This report was generated by Lizann Powers-Hammond¹, Shirley Calodich¹, Deborah John, PhD², and Kathy Gunter, PhD², in partnership with Generating Rural Options for Weight Healthy Kids and Communities (GROW HKC) using data collected during the HEAL MAPPS™ processes and provided to the Connell Community to support the community’s initiative to prevent childhood obesity.

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Connell is a rural city located in Franklin County, Washington. The city is situated in North Franklin County. The population, based on the 2010 census, is 4,209. Connell has grown 28% in the last ten years largely attributed to the opening of the medium-security facility at Coyote Ridge Correctional Facility which opened in 1992. In addition to the correctional facility, the industrial base is agricultural including food processing and agricultural chemicals.

Connell is home to the North Franklin School District administrative offices, and is served by one high school, one middle school and one elementary school. The community has many well maintained parks including a city pool and water park. City athletic fields range from general purpose open space, to soccer and baseball fields.

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 Connell 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.
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 Connell Community

According to the US Census Bureau, in 2010, the percentage of families in Connell with children under the age of 18 was 50.5%. The racial makeup of the city was 73.4% White, 6.4% African American, 1.9% Native American, 2.7% Asian, 0.4% Pacific Islander, 12.2% from other races, and 3.0% from two or more races. Hispanic or Latino of any race was 39.3% of the population. According to the 2000 census, the median household income is $33,992 with a poverty rate of 19.5%. In 2012, 71.7% of Connell elementary aged children, 68.9% of middle school aged children and 62.2% of high school youth qualified for free and reduced lunch.

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. 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 of Connell.

Methods and Preliminary Results

A HEAL MAPPS™ team (n=6) comprised of Connell community members with an interest in creating a healthier community volunteered and were first trained to individually photograph and map the Connell community features that they perceived as either supports or barriers to eating healthy and being physically active most every day. Collectively, over 169 photographs were taken and mapped along fourteen routes that represented the community’s active (i.e. walking, bicycling, skateboarding, etc.) and motor vehicle transportation system. The ‘mappers’ covered the area including the 7.9 square miles of the city of Connell and included features in the surrounding unincorporated areas (see Figure 1). The HEAL MAPPS™ team reconvened to discuss the photographs and maps during a focus group meeting. The most relevant 47 photographs, based on group consensus, were included in a presentation to provoke a larger community conversation. Over 15 Connell residents and stakeholders attended and participated in a community dinner and discussion held at the Connell Community Center on Wednesday, October 9, 2013. The community conversation was facilitated by a member of the GROW

1 The ‘mappers’ individually determined the community boundaries as within the city and unincorporated land approximately served by the North Franklin school district.
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 Model (CRM) is a tool we used to gain an understanding of the Connell community’s resources and readiness for obesity prevention efforts. The model is comprised of 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 the issue. Community readiness is issue specific, can vary across dimensions and community sectors. During the Connell Community Conversation, an Extension educator posed questions related to each of the dimensions and prompted discussion around Connell’s resources as supports or barriers to weight healthy behaviors. The entire conversation narrative was scribed verbatim and coded for themes by independent evaluators. The data related to each dimension was then scored by a researcher trained to utilize the CRM and combined to identify the overall stage of readiness.

### Stages of Community Readiness

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No Awareness</td>
</tr>
<tr>
<td>2</td>
<td>Denial</td>
</tr>
<tr>
<td>3</td>
<td>Vague Awareness</td>
</tr>
<tr>
<td>4</td>
<td>Pre-planning</td>
</tr>
<tr>
<td>5</td>
<td>Preparation</td>
</tr>
<tr>
<td>6</td>
<td>Initiation</td>
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<tr>
<td>7</td>
<td>Stabilization</td>
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<tr>
<td>8</td>
<td>Expansion</td>
</tr>
<tr>
<td>9</td>
<td>Professionalization</td>
</tr>
</tbody>
</table>

Connell stage of readiness to implement environmental and policy strategies to prevent obesity emerged around stage 3 (vague awareness) as indicated by the arrow on the Stages of Readiness graph.

**Findings**

Several community organizations (and leaders) emerged as supports for healthy eating and physical activity, such as school administrators, churches, and local businesses (employers). Several Connell community efforts to improve the food and physical activity environment were noted: efforts by local businesses and employers to support employee wellness through wellness programs and initiatives, a
community garden, and construction of a new park and cross country track. These efforts and organizations contributed positively to the readiness score given to the community.

Perceived barriers to healthy eating and physical activity include unmaintained and disconnected sidewalks and limited availability and variety of affordable, healthy food/beverage options in Connell. Though efforts and resources exist in Connell, participants frequently mentioned the low participation and engagement of community members in these activities, services and efforts but were unsure of the reasons for this outcome. Rather than discussing the role of the community built environment in supporting or hindering healthy behavior, the conversation focused more on the need for community health education programs and the responsibility of individuals to seek information and resources for themselves to support personal behavior.

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

1) Raise awareness that the community can do something about the problem by launching a media campaign, i.e. post flyers, posters, and billboard to advertise current efforts.
2) Provide suggestions on where and how efforts should be focused based on resident input and identified barriers, specifically as it relates to accessing and utilizing community resources.
3) Work with the Washington GROW Healthy Kids and Communities HEAL MAPPS™ team and utilize Extension GROW HKC, HEAL MAPPS™ and other resources.
   a. Gather additional and ongoing input from others, including diverse groups of residents and community sectors;
   b. Publish newspaper articles and editorials with general information related to the local food and physical activity situation and context;
   c. Build and communicate Connell’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://triethniccenter.colostate.edu/communityReadiness.htm
Summary of Results – Community Physical Activity and Healthy Eating Resources and Community Efforts (Supports or Barriers) emerging from Connell Community Conversation

Physical Activity

Supports

- Outdoor trails and parks that are well maintained, including public parks and playgrounds and walking paths.
- Active recreation supports include sports fields, swimming pool, and free bowling.
- School policies allow facilities to be used by community members, including the new cross country track.
- Some recreational programs offered through the Parks and Recreation department.

Barriers

- Barriers to walkability include a lack of sidewalks and railroad/rail lines divide the town and block intersections.
- Lack of available and accessible (across demographic groups) recreational programs and facilities; affordability of existing programs/facilities – fee structure hinders accessibility for some community members.

Healthy Eating

Supports

- Local food resource center bridging local food production with distribution including the farmers market, community garden, and vegetable swap.
- Food retailers include grocery stores and restaurants.

Barriers

- Limited availability and variety of affordable, healthy food/beverage options in Connell.

Resident-Informed Recommendations for Community Change

The following recommendations emerged from the data generated during the Connell community conversation and represent those of the Connell 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.

- Offer educational resources to community members, such as nutrition and diabetes classes.
- Improve walkability by creating a pedestrian overpass and improving existing walkways and paths.
- Extend pool hours and class offerings to include options for adults and weekend swim.
Figures 1 through 5 represent the routes navigated by local residents as they mapped the physical features of the Connell community using participatory photographic survey methods.

Figure 1. Represents all routes generated by the Connell 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.
Figure 4. Represents a public transportation route.
Route 5. Represents a route with an unidentified mode of transportation.