally produced food.
- Educate students and community members about nutrition and healthy eating through activities like cooking classes.

Figures 1 through 3 represent the routes navigated by local residents as they mapped the physical features of the Chiloquin community using participatory photographic survey methods. Include one route from each different mode of transportation the mappers used.

Figure 1. Represents all routes generated by the Chiloquin community mappers.



**Figure 2.** Represents an example of a route generated while using a personal motorized vehicle. All photograph location coordinates are in decimal degrees.



**Figure 3.** Represents a walking route and the features encountered along the route that enable or hinder healthy eating and/or physical activity.

