Building a Culture of Health: Charting a Course for a Sustainable Food System

2018 Klamath and Lake Counties Community Food Assessment
The Assessment Team

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# Table of Contents

The Assessment Team  
Acknowledgements  
Table of Contents  
Foreword  

Chapter 1: Introduction .......................................................................................................................... 7  
• Executive Summary........................................................................................................................... 7  
• What is a Community Food Assessment? ...................................................................................... 10  
• Importance of Local Data .............................................................................................................. 10  

Chapter 2: Community Health ........................................................................................................... 13  
• Social Determinants: Food, Economics, and Health  
  o Chronic Disease ......................................................................................................................... 13  
  o Food Security ............................................................................................................................. 15  
  o Socio-Economics ...................................................................................................................... 18  
  o Summary: County-Level Statistics ......................................................................................... 20  
• Local Data: Food and Health  
  o Community Health Assessment ............................................................................................. 20  
  o Socioeconomics and Vulnerable Populations ........................................................................ 21  
  o Food Access ............................................................................................................................. 21  
  o Summary: Local Survey Data .................................................................................................. 25  
  o Spotlight: Child Hunger Coalition ........................................................................................... 26  
  o Spotlight: Klamath-Lake Counties Food Bank “Produce Connection” .................................... 27  
  o Spotlight: Sky Lakes LiveYoung Wellness Center ................................................................. 28  
  o Summary: Programmatic Progress ......................................................................................... 29  

Chapter 3: Community Food Education Efforts  
• Local Data: Community Food Education  
  o Cooking, Nutrition, and Gardening ......................................................................................... 30  
  o Summary: Local Survey Data .................................................................................................. 33  
  o Gardening Education ................................................................................................................. 33  
  o Spotlight: Good Food Good Medicine .................................................................................... 36  
  o Spotlight: Cafeteria Role Model Program ............................................................................... 37  
  o Summary: Programmatic Progress ......................................................................................... 39  

Chapter 4: Food Supply, Quality, and Access  
• Food Assistance and Emergency Food  
  o Supplemental Nutrition Assistance Program ......................................................................... 40  
  o Women, Infants, and Children .................................................................................................. 41  
  o School Lunch ............................................................................................................................ 42  
  o Summary: County-Level Statistics ......................................................................................... 43  
• Local Data: Where do we get our food?  
  o Buying Local .......................................................................................................................... 44  
  o Food Assistance ....................................................................................................................... 45  
  o Farmers and Ranchers .............................................................................................................. 50  
  o Grocery Stores ......................................................................................................................... 51  
  o Farmers’ Markets ...................................................................................................................... 51
Summary: Local Survey Data ..................................................................................................................52
Spotlight: Sweet Union Farm ..................................................................................................................52
Spotlight: Flying T Ranch .......................................................................................................................53
Spotlight: Klamath Farmer’s Online Marketplace ..................................................................................54
Summary: Programmatic Progress ..........................................................................................................55
Methodology ............................................................................................................................................56
Works Cited ...............................................................................................................................................57
Appendix
- Community Food and Pantry Survey (English and Spanish)
- Community Meal Site Manager Survey
- Pantry Site Manager Survey
- Farmer and Rancher Survey
Foreword

For more than 35 years, the Klamath-Lake Counties Food Bank has served individuals and families across two counties who are in need of emergency food assistance. In the past year, over 18,000 people were fed a total of 2,000,000 pounds of food. People come to the Food Bank for a variety of reasons; living on low fixed incomes, people with disabilities sometimes making less than $1,000 per month, those who have suffered injury, job loss, or other life changing crises. We also serve individuals who are working low paying jobs, transitioning from welfare to work, in job training, or going back to school. It is a humbling experience to ask for help, and it takes a community to address everyone’s needs.

This food assessment is a follow up from the 2011 Klamath and Lake Counties Food Assessment, which presented local research on emergency food, food access, food and nutrition education, and economic opportunities in our food system. While some things have stayed the same, including high food insecurity and an equally high number of amazing volunteers distributing food, other changes have occurred. New initiatives have brought together food security and health in ways that have benefited many, and in some cases reduced the need for emergency food.

This assessment is meant to be used as a demonstration of these efforts. Programs like our “Produce Connection,” Klamath Farmer’s Online Marketplace, and the Park and Play summer lunch program are proving their value to the community. Future endeavors like processing plants or food hubs are on the horizon, boosting the economy. In this community, we are tackling food insecurity and nutrition in tandem, a combination that can significantly impact the cost of healthcare.

It is our hope that this research will help to expand the capacity of successful programs, inform a long-term approach to an equitable food system, and improve our overall well being.

Niki Sampson
Executive Director
Klamath and Lake Counties Food Bank
Chapter 1: Introduction

Executive Summary

About this assessment:

Purpose
The purpose of this Community Food Assessment is to identify the current state of food security, nutrition, health, and economic opportunities related to our local food system. It is designed to be a data resource for individuals, organizations, and local governments seeking to build the capacity of current projects and resource future initiatives that could have far reaching benefits to the community.

This assessment is made possible by the Oregon Food Bank, and uses similar methodologies as the 2011 Klamath and Lake Counties Food Assessment. This assessment takes a focused approach on current food initiatives in the Klamath Basin, incorporates data from the 2016 Lake County Food Assessment, “Tough Like Alfalfa,” and benefits from the collaboration of local college students and faculty to collect and analyze survey data. This assessment also addresses the current state of the counties’ progress on goals laid out in the 2011 Klamath and Lake Counties Food Assessment.

Scope
From June 2018 to September 2018, surveys were developed and disseminated to community members, community meal site managers, pantry site managers, farmers and ranchers, and local stores. Additionally, in depth interviews were undertaken with several key informants representing agencies active in food systems projects. Data was analyzed in October of 2018 and incorporated into this final report.

Key Players
This is a collaborative project between the Oregon Food Bank, Klamath and Lake Counties Food Bank, Klamath County Food Policy Council, Blue Zones Project, Oregon Tech, and Oregon Health and Sciences University.

Guiding Questions:
Since the last community food assessment in 2011, what progress has been made toward the current state of food access, community health, and economic development in Klamath and Lake Counties? What current challenges exist, and what are the successful interventions?

The 2011 Klamath and Lake Counties Food Assessment outlined three main recommendations for the future:

- Expanded, more accessible and affordable year-round local food resources, including gardens, farm stands, and markets, emergency resources, and retail options.
- Increased education and skills around growing, cooking, gardening, nutrition, and shopping for all sectors of the community.
- Strengthened community and regional networking, marketing, and infrastructural development.

**Results of this assessment demonstrates progress in those areas, including:**

- More options for farmers to sell their products locally, as well as funding for additional assessment research in preparation for expanding local food markets
- Continuation of existing food education programs, as well as successful new food education programs which target children
- New structures for community collaboration and networking, and mechanisms to improve communication among agencies

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Expanded, more accessible and affordable year-round local food resources</strong></td>
<td>Blue Zones Project’s “Klamath Farmer’s Online Marketplace”</td>
</tr>
<tr>
<td></td>
<td>Klamath-Lake Counties Food Bank’s “Produce Connection”</td>
</tr>
<tr>
<td></td>
<td>YMCA’s “Park and Play”</td>
</tr>
<tr>
<td><strong>Increased education and skills around growing, cooking, gardening, nutrition, and shopping</strong></td>
<td>Klamath Tribal Health and Family’s “Good Food Good Medicine”</td>
</tr>
<tr>
<td></td>
<td>OSU’s “Library Series”</td>
</tr>
<tr>
<td></td>
<td>Sky Lakes Wellness Center and Klamath Works’ “Shopping with SNAP”</td>
</tr>
</tbody>
</table>
| **Strengthened community and regional networking, marketing, and infrastructure** | Child Hunger Coalition
|                                                             | Food Policy Council                                                                             |
|                                                             | Healthy Klamath                                                                                  |
|                                                             | Blue Zones Project                                                                              |
This assessment provides local data to demonstrating this progress, including presenting successful interventions that have addressed challenges outlined in the current and previous assessment, and may be used to plan next steps in addressing existing challenges and expanding successful programs.

**Research from this assessment has led to seven key goals:**

1. Expand programs geographically and increase number served
2. Increase marketing and promotion of programs to potential clients
3. Secure funding for dedicated, paid staff time for program management
4. Recruit more volunteers (i.e. working professionals, students, clients)
5. Consider co-location of programs (i.e. gardens at school, education at food pantries)
6. Research links between food, chronic disease and costs of care; expand partnerships with healthcare and coordinated care organizations
7. Evaluate efforts to reduce cost of living (i.e. energy efficiency)

**Next Steps**

*Plans are underway for a Food Hub Feasibility Study in Klamath County which will help determine the most economically viable option to increase the capacity of local food production and distribution.*

*Sky Lakes Medical Center and partners are applying for a Community Food Project grant.*

*In Lake County, the Community Health Improvement Program is incorporating findings from their 2016 assessment into their 2016-2019 strategic plan.*

![Image of child eating a tomato]
What is a Community Food Assessment?

Assessments of any kind focus on collecting and analyzing data specific to an area in order to learn more about a given issue or aspect of the community. Assessments involve gathering information from a variety of sources using different research methods, such as surveying, conducting focus groups, interviewing individuals, or mapping out resources. Community-level assessments are conducted in many sectors, including healthcare, education, and public health. These assessments can help to define a problem, develop solutions, and evaluate the results of programs designed to tackle a community need.

Community food assessments are done in a collaborative process in which data is collected on issues specific to a community’s food system. This can include areas such as food production, processing, distribution, consumption, and waste. Community food assessments can employ many different methods, and they are a combination of “primary” data, that is, collected by the assessment team in a local area, and “secondary” data, which has already been collected by entities such as the U.S. Census Bureau and the Center for Disease Control.

Communities choose to do food assessments for a variety of reasons, but most communities do so in order to guide important next steps that can be taken to improve the state of the local food system and wellbeing of individuals. Food assessments can play a critical role in competing for state and federal funds for food projects, and can lay the groundwork for evaluating the successes of community-driven efforts to boost food access, education, and industries that impact community resiliency.

Many community food assessments rely on an informal process, taking a grassroots approach to identify community leaders and ways to organize as a group. It can facilitate more connections among people and programs who have a common goal of improving the community food system. A community food system includes everything needed to make food available to people. Food assessments also tackle community food security and resilience. Community food security is “a condition in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance” (Hamm & Bellows, 2003). Resiliency refers to a community’s ability to persevere in the face of economic, social, and environmental changes. This assessment addresses some of the key issues that face Klamath and Lake Counties, and is designed to provide the building blocks of expanding the capacity of programs that are intended to improve community food security, resiliency, and health.

Importance of Local Data

The term “data” is used to describe pieces of information or facts that can be used as a reference, or that can be analyzed to understand a given topic. With respect to food systems and health, data is collected at county, state, and national levels, and that data can be accessed by anyone at a computer. These large datasets are useful as they span a large portion of a population and have already been analyzed to be relied on as a reference. For example, an estimated 308.7 million people were counted in the U.S. Census in 2010 (U.S. Census Bureau 2010). These datasets cover a wide range of topics, including aspects of the food system such as food deserts and farmland. This assessment draws on data from these national, as well as state and county-level sources.
The drawbacks of relying on large, secondary data sources are that it may not capture the full picture of what’s going on in a specific city, neighborhood, or rural region. The use of local data, in the form of surveys, interviews, or focus groups, for example, can enable an assessment team to ask any question of interest to the community, target specific segments of the community, gather feedback on specific programs, and include qualitative data from current residents. Local data in the form of surveys is often difficult to gather and time-consuming. This assessment draws on data collected over a three-month period using multiple survey instruments, thanks to a collaborative team that included students from Oregon Tech’s Population Health Management Program, Oregon Health and Science University’s Rural Campus, and community volunteers. These provide data that can be used in grant proposals and other formats to grow promising programs that strengthen our local community.

Assessments in Klamath and Lake Counties

Since 2009, there have been 14 community food assessments done in 23 of 36 counties in Oregon. Many of these assessments were conducted by AmeriCorp members as part of a partnership between the Oregon Food Bank and AmeriCorp’s Resource Assistance for Rural Environments (RARE) program.

In 2011, a Community Food Assessment for Klamath and Lake Counties was conducted by a RARE member, in a process that lasted from September 2010 to July 2011. The 2011 Klamath and Lake Counties Food Assessment covered topics of food access, community health, and local food.

In Lake County, in 2013, the Lake Health District’s Community Health Improvement Program (CHIP) found in their Community Health Assessment that healthy food and nutrition were a key healthy priority for Lake County. After a FEAST (Food, Education, Agriculture Solutions Together), a Community Food Assessment was conducted by a RARE member from 2015-2016.

This assessment focuses on three areas:

- Community Health
- Community Food Education
- Food Access and Supply

This assessment has a theme of community health. Since 2011, both Klamath and Lake Counties have undertaken significant work in the realm of community health, through community health assessments, community health improvement plans, and community coalitions. Klamath Falls is now a Blue Zones Project site, part of a growing national community of pilot projects in community health improvement. Klamath County has risen from being the last ranked county in the state for health, and as of summer 2018, is among four finalists for the prestigious Robert Wood Johnson Culture of Health Prize. Community health is a priority to many key players in these counties, and this assessment investigates perspectives on food and health according to residents.

This assessment is meant for a broad audience that includes community members, local organizations, and external agencies. The goal of this assessment is to provide information which can be used to advance strategies that improve the local food system and our collective well being.
This assessment employs the following methods of data collection:

- Community Food Survey
- Pantry Survey
- Community Meal Site Survey
- Food Pantry Manager Survey
- Farmer/Rancher Survey
- In-depth Interviews
- Food-related Student Research Projects
- Input from Blue Zones Food Systems Committee and the Food Policy Council
- Secondary Data Sources

The methodology for this assessment is described in more detail at the end of this report.

To sum up…
Community Food Assessments are beneficial to the process of collectively working to improve a community food system. This assessment draws on multiple survey and interview methods to assess the state of Klamath and Lake Counties with respect to food access, food education, and the food economy. Both counties suffer from economic and health issues that are impacted by the quantity and quality of food available. The surveyed population, though not covering the entirety of Klamath and Lake County, is comparable and is large enough to be useful in informing strategy. The next chapter begins with a look at food access, the existing challenges, and opportunities for meeting this important need.
Chapter 2: Community Health

Social Determinants: Food, Economics and Health

Community health is more than just the prevalence of sickness and disease. We can assess the health of our community by researching prevalence of illness, but to understand the root causes of poor health outcomes, we must look at the bigger picture.

Social and economic problems such as unemployment, low income, housing, and access to healthy food contribute to illness and disease in communities. Food access and nutrition is linked with chronic disease, which can be costly to health systems and individuals. Our neighborhoods, industries, homes, food sources, transportation systems, and job markets can play a major role in our health. Vulnerable populations such as children, seniors, people with disabilities, or socially or geographically isolated people are particularly at risk for food insecurity, poor nutrition, and chronic illnesses over the life course. These health factors are known as the social determinants of health, and they account for 70% of the contribution to prematurely dying (Schroeder 2007).

Food Insecurity, or, “the state of being without reliable access to a sufficient quantity of affordable, nutritious food,” is enormously influential to health, and healthcare costs. When individuals lack access to food, they may eat low cost foods, binge when food is available, or eat highly filling foods, all of which can increase risk of chronic illnesses and impact ability to manage health. A study conducted by “Children’s HealthWatch,” and sponsored by the Greater Boston Food Bank, found that food insecurity was linked to health issues that had a high cost impact, accounting for $160 billion. Hunger influences hospital visits for low blood sugar, and studies show that admissions for low blood sugar increase by 27% in the last week of the month for low-income patients (Seligman HK et al 2014). While the cost of feeding a family of four per month amounts to $657, a single inpatient admission is on average $17,564. More recent research has confirmed that food insecurity is associated with higher healthcare expenditures, greater emergency department visits and inpatient admissions, as well as the length of hospital stays (Berkowitz, Seligman, Meigs, & Basu 2018). The following sections outline statistics in the health of Klamath and Lake Counties, as well as socioeconomics and food insecurity.

Chronic Disease

For adults in Klamath and Lake Counties, chronic disease rates are decreasing overall, but obesity remains a top concern (Table 1). Over time, obesity can contribute greatly to risk of other chronic diseases.
### Table 1: Chronic Disease Rates

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Obesity</td>
<td>28.7%</td>
<td>27.8%</td>
<td>36.2%</td>
<td>29.2%</td>
<td>26.0%</td>
<td>27.3%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>10.6%</td>
<td>11.5%</td>
<td>9.7%</td>
<td>14.1%</td>
<td>9.0%</td>
<td>9.8%</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>38.1%</td>
<td>40.4%</td>
<td>37.7%</td>
<td>32.7%</td>
<td>29.9%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Cardiovascular Disease</td>
<td>9.2%</td>
<td>12.4%</td>
<td>5.7%</td>
<td>13.5%</td>
<td>7.9%</td>
<td>8.4%</td>
</tr>
</tbody>
</table>


### Chronic Disease and Food

The impact of food on chronic disease occurs over the life course, and food choices early on can affect individuals’ risk and progression of diseases. Data shows that for high school students, an increasing number do not eat five or more servings of fruits and veggies per day, however teen soda drinking has decreased, and in the junior high population, more students are eating their fruits and veggies (Table 2). Locally, programs have started to target younger ages to attempt to influence food choices as kids get older.

### Table 2: Teen Health Behaviors

<table>
<thead>
<tr>
<th></th>
<th>Grade 8 2013</th>
<th>Grade 9 2015</th>
<th>Grade 8 2017</th>
<th>Grade 9 2017</th>
<th>Grade 11 2013</th>
<th>Grade 11 2015</th>
<th>Grade 11 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drink soda $\geq 1x$ per day</td>
<td>14.4</td>
<td>12.1</td>
<td>10.4</td>
<td>14.5</td>
<td>18.1</td>
<td>14.3</td>
<td></td>
</tr>
<tr>
<td>Drink soda $\geq 4x$ per day</td>
<td>2</td>
<td>1.7</td>
<td>1.4</td>
<td>2.9</td>
<td>5.3</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>$\geq 5$ servings fruits and vegetables</td>
<td>29</td>
<td>20.8</td>
<td>25.3</td>
<td>23</td>
<td>18.1</td>
<td>15.2</td>
<td></td>
</tr>
</tbody>
</table>

For health professionals, food insecurity in a patient population is a critical issue and access to food may impact patient’s ability to attend appointments, engage in other disease management activities, and cope with illness and trauma. Residents at Cascades East Family Medicine clinic in Klamath Falls studied food insecurity in patients in 2018. They found that 30% of their patients did not know...
where their next meal would come from, or had recently run out of food. Factors in food security included having an income that was “too high to qualify for federal benefits and too low to buy healthy food,” which is supported by data from the Oregon Center for Public Policy (Figure 1).

Food insecurity is linked to increased likelihood of getting a chronic disease later in life. Food insecurity in adults and children are important to understand, and successful strategies to reduce food insecurity should be promoted to increase participation and community engagement. In Klamath and Lake Counties, chronic disease is prevalent and rates are increasing. Obesity, diabetes, high blood pressure, and cardiovascular disease are all complex illnesses that can seriously impair quality of life in the long term (Peeters, et al. 2003). These chronic conditions also respond to better nutrition, stress reduction, mindfulness, and physical activity which can extend both life and quality of life for individuals.

Food Security and Food Access

Social determinants of health such as income and poverty play a major role in access to healthy food. Unfortunately, both access to food and access to healthy food are critical issues in Klamath and Lake Counties.

To be food insecure, is to not have a reliable source of food and to experience not knowing where your next meal is coming from. There are many factors in food insecurity. At the community-level, availability of food, cost of food, and governmental assistance can play a part. In both urban and rural areas, food deserts can exist, where there is no grocery store within a mile (for rural) or less than a mile (non-rural).

Klamath and Lake Counties have higher rates of food insecurity compared to the rest of the state. There is also greater awareness of government assistance (Table 3).
Table 3: 2016 Overall Food Insecurity

<table>
<thead>
<tr>
<th></th>
<th>Don't know where next meal is coming from</th>
<th>Can get government help with food</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klamath</td>
<td>14.9%</td>
<td>85%</td>
</tr>
<tr>
<td>Lake</td>
<td>15.4%</td>
<td>93%</td>
</tr>
<tr>
<td>Oregon</td>
<td>12.9%</td>
<td>70.4%</td>
</tr>
</tbody>
</table>

feedingamerica.org

Klamath and Lake Counties have seen decreases in food insecurity rates in recent years, despite increases in the cost of meals (Table 4).

Table 4: Food insecurity

<table>
<thead>
<tr>
<th></th>
<th>Food insecurity rate</th>
<th>Number of food insecure individuals</th>
<th>Average cost of a meal</th>
<th>Individuals below the poverty line</th>
<th>Unemployment rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klamath</td>
<td>21.1% 14.9%</td>
<td>13,330 9,800</td>
<td>$2.57 $3.10</td>
<td>20.2% 19.0%</td>
<td>11.6 6.7</td>
</tr>
<tr>
<td>Lake</td>
<td>19.3% 15.4%</td>
<td>1,380 1,200</td>
<td>$2.82 $3.08</td>
<td>18.5% 15.0%</td>
<td>12.2 6</td>
</tr>
<tr>
<td>Oregon</td>
<td>18.8% 12.9%</td>
<td>626,420 527,370</td>
<td>$2.60 $2.93</td>
<td>14.3% 13.0%</td>
<td>9.5 5</td>
</tr>
</tbody>
</table>


For Klamath and Lake Counties, limited access to food is leveling out but has increased over the years, and is still well above Oregon- a state that ranks among the bottom 15 states in the nation for food insecurity (Figure 2).

Figure 2: Access to Food
Food Insecure Children

1 in 4 children in Klamath County go hungry or don't have enough food or healthy food all the time — this is referred to as “childhood food insecurity.” This happens when families live too far from grocery stores or don't have money to buy enough food. Rates of food insecurity in Klamath and Lake Counties are high and exceed both state and national rates, though are slowly decreasing. As of 2016, the rate of child food insecurity in Klamath County was 23.7%, in Lake County it was 22.5% and in Oregon it was 20%. Children who don't eat enough have poorer growth, a harder time in school, and get sick more often now and later in life. Interventions that address both food insecurity and nutrition are a promising practice to address this issue.

Access to Healthy Food

Vulnerable populations such as individuals who live in rural areas have less access to healthy foods. The Robert Wood Johnson Foundation’s program on County Health Rankings defines limited access to healthy foods as “the percentage of the population that is low income and does not live close to a grocery store. Living close to a grocery store is defined differently in rural and non-rural areas; in rural areas, it means living less than ten miles from a grocery store; in non-rural areas, less than one mile. ‘Low income’ is defined as having an annual family income of less than or equal to 200 percent of the federal poverty threshold for the family size” (Table 5).
### Table 5: Limited Access to Healthy Foods

<table>
<thead>
<tr>
<th>County/Statewide</th>
<th>2006</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake</td>
<td>18%</td>
<td>22%</td>
<td>23%</td>
</tr>
<tr>
<td>Klamath</td>
<td>8%</td>
<td>13%</td>
<td>14%</td>
</tr>
<tr>
<td>Oregon</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Socio-Economics

Economically, unemployment in both Klamath and Lake Counties has gone down significantly since 2010, but the unemployment rates in both counties is still about 1.7 times that of Oregon (Table 6).

### Table 6: Unemployment Rate

<table>
<thead>
<tr>
<th>County</th>
<th>2010 Average</th>
<th>May 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klamath</td>
<td>13.0%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Lake</td>
<td>13.0%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Oregon</td>
<td>10.6%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

Bureau of Labor Statistics Local Area Unemployment Statistics Map

Despite the slow but significant recovery in the economy, poverty still plagues communities like Klamath and Lake County. Federal poverty levels have increased over the years (Table 7), but the amount of children in poverty has hardly declined (Table 8).

### Table 7: Federal Poverty Guidelines

<table>
<thead>
<tr>
<th>Size of family</th>
<th>100%</th>
<th>133%</th>
<th>185%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$10,890</td>
<td>$12,140</td>
<td>$14,483.70</td>
</tr>
<tr>
<td>2</td>
<td>$14,710</td>
<td>$16,460</td>
<td>$19,564.30</td>
</tr>
<tr>
<td>4</td>
<td>$22,350</td>
<td>$25,100</td>
<td>$29,725.50</td>
</tr>
</tbody>
</table>

Lake County has seen a slight decline in the number of children in poverty consistent with the state of Oregon, but Klamath is holding steady with an unfortunate child poverty rate of nearly 28%, a full 10% higher than the state (Table 8).

<table>
<thead>
<tr>
<th>Table 8: Children in Poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Klamath</td>
</tr>
<tr>
<td>Lake</td>
</tr>
<tr>
<td>Oregon</td>
</tr>
</tbody>
</table>


In addition to experiencing economic disadvantages, Klamath and Lake Counties are home to groups that are even more vulnerable to downturns in the economy as well as health, housing, transportation, and food access issues. The Native American and Hispanic populations are minority groups in Klamath and Lake Counties. While most segments of the populations in these communities have declined over the years, the Hispanic population is growing (Table 9).

<table>
<thead>
<tr>
<th>Table 9: Population Demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Klamath</td>
</tr>
<tr>
<td>Lake</td>
</tr>
</tbody>
</table>


Young parents, and single parents with small children can be at higher risk for economic instability that can affect health. The percent of families with single parents and children under 18 has dropped in both Klamath and Lake counties since 2011 (Table 10).
<table>
<thead>
<tr>
<th>Table 10: Teen and Single Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>2011</td>
</tr>
<tr>
<td>----------------------------------</td>
</tr>
<tr>
<td>Teen Birth Rate (Births per 1000 females, age 15-19)</td>
</tr>
<tr>
<td>----------------------------------</td>
</tr>
<tr>
<td>Klamath</td>
</tr>
<tr>
<td>Lake</td>
</tr>
<tr>
<td>Oregon</td>
</tr>
</tbody>
</table>

National Vital Statistics System (NVSS) at the National Center for Health Statistics, Centers for Disease Control and Prevention, US Census Bureau

Summary: County Health Statistics

<table>
<thead>
<tr>
<th>2011</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teen Birth Rates</td>
<td>Decreased</td>
</tr>
<tr>
<td>Children in Poverty</td>
<td>Decreased</td>
</tr>
<tr>
<td>Teen Soda Drinking</td>
<td>Decreased</td>
</tr>
<tr>
<td>High School &lt;5 Veggies/Day</td>
<td>Increased</td>
</tr>
<tr>
<td>Junior High &lt;5 Veggies/Day</td>
<td>Decreased</td>
</tr>
<tr>
<td>Limited Access to Healthy Food</td>
<td>Increased</td>
</tr>
<tr>
<td>Adult Obesity</td>
<td>Increased</td>
</tr>
<tr>
<td>Adult Diabetes</td>
<td>Decreased</td>
</tr>
<tr>
<td>Adult High Blood Pressure</td>
<td>Decreased</td>
</tr>
<tr>
<td>Adult Cardiovascular Disease</td>
<td>Decreased</td>
</tr>
<tr>
<td>Unemployment</td>
<td>Decreased</td>
</tr>
<tr>
<td>Hispanic Population</td>
<td>Increased</td>
</tr>
<tr>
<td>Tribal Population</td>
<td>Decreased</td>
</tr>
</tbody>
</table>

Local Data: Community Health Assessments

In addition to new initiatives that are building a foundation for better health outcomes in the future, local data is being gathered to assess the health of our community which includes the social determinants of health. This data shows that food insecurity may be impacting health, and that good food and nutrition is a value.

Locally, data has been collected in Klamath County in the 2018 Community Health Assessment. The assessment revealed that 1 in 5 residents rate their health as “fair” or “poor”. Of survey participants, 1 in 4 reported that they worry about running out of food sometimes, often, or always. Those who reported poorer health were more likely to have food worries. Survey respondents were asked what the greatest barriers were to good health. After physical activity and the cost of healthcare, chronic illness and lack of healthy foods were ranked highest. In the Lake County Community Health
Assessment in 2013, it was found that residents felt there was a lack of healthy food where they lived, and that it impacted their health.

Local Data: Socio-Economics and Vulnerable Populations

In 2016, Klamath and Lake Community Action Services (KLCAS), a non-profit dedicated to reducing poverty, conducted a community needs assessment. The assessment surveyed low-income residents and clients of KLCAS, as well as community leaders and partners.

The survey found that most of residents who struggle with poverty believe the main driver is joblessness and availability of jobs. Other factors included job skills, transportation or disability. When community leaders were asked about main causes of poverty, the reasons given were similar, but also included low motivation.

Poverty impacts nearly every aspect of health, including getting adequate food. 28% of respondents in the KLCAS survey reported they had gone hungry because they weren’t able to get enough food, and over 30% said that food assistance was their most vital resource they had received.

Veterans, seniors, and minority populations are disproportionately affected by poverty and food access. And even for those who are employed, the costs of household expenses and housing itself is a major barrier to having a stable life. A housing budget cannot be adjusted in the way that a food budget is. This leaves many struggling to pay rent, and having to cut down their food costs to their detriment.

Local Data: Social Factors and Food Access

Poverty, lack of affordable housing, minority status, and employment all influence the ability to access adequate food, which in turn impacts health. Almost half of the 2018 Community Food Survey respondents were found to be very low income and many suffer from food insecurity. There were 434 respondents in the combined community food and pantry surveys. The age of respondents ranged from 18-83, and 74% were female. There were an estimated 3% Native American and 6% Hispanic population. This is comparable to 3% and 11% for those segments based on the Klamath County census data. Results showed 46% were in the $0-25,000 range (Figure 3). 64% of the study population has some education; either a GED or some college, and 26% had a Bachelor’s or Master’s Degree (or higher). There were only 6% that did not have a high school education (Figure 4).

Figure 3: Survey Respondents’ Total Household Income
In the Community Food Survey, individuals were asked if, in the past year, they had struggled to have enough food. The same question was asked in the Pantry Survey, so that the pantry clients and the general population could be compared. As shown in table 11, both groups have a high rate of food insecurity. Clients of local pantries had significantly higher percentages of people reporting they skipped meals, worried about running out of food, or skipped meals so their children could eat. Of Klamath County’s surveyed respondents 37% of pantry clients and 32% of general population respondents they have worried about running out of food (Table11). This highlights the fact that pantry clients may not be getting enough food to live on from the pantries, and in some cases the emergency food from the food pantry may be the primary source of food.

Table 11: Food Worries

<table>
<thead>
<tr>
<th>In the past year, have you…</th>
<th>Pantry Clients</th>
<th>General Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skipped meals, or reduced their size because you did not have enough money to buy more</td>
<td>39%</td>
<td>30%</td>
</tr>
<tr>
<td>Worried that you might run out of food before you had enough money to buy more</td>
<td>37%</td>
<td>32%</td>
</tr>
<tr>
<td>Skipped a meal so that children could eat</td>
<td>38%</td>
<td>31%</td>
</tr>
<tr>
<td>Struggled to feed children in the summer, when they were not in school</td>
<td>33%</td>
<td>33.5%</td>
</tr>
</tbody>
</table>

2018 Klamath and Lake Counties Community Food Survey
Since 2011, food worries for food pantry clients have **decreased** by 21%, meal skipping has **declined** 10%, and meal skipping for children has **increased** by 7%.

Among those who agreed that they sometime struggled to have enough food, 2/3 or more reported they worried about running out of food before they had enough money to buy more. This was a major concern for almost all individuals from different areas in the Klamath County (Figure 5).
The perception that local food is not accessible nor affordable is seen across socioeconomic groups, but felt the most as income levels go down. This demonstrates that cost of food, or the perception of the cost, is important to people and may be uniquely problematic in our area (see Table 12).

Table 12: Food Accessibility and Affordability

<table>
<thead>
<tr>
<th>Household Income</th>
<th>Food is not accessible</th>
<th>Food is not affordable</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0-25,000</td>
<td>28%</td>
<td>61%</td>
</tr>
<tr>
<td>$25,000-50,000</td>
<td>16%</td>
<td>40%</td>
</tr>
<tr>
<td>$50,000-75,000</td>
<td>11%</td>
<td>27%</td>
</tr>
<tr>
<td>$75,000-100,000</td>
<td>16%</td>
<td>22%</td>
</tr>
<tr>
<td>$100,000+</td>
<td>2%</td>
<td>26%</td>
</tr>
</tbody>
</table>

2018 Community Food Survey

For many people, costs of other bills infringe on their ability to buy food in general, let alone healthier or local options. As shown in Figure 6, the rising cost of other household expenses was second only to cost of food among the factors that affect ability to access needed food. Both cost of other household expenses and cost of fuel are important factors expressed by community members. Additionally, those factors seem to be more prevalent in the 2018 than in the 2011 community food assessment. These additional barriers only compound the primary issue of cost of food (Figure 6).

Figure 6: What factors affect your ability to access the food you need?
Access is also complicated by distance—1 in 3 people travel more than 8 miles for food. The problem of distance varies by location in Klamath County, but remains an issue for most residents. Klamath Falls is the only location with more than half of respondents having to travel less than eight miles one-way for food (Figure 7). Travel distances can have impacts on food choices due to shelf life.

Figure 7: What distance (one-way) do you typically travel for your main source of food?

Summary: Local Survey Data

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Insecurity</td>
<td></td>
<td>Decreased</td>
</tr>
<tr>
<td>Cost of Food Barrier</td>
<td></td>
<td>Increased</td>
</tr>
<tr>
<td>Distance to Food Barrier</td>
<td></td>
<td>Increased</td>
</tr>
<tr>
<td>Transportation Barrier</td>
<td></td>
<td>Increased</td>
</tr>
<tr>
<td>Rising Household Expense Barrier</td>
<td></td>
<td>Increased</td>
</tr>
</tbody>
</table>

**Food Pantry Clients:**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worries about running out of food</td>
<td></td>
<td>Decreased</td>
</tr>
<tr>
<td>Skipping meals</td>
<td></td>
<td>Decreased</td>
</tr>
<tr>
<td>Skipping meals for children</td>
<td></td>
<td>Increased</td>
</tr>
</tbody>
</table>
**Spotlight on…the Child Hunger Coalition**

**Challenge: Feeding Children in Summer**

When School is out, so is the food. The school year provides students with breakfast, lunch and an afternoon snack. A large portion of our community has trouble feeding children even throughout the year, and adults are known to skip meals so their children can eat. Many individuals and families struggle to feed their children in summer months, without access to these free lunches. Additionally, finding healthy food sources is a value to community members at all points in the economic spectrum. The development of a multi-organization Child Hunger Coalition in Klamath County is providing more than just lunch in the summer, and has transformed summer lunch efforts from a competitive to a collaborative endeavor. In 2013, the coalition sought out to end child hunger and support each organizations’ unique role. Members of the coalition include YMCA, Integral Youth Services, Klamath and Lake Counties Food Bank, City Parks, Oregon Tech’s Population Health Management (PHM) Externship Program, and local libraries. The coalition’s Park and Play program is hosted by the YMCA of Klamath Falls, with lunch provided by Integral Youth Services, enrichment activities for kids supervised by Oregon Tech PHM externs, and nutrition education led by OSU Extension. Each year data is collected through interviews and surveys, on the program’s five parks that are nestled into underserved areas of town, including the Keno Library.

The collaborative coalition creates unique solutions to problems, such as lack of funding. In 2018, a charitable donation by the Smullin Foundation to Oregon Tech’s Population Health Management Program was used to fund externs, and the Food Bank provided a mobile grill station that was the life of the kickoff party with fruits and veggies for all to try. Prior funding was received through partnership grants with the YMCA of the USA and the Walmart Foundation, pushing YMCA to work with outside agencies to solve childhood hunger in their local community. Partnership for Hunger Free Oregon also gave several grants to the Park & Play program over the years to assist with programming and kick off events. The local Walmart store has also been very supportive of the Park & Play program donating funding and volunteer time helping serve meals.

“No one can thrive on an empty stomach, nor can anyone be healthy without access to fresh produce. It is only through true collaboration that we can start improving our culture of health. I believe Klamath County is making tremendous strides towards improving the health of our community. What we do now sets the stage for the future and the future looks bright.” – Renea Wood, Sky Lakes Foundation
Opportunity for Growth: Staff, Marketing, and Outreach

The Park and Play Program highlights what can be done with a dedicated group of organizations working together toward a common goal, but Park and Play does not meet the full need of the community it serves. Having a fully funded staff position for the Park & Play program would enable more strategic, resource-backed marketing and outreach efforts. This dedicated staff would also provide more time to work on fundraising for other food access programs that have dwindled over the years, such as the Back Pack Meal program, which was successful in the past but is no longer offered.

Spotlight on…the Klamath-Lake Counties Food Bank’s “Produce Connection”

Challenge: Nutrition, Food Insecurity, and Health

Survey results showed that many people face barriers to accessing food, and also value healthy options such as fruits and vegetables. Lower income residents have lower access to food and are more likely to have diet related chronic diseases.

Since 2013, Klamath-Lake Counties Food Bank “Produce Connection” has been impacting the lives of individuals and families by both providing free food, and increasing access to healthy food. This program is a local version of a statewide initiative of the Oregon Food Bank to provide free fruits and vegetables to those in need. The Oregon Food Bank works with growers from Oregon, Idaho, Washington, and California to provide the vast majority of the food provided by Klamath-Lake Counties Food Bank “Produce Connection,” which has 21 sites located in the communities of Klamath Falls, Chiloquin, Merrill, Malin, Bonanza, Sprague River and beyond, covering an area of 18,000 square miles. Nearly 30% of all perfectly good, edible produce in America ends up in a landfill or compost pile. Oregon Food Bank and their logistical team have made great strides the past few years, getting that perfectly good produce to areas throughout the state, including Klamath Falls. The Klamath Lake Counties Food Bank’s “Produce Connection” program will distribute 850,000 pounds of good produce in 2018 with less than a 1% waste factor at their facility. This program has been extremely popular and continues to grow. In 2017, 734,620 pounds of produce was distributed to program sites, with an additional 56,000 pounds distributed to non-“Produce Connection” sites.

Quotes from Clients of “Produce Connection”:

“My wife is going through Chemotherapy. The quality produce has been a Godsend.”

“I took things I didn’t think my kids would eat. They loved the mushrooms and broccoli steamed and mixed. Now I’m buying it at the store and fixing it on a regular basis.”

“If it weren’t for the Food Bank and the produce they distribute, I wouldn’t have enough food to get through the month.”
In the Community Food Survey, we asked nearly 200 clients of Klamath-Lake Counties Food Bank “Produce Connection” how it had impacted their life. The most common response was it enabled them to eat healthier. They also noted that they went to food pantries less, stretched their food stamps further, and had more money for bills.

**Opportunity for Growth: Food Pantry Gardens and Farms**

Klamath-Lake Counties Food Bank “Produce Connection” is popular and will require additional funding to adequately meet the growing need and desire for free fruits and vegetables. Some communities have experimented with “u-pick” sites, connections with smaller farms or CSAs who can donate unclaimed shares, or even grow a plot specifically for food assistance. Many people are waiting hours for their pick up at Klamath-Lake Counties Food Bank “Produce Connection” sites. If small farms or CSAs were co-located with these sites, clients could pick additional fruits and veggies while learning about growing and harvesting food.

**Spotlight on…the Sky Lakes Live Young Wellness Center**

**Challenge: Chronic Disease and Poor Diet**

Many of the chronic illnesses that plague our communities can infringe on the quality and quantity of our years. Social, environmental, and behavioral factors play a role, and when these are addressed, some of the consequences and causes to disease can be prevented. Scientists have dubbed our health care system one of “sick care,” treating illnesses after they have manifested. Research on diet, stress, exercise, and mindfulness demonstrates the power of these factors for a longer, healthier life. In Klamath County, high rates of chronic illness, high food insecurity and populations with barriers to health create a perfect storm for a lifestyle that leads to complications down the road.

In Klamath Falls, Sky Lakes Medical Center has taken a big step toward the prevention side of healthcare. Opening the Live Young Wellness Center in 2014, they now offer programs in weight management, lifestyle change, stress reduction, mindful eating, and other classes designed to empower people to change the trajectory of their health. Food is a critical component of prevention. “At the Wellness Center, we teach that food is medicine,” says Jennifer Newton, Registered Dietician. “Everything is practical, hands on, and anybody can take them regardless of what tools they have in their kitchen. It’s largely plant-based, and with people’s budgets in mind.”

The Wellness Center has adapted to their client base, first using a standard curriculum and then changing to resonate more with their population. They advertise by a newsletter sent to physician offices, Facebook, an email list, and through various community partners. They also partner with Klamath Works, piloting programs that utilize community health workers to help people shop on a budget with nutrition in mind.

Jennifer says people have some level of cooking experience, but not expert. “We are trying different things. We even have a cauliflower class- and people are interested!”
“Community partnerships have been vital to increasing the awareness of and access to food programs. It is through working together that we will have a positive impact on the well being of our community members” – Jennifer Newton, Nutrition Coordinator, Sky Lakes Wellness Center

Summary: Programmatic Progress

<table>
<thead>
<tr>
<th>Recommendations from 2011</th>
<th>Successful Interventions as of 2018</th>
<th>Future Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporating meal planning into existing education programs as financial literacy</td>
<td>Sky Lakes Wellness Center</td>
<td>Longer term data collection on health initiatives and chronic diseases</td>
</tr>
<tr>
<td>Create and support a coalition of stakeholders with a unified mission</td>
<td>Child Hunger Coalition</td>
<td>Increased funding, marketing and outreach</td>
</tr>
<tr>
<td>Acquire more fresh food for food pantry clients</td>
<td>Klamath-Lake Counties Food Bank “Produce Connection”</td>
<td>More outreach, strategic planning</td>
</tr>
<tr>
<td>Improve the health of rural communities by engaging grocery stores</td>
<td>Blue Zones Project</td>
<td>Increased regional and state partnerships</td>
</tr>
</tbody>
</table>

To sum up…

Klamath and Lake County have seen some improvements in health, including decreased teen birth rates, lower child poverty rates, and decreases in some chronic disease rates. At the same time, obesity rates and access to healthy foods have worsened. Encouraging practices at the local level to address food-related health issues, including improving access to free fruits and vegetables through programs like Klamath-Lake Counties Food Bank’s “Produce Connection,” may move the needle.
Chapter 3: Community Food Education Efforts

Community Food Education

The term food literacy is used to describe knowledge and habits related to cooking, shopping, nutrition, and gardening which can lead to a healthier lifestyle and reduced risks of chronic disease such as diabetes and heart diseases. Food literacy programs across the state and nation are gaining steam as they target populations that may be particularly at risk for such illnesses.

As reported in the 2011 Klamath and Lake Counties Food Assessment, a key goal of our communities was to “Increase education and skills around growing, cooking, gardening, nutrition, and shopping.” Education is a critical component of behavior change and culture change around nutritious eating, but information alone does not do the trick. Resources must be available for people to put knowledge into action, and education has to be engaging, accessible, and relevant. The additional resources needed to put education into practice, such as space, time, and equipment, should also be considered. Overall, since 2011, both Klamath and Lake Counties have made big steps in developing, piloting, evaluating, and improving programs related to food education. This section will review the results of survey research in the area of food education, and highlight successful programs that have tackled current and persisting challenges. The data demonstrates that our educational programs are worth investing in as there is room for growth.

Local Data: Education on Cooking, Nutrition and Gardening

Survey results showed that cooking is prevalent-65% cooked at least an average of once/day (Figure 8). Many people reported they do not cook because of time constraints, not knowing how to cook, or not having the right equipment. 58% want to learn how to cook (which equates to more than 200 people). Most people say they want to learn about cooking in person or at the Farmer’s Market.

Figure 8: How many days per week do you cook meals at home?
The interest in learning about how to cook healthy foods ranged by geographic location. More than 80% of individuals from Chiloquin expressed interest. Almost half of individuals from most locations expressed interest in gaining new knowledge about cooking (Figure 9).

<table>
<thead>
<tr>
<th>Location</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klamath Falls</td>
<td>56</td>
<td>44</td>
</tr>
<tr>
<td>Merrill/Malin</td>
<td>44</td>
<td>56</td>
</tr>
<tr>
<td>Chiloquin</td>
<td>83</td>
<td>17</td>
</tr>
<tr>
<td>Grant/Chenual</td>
<td>33</td>
<td>67</td>
</tr>
<tr>
<td>Overall</td>
<td>56</td>
<td>44</td>
</tr>
</tbody>
</table>

Individuals surveyed at Women, Infants, and Children (WIC) and Department of Human Services (DHS) offices also expressed interest in food preparation education. Nearly 90% of participants at the WIC office were interested in learning about cooking (Figure 10).

Given that WIC is a nutritional program that offers access to healthy foods, the willingness of individuals to learn more is important for the success of current and future efforts to offer educational opportunities for WIC recipients. Coupling together access to food and education on food preparation is key to success. The Cooking with Kids Nutrition Education Curriculum studies have found that providing individuals with the cooking skills and experiences is important. However, making sure that individuals have access to the foods they learn with is a perquisite to
actually using their knowledge and skills (Walters and Stacey 2009). Cooking education coupled with food access programs is the strategy most likely to result in success.

**Gardening Education**

Survey data showed that 44% of people in Klamath County grow some of their own food, accounting for over 150 people. For those who said they did not grow their own food, the most common reasons included not having space or time, followed by being physically unable or not knowing how to grow their own food. In most locations, individuals reported that they would like to learn more about growing their own food (Figure 11). When asked where they wanted to learn about gardening and growing, most people wanted to learn about growing in person or at the Farmer’s Market.

![Figure 11: Would you like to learn more about growing your own food? "Yes"

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klamath Falls</td>
<td>76%</td>
</tr>
<tr>
<td>Merrill/Weed</td>
<td>25%</td>
</tr>
<tr>
<td>Chiloquin</td>
<td>100%</td>
</tr>
<tr>
<td>Paisley/Christmas Valley</td>
<td>80%</td>
</tr>
<tr>
<td>Gilcrest/Reno/Tehama</td>
<td>40%</td>
</tr>
<tr>
<td>Overall</td>
<td>74%</td>
</tr>
</tbody>
</table>
Beyond geographic location, the overwhelming majority of those at area agencies would like to learn more about growing their own food (Figure 12).

Figure 12: Would you like to learn more about growing your own food?

The growing of food is one of the best ways to integrate new knowledge about nutrition, but provides a needed resource for food preparation education. Programs related to growing and cooking foods should be integrated to ensure that individuals gain knowledge about foods and cooking, along with actually having the foods to practice and use in their homes.

Summary: Local Survey Data

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest in Healthy Food Cooking</td>
<td></td>
<td>Increased</td>
</tr>
<tr>
<td>Interest in Growing Own Food</td>
<td></td>
<td>Increased</td>
</tr>
</tbody>
</table>

Gardening Education

Oregon State University’s Klamath Basin Research and Extension Center (OSU-KBREC) continues to be a staple organization among food education programs in the Basin, and has adapted their programs to evolving needs and demographics. Their Master Gardener program is a nationwide program existing in 48 states and 30 of the 36 counties in Oregon. It includes garden-based education, a plant clinic, and a mobile plant clinic that travels to Farmer’s Markets where people can bring in a plant that needs some TLC. In the plant clinic, Master Gardeners get 70 hours of training, and veteran Master Gardeners who have gone through the program take ten additional hours every year to get re-certified. The Master Gardeners in Klamath county took over 1100 hours of training.
Knowing their audience

The rigorous training and time commitment of the Master Gardener program may limit participation. “Clearly there was a desire to take more classes, but not everyone can commit to that” says Nicole Sanchez, Associate Professor at OSU-KBREC, who has taken a lead in reaching more people. This has taken the form of a Library Series that offers education on vegetable and fruit growing, among other topics. She used a survey to find out what people wanted to learn about. In 2017, nearly 300 people attended the sessions. Many attendees were new to the area, and wanted to learn more about the local environment.

In addition to the Library Series, there is a Facebook page called “Gardening in Klamath Falls” with over 1,200 members. It enables people to ask questions and get immediate feedback. Nicole says the challenge of distance has been helped by partnering with libraries. “People are used to using libraries, and they have good communication.”

Collaboration and “closing the loop”

The Master Gardeners and staff at OSU-KBREC have an integrated approach, and partner with local organizations to provide education on growing food, and cooking food, and deliver the education to schools, food pantry sites, and community events in order to “close the loop” on food accessibility, nutrition, and sustainable agriculture. More recently, education has been centered around connecting with produce. How to clean it, store it, and prepare it. Since access and sustainability are critical, a goal is to empower smaller areas to provide their own programming.

**OSU-KBREC offers tools and resources which can provide a mechanism for solving problems, especially for smaller producers that don’t have the technical assistance of a larger corporation.**

Previous assessments of Klamath and Lake Counties have noted the short growing season that limits food production. “One thing that could really move the needle,” Sanchez says, “is season extension techniques. Greenhouses that are more energy efficient, more economical, but we need more education on what is possible.”

Reaching youth and children

With a high percentage of “at-risk” teens- teens who may suffer from food insecurity, getting teenage participation is a goal. Outlined in 2011 as an issue, now in 2018 there are multiple examples of teens getting involved, and ways to move in that direction.
Youth Rising, a youth-led non-profit group offering positive social activities and volunteer opportunities for youth, serves free meals at the Klamath Downtown library with Integral Youth Services. The Klamath Youth Tribal Council has developed a strong reputation for “being there when we need them— they are on time and ready to help with anything” says Jalisa Rich at Tribal Commodities.

City and County Schools now has a Wellness Committee, made up of educators, to inspire wellness practices in schools. Patty Case, Associate Professor of Nutrition at OSU-KBREC, explains “there’s a student leadership component- you want to build health advocates, within the youth.”

Friends Church Garden Camp continues to be a great success, with 35 children at the last camp in 2017, and unique visitors to share knowledge such as bee keepers. Faith Marsali, pastor of Friends Church says “there is a different theme every year, there’s really good education, but children can also try the foods.” This is another example of collaboration, as Friends Church provides volunteers and OSU-KBREC provides the education.

There is more help needed to plant and maintain their community garden, and Friends Church would like to go after more grant opportunities through various Oregon foundations. Friends Church also operates a Food Pantry on the last two Tuesdays of every month at 4:30 pm.

Programs developed to improve food literacy, reduce food waste and tackle food insecurity are increasingly targeted to children. The following interventions have shown success and have potential to be expanded.

**Klamath Sustainable Communities**

Klamath Sustainable Communities (KSC) board member Dwight Long, a long-time community activist, says that in the early 90s folks realized that one of the key areas for sustainability efforts is in local food. There have been 14,000 copies of a Local Food Guide distributed, a project conducted as part of the 2011 Klamath and Lake Counties Food Assessment. Since then, KSC has put on an annual “Garden Tour” that promotes community education around gardening. It has been popular, with over 500 participants in 2016. KSC was instrumental in opening the Klamath Tool Library, which also has garden tools. The Tool Library has been a success, and has also become a community gathering space, hosting the distribution of food for Klamath Farmers Online Marketplace (KFOM). KFOM enjoyed the Tool Library space, and the program’s success has led to their opening a new, bigger space with more refrigeration in the Herald and News building, also the new location of Blue Zones Project.
**Spotlight on…Good Food Good Medicine**

**Challenge: Children’s Obesity**

Any long term preventative approach to chronic illness and disability includes a focus on the life course, which begins in infancy and childhood. Obesity is a risk factor for many health complications in later life, including heart disease, diabetes, and cancers, which are among the top causes of death in the United States. While adult obesity rates are higher than average in Klamath and Lake Counties, childhood obesity is also an issue to address. Children who are obese are more likely to become obese adults, and programs that address obesity in childhood may have long lasting impacts into adulthood. The Centers for Disease Control and Prevention reports that 12% of preschoolers, 24% of 8th graders and 26.5% of 11th graders are overweight or obese.

OSU-KBREC conducted a research project entitled “Generating Rural Options for Weight Healthy Kids & Communities,” indicating that children living in rural areas are more than 20% more likely to be obese or overweight compared to more urban areas. Factors that contribute to that are limited access to fruits and vegetables, knowledge on how to prepare healthy foods and limited opportunities to be active. The OSU research team collected data on weight status and physical activity of students, and assessed school policies and systems. This included an inventory of healthy food and physical activity resources in our region. Data from the research project shows children in Chiloquin are at increased risk of obesity and physical health problems over the long term.

Research highlights include:
- 50% of students at Chiloquin elementary school are overweight or obese (national average is 34%)
- Based on inventory of resources (conducted in 2013 & 2015) there are very limited food resources within city limits; residents must travel considerable distance to access a selection of healthy foods

How do we combat childhood obesity, address education gaps on healthy eating, and tackle access to healthy food and food in general?

In 2017, the Knight Cancer Institute awarded Klamath Tribal Health and Family a grant to fund an innovative program called “Good Food, Good Medicine”. In this program OSU-KBREC provided cooking, nutrition, and heath classes to youth as part of an afterschool program at Chiloquin Elementary. In addition to the cooking classes for two groups, kids in 3rd-6th grade (fall 2017), and kids in kindergarten to 2nd grade (spring 2018). Also included were physical activities before the cooking classes. A week-long class was offered in the summer of 2018 to kids of all ages. In addition to the classes, kids were given take-home bags of food with all of the ingredients of the meals they learned how to make in that week’s class. This enabled the kids to make a healthy meal at home for their family. When surveyed, many children reported that they cook or make meals at home. Many children also said they had made the recipes at home that they learned in the program.

To assess engagement, competencies, and interest in the program, Population Health Management students from Oregon Tech collected data from observations throughout the classes, talking to groups of students after the program, and over the summer session, designed a poster survey where younger children used stickers to indicate their preferences.
The results showed that for both groups, over the 8 week periods mastery of skills went from 60% in week 1 to 100% in week 8. The skills included handwashing, kitchen safety, knife safety, recipe reading, as well as tasting the food. The children overall loved making the meals and in particular loved making smoothies.

“After the food groups were identified, the students were asked to name some of their favorite foods. The assistants wrote all the foods that students listed on a display pad for all to see. Then the students were asked if some of these foods could be mixed and still be delicious. This lead up to the introduction of today’s finale of smoothies, which sparked much excitement in the room. A review on all that had been learned thus far was conducted: when to wash hands, safety rules, knife safety, how to measure and the units involved, what is a protein rich food, and name a whole grain. Everybody was awarded a prize after the review trivia. The task today was to make 3 different smoothies: green vegetable and banana, frozen carrots and peaches, and an orange cream smoothie. Students were each called to the front at the end of the class and awarded their "master chef" certificate for completing the program.” (Oregon Tech student observations of Good Food Good Medicine Program).

Opportunity for Growth: Expanding Throughout Klamath County and Lake County

The Good Food Good Medicine Program was a success, but the scope of the program is small considering the vast area of Klamath and Lake counties. Those involved in the program hope to expand it to other areas. Eventually programs like these could be included as part of standard school curriculum, or students could take part in making some part of their school lunch. There is also a new commercial kitchen opening in Chiloquin in the spring of 2019. This will enable more community cooking to take place in Chiloquin and be accessible to the community.

Spotlight on…the Cafeteria Role Model Program

Challenge: Food Waste

Complicating the issue of child hunger and child obesity is food waste. Food waste impacts schools across the nation. In Klamath Falls, Mills Elementary School faces all three issues. Children in the Mills Addition are disproportionately impacted by food insecurity as 91% of Mills Elementary students are eligible for Free and Reduced Lunch, and 25% of children in this neighborhood live below the poverty level. A study in 2016 by students from Oregon Tech found that over half of student’s food was wasted.

After measuring plate waste, students from Oregon Tech developed a mentoring program which they named the Cafeteria Role Model program. The college students spent 2-3 days per week for 20 weeks delivering the intervention, which included role modeling healthy eating habits and providing positive encouragement and incentives for eating cafeteria fruits and vegetables. They ate school lunch with the students, provided verbal encouragement for eating fruits and vegetables, provided
incentives such as hand stamps and high fives, and hosted competitions. In the first competition, classes competed to earn a smoothie party, while in the second, students competed individually to be placed in a raffle towards earning a t-shirt created by a fellow student. The intervention led to significantly less waste, specifically for fruits and veggies.

Opportunity for Growth: Institutionalize Health Promotion Programs

Many programs are not a regular part of grade school education. Programs could be integrated with current courses, and other students at high schools, community college, university, or home school could participate and study these issues as part of senior projects which are required by most schools in Klamath and Lake County. Many of the most successful programs going are supported by partnerships with a foundation developed by key programs and institutions, such as the Klamath and Lake Counties Food Bank and the Oregon State University Extension Office’s SNAP-Ed program. Since 1993, SNAP-Ed programs have been active in all 36 counties of Oregon. The program is funded through a USDA Food and Nutrition Service grant program and housed in the Oregon State University Extension service offices. Staff members provide educational programing seeking to improve food-related behaviors and physical activity levels of low-income families. SNAP-Ed in Klamath County delivers evidence based nutrition in-classroom lessons, cafeteria tastings, participates in family activity nights and Farm to School learning activities to promote the consumption of Oregon grown and processed foods in more than 11 schools. In partnership with the Food Bank, the SNAP-Ed program provides Cooking Matters classes, and printed recipes and food tastings at Pantry Distribution and Produce Connection sites. Program staff have mentored Oregon Tech student interns in school wellness projects at local elementary schools as well as summer programs such as the Park and Play program. Working with community partners such as the Child Hunger Coalition and the Blue Zones Project, as well as other programs of OSU Klamath Basin Research and Extension (i.e., Master Gardeners and 4-H), they are actively addressing food system issues through education programs at schools, community events, garden camps and activity stations at the Farmer’s Market. Continued and expanded support for the most critical programs that help support innovative and far reaching programs is key to future success.

Announcing: A new group tackling food waste

The Solid Waste Action Committee (SWAC), a project of Klamath Sustainable Communities (KSC), is focused on community well-being, and environmental stewardship. SWAC is committed to creating a more informed and engaged public in regard to reducing, reusing, and recycling. The committee works to: collaborate with existing resources to provide informational support for businesses and the general public; advocate for sustainable products and practices; educate and increase awareness of current issues. The committee sees the importance of understanding the needs and capabilities of our community in order to develop a type of food waste disposal system that makes sense for us, with the intention of economic prosperity.
“In recent years I have observed a merging of efforts to link food access with nutrition education in schools, grocery stores, food pantries, clinics, summer meal sites and in classes. As educators we know that our message to “choose healthy foods” is muted unless we can also increase access to those same foods. For example, in schools we are teaching youth where and how food is grown while they taste food from local farms. In pantry and food distribution sites we are providing recipes and tips on how to prepare those foods. In our cooking classes we are sending food home with participants so they can actually make the recipes for their families. This takes considerable coordination and strong partnerships—all of which have coalesced in the past several years. It’s an exciting time to be a nutrition educator—our message of “choose healthy foods” is more attainable than ever” – Patty Case, Associate Professor, Oregon State University Extension

Summary: Programmatic Progress

<table>
<thead>
<tr>
<th>Recommendations from 2011</th>
<th>Successful Interventions as of 2018</th>
<th>Future Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve access to adult and rural gardening</td>
<td>OSU Library Series</td>
<td>Incorporating more school gardens</td>
</tr>
<tr>
<td>Establish online materials explaining gardening methods; Improve visibility of gardening clubs</td>
<td>Klamath Gardeners on Facebook</td>
<td>More education and outreach on growing City and county codes</td>
</tr>
<tr>
<td>Incorporate information about healthy eating practices into school programs</td>
<td>Good Food Good Medicine Program</td>
<td>More engagement with tribal, Hispanic, and farmworker communities</td>
</tr>
<tr>
<td>Set up partnerships for community kitchens</td>
<td>Chiloquin community kitchen (2019)</td>
<td>More community certified kitchens</td>
</tr>
</tbody>
</table>

To Sum up…
There is great interest locally on healthy cooking, and growing food. The success of programs in this area is exciting, but there is still an untapped market for educational programs. Given the interest in these topics, programs should go for increased funding and choose locations that take it to the people.
Chapter 4: Food Supply, Quality, and Access

The Lay of the Land

Klamath and Lake Counties are both agricultural communities that face similar challenges related to economic development, climate, and health. Agriculturally, the total acreage of farms is decreasing, while the average size is increasing (Table 13). Locals say that the era of small farms is ending, but others point to a new generation of small farmers enthusiastic about the local area.

<table>
<thead>
<tr>
<th>Table 13: Farm Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Farms</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Klamath</td>
</tr>
<tr>
<td>Lake</td>
</tr>
</tbody>
</table>

Food Assistance and Emergency Food

Oregon ranks among the top five states in hunger, despite successful efforts to provide emergency food and increase access. Rural residents are among the most at risk for food insecurity. Long distances from residences to food sources, along with the price of food and rising costs of other bills can be barriers to people accessing the food they need. For low income residents, healthy food options are not always available, which exacerbates the relationship between income, food security, and health. In Klamath and Lake Counties, the number of families assisted by the Supplemental Nutrition Assistance Program (SNAP) and the Women, Infants, and Children division of public health, is increasing. Efforts to improve the health of clients of these programs taken into account the desires of clients and the economic barriers to purchasing healthy food.

Supplemental Nutrition Assistance Program (SNAP)

The Supplemental Nutrition Assistance Program (SNAP) offers assistance to individuals and families and impacts the local economy. In both Klamath and Lake County, the number of households receiving SNAP benefits increased by 3% between 2005 and 2016. Households with seniors increased use of SNAP benefits by more: 6% in Klamath and 3% in Lake (Table 14).
Table 14: Supplemental Nutrition Assistance Program - Households

<table>
<thead>
<tr>
<th>Lake County</th>
<th>Total Households</th>
<th>Households receiving SNAP (%)</th>
<th>Households receiving SNAP with one or more person 60+ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2009</td>
<td>3,248</td>
<td>557 (17.1%)</td>
<td>145 (26.0%)</td>
</tr>
<tr>
<td>2012-2016</td>
<td>3,409</td>
<td>712 (20.9%)</td>
<td>206 (28.9%)</td>
</tr>
</tbody>
</table>

2012-2016 & 2005-2009 American Community Survey 5-Year Estimates

Since 2011, the cutoff for Senior Farm Direct Nutrition Program eligibility has increased by 3%; the Food Bank does not specify a hard cutoff for eligibility; all other program eligibility remains unchanged.

The average number of SNAP participants in one month increased by 18% in Klamath County and by 11% in Lake County from 2009 – 2017 (Table 15).

Table 15: Supplemental Nutrition Assistance Program - Seniors

<table>
<thead>
<tr>
<th>Klamath County</th>
<th>Average Monthly Participants</th>
<th>Senior SNAP Participation (of those eligible)</th>
<th>Average Monthly SNAP Benefits Per Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>14,376</td>
<td>26%</td>
<td>$88</td>
</tr>
<tr>
<td>2018 (Jan-Apr)</td>
<td>17,702</td>
<td>12.8%</td>
<td>$121.80</td>
</tr>
</tbody>
</table>

Oregon Department of Human Services Data and Reports: SNAP County Tables 2017/2018

Women, Infants and Children (WIC)

WIC helps women with infants and children by providing nutrition education, and offers various classes and programs. From 2010 to 2014 there was a decrease in the number of individuals served by WIC in both Klamath and Lake Counties, but an increase in the number of families served (Table 16).

Table 16: Women, Infants, and Children

<table>
<thead>
<tr>
<th></th>
<th>% Pregnant Women Served</th>
<th># of Women, Infants, and Children Served</th>
<th># WIC Families</th>
<th>% Working Families in WIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klamath</td>
<td>66.70%</td>
<td>57%</td>
<td>4265</td>
<td>3796</td>
</tr>
<tr>
<td>Lake</td>
<td>51.50%</td>
<td>52%</td>
<td>335</td>
<td>301</td>
</tr>
</tbody>
</table>
Sue Schiess, a registered dietician, is the manager for WIC at Klamath County Public Health and has been there for 24 years. Part of her job is counseling with clients that are at-risk for chronic diseases which are nutrition-related. They collect information from clients including a diet history, and offer education on container gardening, smoothies, and grocery store tours. Sue says their client base has decreased since the birth rate has dropped and the economy has improved, and their clients are motivated to learn more about food and health.

WIC is specific about what foods clients can get. Many items are not available in organic, but Sue says there’s a lot of interest in getting organic food. Fruits and vegetables, as well as eggs are available in organic, as well as baby food. The Farm Direct Nutrition Program has been going on for ten years, and clients can get $28 worth of goods from local farm stands that they can’t use at stores. “We would love to be more involved in community gardens such as Mills Garden, as people have loved learning about container gardening”. Currently WIC has a growing number of partnerships with groups such as OSU-KBREC, the farmer’s market, Blue Zones, Klamath-Lake Counties Food Bank “ Produce Connection,” as well as partnering with Klamath Institute, Klamath Union High School, and Mazama High School offering parenting classes. The Department of Human Services (DHS) refers clients to the Klamath-Lake Counties Food Bank “ Produce Connection,” and programs at Klamath Works which educate people on how to shop healthy on SNAP. The biggest issue according to Wendy at DHS in Klamath Falls, is that healthy fruits and veggies are expensive. “Frozen food is cheaper- if you do coupons, it’s for fish sticks or candy- I don’t see coupons for bottled water. When it comes to healthy, processed foods aren’t as cheap, but people may lack the skill set for cooking.”

School Lunch

Some schools offer free lunch to everyone in the school through Community Eligibility Provision (CEP). CEP is a non-pricing meal service option for schools and school districts in low-income areas. CEP allows the nation’s highest poverty schools and districts to serve breakfast and lunch at no cost to all enrolled students without collecting household applications. Instead, schools that adopt CEP are reimbursed using a formula based on the percentage of students categorically eligible for free meals based on their participation in other specific means-tested programs, such as the Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF). (Table 17).

<table>
<thead>
<tr>
<th></th>
<th># Eligible for Free meals</th>
<th># Eligible for Reduced meals</th>
<th>% Eligible for free and reduced meals</th>
<th># Student enrolled</th>
<th># Total Eligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klamath County</td>
<td>5452</td>
<td>598</td>
<td>65.8</td>
<td>9,481</td>
<td>6,241</td>
</tr>
<tr>
<td>Lake</td>
<td>465</td>
<td>65</td>
<td>43.6</td>
<td>1,217</td>
<td>530</td>
</tr>
</tbody>
</table>

Oregon Department of Education, 2017
Child nutrition programs help our children get the nutrition they need to grow and learn through critical federal programs like the National School Lunch Program (NSLP), Summer Food Service Program (SFSP), Child and Adult Care Food Program (CACFP), WIC, and School Breakfast Program (SBP). School based child nutrition programs offer many students access to breakfast, lunch, and afterschool meals during the school year. In the summer months, access to meals is limited to school and organizations that have the means to administer the federal SFSP. SFSP assist programs in serving breakfast, lunch and afternoon snacks, but due to limited availability children go without. Programs that increase access to summer meals should be supported and expanded.

Summary: County Level Statistics

<table>
<thead>
<tr>
<th>2011</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Farms</td>
<td>Decreased</td>
</tr>
<tr>
<td>Land in Farms</td>
<td>Decreased</td>
</tr>
<tr>
<td>Average Farm Size</td>
<td>Increased</td>
</tr>
<tr>
<td>Organic Farms</td>
<td>Decreased</td>
</tr>
<tr>
<td>SNAP Households</td>
<td>Increased</td>
</tr>
<tr>
<td>WIC Families</td>
<td>Increased</td>
</tr>
<tr>
<td>School Lunch</td>
<td>About the Same</td>
</tr>
</tbody>
</table>

Local Data: Where do we get our food?

Most people get their food at grocery stores, but farmer’s markets were among the top three most common food sources. Food deserts plague both Klamath and Lake Counties. According to the 2018 Community Food Survey, geographic location is important for availability and convenience. Availability and convenience was highest in Klamath Falls and Merrill/Malin areas and lowest in Chiloquin and Paisley/Christmas Valley areas (Figure 13).

Figure 13: Is food available and conveniently accessible where you live?
Availability and convenience of food options is important for a variety of reasons including additional expenses needed for access such as fuel or other transportation costs as well as alternative and possibly unhealthier choices that are available, convenient, and economical. While many residents said that food was available, fewer suggested that food was affordable where they lived (Figure 14).

The cost of food, particularly healthy food, is a central issue when it comes to food security. Even if food is available to individuals, affordability will determine whether or not they will access foods (Farrell et al 2017).

Local Data: Sourcing Food and Buying Local

The majority of survey respondents source their food from grocery stores, but this was closely followed by farmer’s markets and home gardens (Figure 15).
The most common foods that people buy locally are produce, eggs, and honey/jam. The reasons people do not buy locally have changed slightly over the years. Barriers to buying local food include expense, not knowing where to purchase, or not available/seasonal (Figure 16).

![Figure 16: Reasons for not buying local food](image)

**Local Data: Food Assistance**

The Klamath-Lake Counties Food Bank provides food to assist in the preparation of 460,000 meals which benefit children, seniors, people without homes and people with disabilities. The Klamath-Lake Counties Food Bank gets about 70% of their food from the Oregon Food Bank, the balance coming from local sources including private donations, grocery stores, and food drives. Individual donations go far—one dollar donated moves 9 pounds of non-perishable food and 20-25 pounds of fresh produce. Altogether, nearly 2 million pounds of food are distributed to programs and sites across Klamath and Lake Counties.

Partnerships enable the Klamath-Lake Counties Food Bank to provide food to all corners of our rural counties. The Food Bank partners with 100 organizations including faith based organizations, youth-serving non-profits, social services, corrections, senior centers, and Tribal centers among others. Some food is even sourced from community members who “Grow a Row” or two, to contribute. Much of the food from the Klamath-Lake Counties Food Bank goes to stock food pantries, which are places where individuals and families can pick up food. The Food Bank provides food to pantries in Klamath Falls, Keno, Bly, Bonanza, Chiloquin, Lakeview, Malin, Merrill, Paisely, Crescent, and Sprague River, to name a few.

In Klamath County, 26% of Community Food Survey respondents were food pantry clients. Food pantries supply individuals with food boxes. As mentioned early, most individuals that struggle with food security mentions that they worry about food running out. This program helps “bridge the gap.” Accessing the Food Pantries is important for food insecure families, but there are challenges.
Many of the main issues related to accessing food pantries were similar for the 2018 and 2011 food surveys. However, many of the main issues in 2011 were reported in higher numbers in 2018 (Figure 17).

Specifically, the need for emergency foods more than 12 times per year was a major issue in 2011 and seems to be an even larger issue in 2018. Similarly, the proportion of individuals that reported being “uncomfortable asking for help” was more than 1/3 in 2018. While most people say they eat everything in their food box, still almost 1 in 10 people did not. This number has remained unchanged since 2011. Inability to choose their food and dietary issues was the most common reason for not eating everything (Figure 18).
Managers of food pantries in Klamath and Lake County were asked about their community partners, their client need, and what their vision is for the future. There continues to be new pantries opening in Klamath and Lake County- pantries ranged from being open just a year, to more than 15 years. Client base also ranged from 15 to over 200 on a typical day. Most pantries indicated their client base is growing, and they outreach by word of mouth. Many pantries are collaborating with Klamath-Lake Counties Food Bank “Produce Connection” and serve as a Klamath-Lake Counties Food Bank “Produce Connection” site. The main challenge for pantries is volunteers. Others want a larger space. Pantries also want to be able to offer more items, such as hygiene items and diapers. A trend seems to be an interest in fresh produce, and Klamath-Lake Counties Food Bank “Produce Connection” has been a huge success. For the future, some pantries would like to integrate more education on food and health (2018 Pantry Manager Survey).

Seniors

The population in both Klamath and Lake Counties is largely a “retirement population”, and among seniors, food security is a serious issue. As the proportion of seniors is growing, and organizations and volunteers must meet the need for free and delivered meals. The Klamath Basin Senior Citizen’s Center’s 14 staff and 155 volunteers helps feed over 3,700 seniors in the Klamath Basin, with more than 88,000 meals annually. The Center provides more than meals- it is a social space, and in the past year has offered 8,500 health class units, 12,500 assisted transportation rides, and many other programs, including the arts. Food is prepared and packaged in-house, using local vendors wherever possible for fresh food supplies and deliver over 66,000 of those meals to eligible recipients of the Meals-On-Wheels Program (MOW). MOW recipients are offered a hot meal each weekday and two frozen meals (also prepared and packaged in-house) on Fridays for the weekend. To improve access, the Center collaborates with Basin Transit Service, the local public transit provider, and the Klamath Tribe’s Quail Trail Service. Its purpose is to provide access to transportation to those who are unable to utilize other transportation services due to the need for support and service outside the scope of other transportation programs. The Center collaborates with a number of other agencies which are reinforced by a strong commitment to the Blue Zones Project and the overall health of seniors and the broader community.

“We should all celebrate the return of a full service grocery to the downtown area, resolving the challenge faced by many seniors and others with transportation challenges to equitably access fresh produce and a wide range of products of better nutritional value than those offered at the typical convenience market. The senior population is growing rapidly with those 60 or over now representing well over 25% of the total population in Klamath County. The need for these meals has increased by more than 60% over the last three years. We must all work together to keep our elderly neighbors connected to family, friends and the community and to assure the assistance that may be needed to maintain access to the nutritional requirements for good health.” - Marc Kane, Executive Director, Klamath Basin Senior Citizen’s Center
Tribal Commodities

Commodities provides monthly food for over 200 clients, spanning an area that includes Klamath County, as well as Alturas, Pit River, Fort Bidwell, Chiloquin, and Sprague River. They also deliver to elders and shut-ins. JaLisa Rich, at Commodities, says that people take what they need and generally have their needs met. Looking to the future, they look forward to more collaboration, and a bigger space.

Community Meal Sites

A variety of sites that offered meals specifically for children, teens, adults, and seniors were asked about their community connections, challenges, and ideas for the future. Sites ranged from serving 40 to over 100 on a typical day, and from 1000 to over 20,000 in a typical year. Organizations hosting free meals advertise through the newspaper, radio, and fliers. To fund meals, organizations receive grants through Oregon Department of Education, Oregon Project Independence, FEMA, United Way, corporate or foundation grants, and through private donations. All of the organizations surveyed indicated they collaborate with other local organizations, including churches, schools, and parks and recreation. 100% indicated partnerships had changed, increased, had more collaboration, and helped to increased participation (2018 Community Meal Site Survey).

<table>
<thead>
<tr>
<th>Biggest Challenges</th>
<th>Vision for the Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaching people</td>
<td>More volunteers</td>
</tr>
<tr>
<td>Maintaining volunteers</td>
<td>More collaboration</td>
</tr>
<tr>
<td>Finding cooks, other costs</td>
<td>More nutrition education</td>
</tr>
</tbody>
</table>

Sustainability and reach

Klamath and Lake Counties have many sites where a free meal can be eaten, whether it be at a church in the evening during the week, or at a park on a hot summer day. These sites struggle with maintaining their work, and are in need of volunteers and innovative ways to reach more people, especially in rural, isolated areas. Those involved in free meal distribution agree that given all of the barriers (transportation, location, volunteers, funding), there are not enough meal sites to meet the need.

Unique collaborations

Integral Youth Services (IYS) continues to provide free meals in many locations in Klamath County, and YMCA’s Park & Play summer meal program is delivered at city parks Stukel, Mills/Kiwanis, Richmond, and Kit Carson, as well as Keno Library. Changes in federal funding in recent years have shifted the amount of money that can be spent on labor vs food, making operating a summer meal program difficult to sustain. There are 34 IYS-operated food sites, and many have changed over the years based on access to volunteers, attendance, and funding. Reaching more rural areas is challenging, and partnerships with churches and other local community hubs has made the difference. IYS has partnered with the Palomino Cafe in Sprague River, and their numbers went up.
The Keno library has also boosted participation. In Klamath Falls, IYS has partnered with several innovative youth-serving, youth-driven programs. Ascending Flow, an innovative non-profit alcohol and drug recovery program that reaches kids through music, and Youth Rising, a youth-led non-profit committed to healthy social activities for teens, both help with the IYS summer lunch program by hosting and serving a meal site.

Programs that boost the core of volunteers would be invaluable to organizations that serve free meals or work in the realm of food assistance. Pantries with a steady group of volunteers and a lower volunteer-to-client ratio have more time to increase options and activities for clients. At Friends Church Pantry, there is a community garden on the premises, activities for folks to do while waiting, a free healthy meal provided, and more options for people with dietary restrictions. Service is one of the most impactful activities you can do for your overall wellbeing, and in our communities this activity is done in large part by retired community members. Service programs that attract younger professionals, families, and students of all ages would benefit the whole community and ensure the sustainability of important service work in our area.

“In the last 34 years food banks have changed greatly. In the 1980’s we had 5 Commodities: Flour, Cornmeal, Butter, Cheese and Peanut Butter. The portion of food given out in the Emergency Food Boxes which came from the food bank was about 30%. Since the amazing leadership of our food bank we now receive nearly 90% of our food from the Klamath-Lake Counties Food Bank. Niki and Dave work hard to help provide the pantries with good food. The shopping pantry came in to being and has been a resounding success, giving our clients a sense of responsibility for their food choices and has less waste in what they receive in their boxes” - Debi Leighton, Salvation Army

Local Data: Healthy Food in Corner Stores

In the absence of a downtown grocery store, in 2017 Oregon Health and Science University students partnered with Oregon Tech to investigate the options for stocking healthier foods in corner stores. Geographic Information Systems (GIS) technology was employed, led by Dr. John Ritter at Oregon Tech, to determine where the food deserts were in relation to corner stores. Oregon Health and Science University students in Klamath Falls interviewed local corner store managers to gauge their interest and perceived barriers to stocking healthier options. Of corner store managers, 88% thought Klamath Falls “needs more help” to be healthier, but only 27% believed their store could play a part. This is in part due to customers wanting convenience, and healthy items may not be a “last minute purchase.” It can be difficult to make a profit on fruits and vegetables, and this food has a shorter shelf life. Healthy options that are available in some corner stores include sandwiches, fruits, eggs, vegetables, milk, juice, and nuts. Managers suggested potential solutions to selling healthier food, including monetary incentives to sell healthier, more shelf space, and creating separate stores that are specifically geared toward health food.
Food availability and accessibility are important components of food security. Challenges to stocking healthy food included healthier foods perishing more quickly, visibility of prices on fruits and vegetables, being unable to buy certain healthier foods in bulk, and having limited options carried by local distributors (for example, packaged sandwiches). Store managers reported that it was difficult to make a profit from healthier foods and that many corner stores do not accept Food Benefits like Oregon Trail Cards or WIC. The most common healthy options in corner stores were sandwiches, fruits, eggs, vegetables (onions, potatoes, lettuce), milk, juice, and nuts.

**Manager-Suggested Solutions for Healthier Corner Stores:**

- More information for corner store owners
- More shelf space for healthy food options
- Easily visible healthy food in stores
- Monetary incentives to sell healthier foods
- Public health advertisements for monetary compensation
- Create separate stores that carry only healthy foods
- Label healthy foods with visible prices
- Connect with food companies that provide healthy food at cheaper cost
- Marketing support

**Local Data: Farmers and Ranchers**

When local farmers and ranchers were surveyed, common themes emerged. Their biggest struggles included finding land, the cost of land, and water shortages. Water issues have impacted what crops farmers grow, reduced production, budgets and financing, and the overall stability of their business. Since the last assessment, farmers have noticed increases in technologies related to tillage, planting, and irrigation, as well as more regulations pertaining to food safety.

Farmers and ranchers both agreed that meat processing and potato processing would be a promising endeavor for Klamath County. Most of the farmers surveyed reported that they were interested in selling more product locally, but struggle with the lack of direct sale markets, as well as regulation issues and the local demand.

Organic practices are prevalent in Klamath County. Many farmers that are not certified organic still have organic practices such as not using pesticides, but are not certified in part due to the cost of certification. Use of renewable energy resources such as solar panels are common as well.

While this assessment is more focused on the consumer side of food systems, the South Central Oregon Economic Development Center is pleased to be undertaking a Food Hub Feasibility Study which began in fall of 2018, that is investigating producer opinions as well as a market analysis for supporting local farmers and ranchers’ ability to distribute more product locally.
**Grocery Stores: An Avenue for Local Sales**

Grocery stores are the main location to source food for most residents of Klamath and Lake County. Grocery stores are also potential avenues for selling local products. Jim Dillon, manager of Sherm’s Thunderbird, says they’re very open to local sellers, and that all they require is insurance. They are able to sell local produce and other products such as salsa and honey. Sherm’s Thunderbird was one of the first grocery stores to become a “Blue Zones Project” approved store. Jim says he can see that over the years there has been more of an interest in eating healthy, and being healthy in general in the community of Klamath Falls. He says it was a local physician who convinced him to embrace Blue Zones, making the argument that health care costs continue to escalate and food is a key intervention to prevent chronic illnesses down the line.

There is good news in Klamath Falls after suffering a major loss with the failure of Haggen’s downtown, which had replaced Safeway. The downtown area was effectively a food desert for many years, and residents are excited about Holiday Market, which moved in September 2018. Holiday Market is already actively engaging with the community, and attended the 2018 “Find Your Farmer” event to network with local producers.

**Farmer’s Markets: Local Business Incubation**

Our survey data has shown remarkable interest in farmer’s markets as places to source food as well as desirable places to learn more about cooking and gardening. Since 2011, the Klamath Falls Farmer’s Market has continued to grow, tripling their patrons, and becoming a staple in the community. Manager Charlie Wykoff, who has manned the market since 2010, says that since then at least one new producer joins the market each year. Of the 45 spaces for vendors (some of which are half-spaces), about 15 are strictly produce, and over half are local food, including value-added products. Charlie’s main initiative when he took the reins, was purchasing an EBT machine. After paper “food stamps” were phased out in 2004, there was a gap in the markets’ ability to process them. With a new wireless machine, people with Oregon Trail Cards can shop at the market- and they do. EBT sales account for over $20,000 in sales per season. In 2016 and 2017, the Farmer’s Market participated in the “Double-Up Bucks” program, which was grant funded. The program enabled people to get a $10 match for every $10 spent at the market with their Oregon Trail Card. The market hopes to participate in this program again, but in the meantime, the local Lemonade Project, which was started by Charlie in 2012, uses funds from selling lemonade to provide their own match program, matching an extra $6 for every $10 spent.

It’s noteworthy that this market, though it showcases local handmade art, is primarily geared toward attracting, mentoring, and helping local farmers expand their business. This is done in part through alerting farmers about special government programs that support their work, such as the high tunnel program. Expanding the growing season is always a challenge, so programs that enable a longer season through the use of high tunnels or greenhouses can make a big difference. The market is somewhat of a local food business incubator and prides itself on success stories such as Bellweather Farms, and Cheryl’s Salsa. Bellweather was started by a young couple who have successfully made a living having a farm and are also raising a family. Cheryl’s Salsa started at the market and now is distributed in local stores and has its own storefront.
In the future, the Farmer’s Market hopes to continue to grow, with more space, dedicated staff, and support from the city. With such promise as a driver of a local food system and boost to entrepreneurs, this true “farmer’s” market is a major asset to the community.

“Our goal is to nurture the existing farmers, and meet the market demand- if they see their produce selling out by 11am, they know they can put more rows in next year” – Charlie Wykoff, Manager of the Klamath Farmer’s Market.

Summary: Local Survey Data

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<th></th>
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<td>Knowledge Barrier</td>
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Spotlight on…Sweet Union Farm

Challenge: Access to Markets

Community supported agriculture (CSA) is a way to connect people with producers, allowing community members to subscribe to certain farms or organizations. CSAs in Klamath and Lake Counties have ebbed over the years. In Klamath, many CSAs are no longer going. They are time consuming and can take the back burner over other operations. Katie Swanson, who moved to Klamath in 2016 with her husband Dallas, first worked for Fresh Green Organics, a micro-greens farm, and then started planting the seeds for a new CSA. Now Sweet Union Farm, the CSA is growing- now at 30 people and set to double next year. There is clearly a market for CSAs, and this could be a great small business opportunity that doesn’t require a lot of space or funds to start up. There are many resources locally that provide support for entrepreuners, as well as federal programs that help with equipment for new farmers.
Spotlight on…Flying T Ranch and Klamath County Schools

Challenge: Farm to School

Collaborating with the Klamath County School District and Oregon State University’s Klamath Basin Research and Extension Center, Flying T Ranch will be providing more than just meat for school lunches. Children are getting a chance to get to know where their food comes from, who’s involved, and feel more connected to their food. The main barrier to buying local for school meals is timing, according to Chris Dalla, Food Services Supervisor at the Klamath County Schools. “There needs to be a huge volume, and for produce we have to order a week in advance. Very little produce comes from Oregon. So next year, I’ll spend it (Farm to School funds) on burgers.”

While some districts utilize companies that manage their food programs, Klamath County School District has developed their own. And with changes in funding, which includes free lunch in all county schools, more kids are eating at school. In 2017 the county schools served over a million meals, up 20% from 2016, including 2200 breakfasts and 4400 lunches every day. Despite challenges in going local, they are taking advantage of Oregon programs to support local food systems and education.

The state of Oregon is investing in local food systems through Farm to School, and School Garden Grants, which allow school districts to seek reimbursement for using Oregon products in school, as well as provide agriculture, food, or garden-based education activities. These programs were made possible by House Bill 2038. Opportunities for the future include more strategic planning, investigating the logistics of farm to school by hiring staff who can devote time to work on it.
Spotlight on…Klamath Farmer’s Online Marketplace

Challenge: Direct Sale Outlets for Farmers

Spurred from the Food Policy Goals from Blue Zones Project, the Klamath Farmer’s Online Market Place (KFOM) has combined grassroots connections with a digital format that links consumers and producers, and offers a way to socialize and get to know where your food comes from. KFOM is simple: customers sign up, and farmers post their products. Then once a month, farmers drop off the food, folks pick it up and pay for it at a single location. KFOM started out operating from the Tool Library, and now they are into a new space- the Herald and News building- which they share with the Blue Zones Project.

Opportunity for Growth: A Food Hub

Betty Riley, Director of the South Central Oregon Economic Development Center (SCOED), says that in recent years “there’s more of a culture shift in terms of people starting new businesses. We know we have more restaurants than we can support, and there’s not necessarily the critical mass to support processing, but we want to do more research on farm to table, agricultural tourism, and possibilities for food hubs”. SCOED received a grant in July 2018 to conduct a Food Hub Feasibility Study. The United States Department of Agriculture (USDA) defines food hubs as “a centrally located facility with a business management structure facilitating the aggregation, storage, processing, distribution, and/or marketing of locally/regionally produced food products.” Food hubs can provide the infrastructure needed for communities to develop opportunities for retailers, producers, distributors, and other businesses such as worker owned co-ops (www.healthyfoodaccess.org).

Three Food Hub Models

- Farm to business/institution model
- Farm to consumer model
- Hybrid model

Food hubs, unlike Farmer’s Markets, operate on a wholesale scale, supporting organizations that can make larger purchases, such as restaurants, hospitals and schools. The Food Hub Feasibility Study will help to determine which model would work best for our unique communities.
### Summary: Programmatic Progress

<table>
<thead>
<tr>
<th>Recommendations from 2011 Assessment</th>
<th>Successful Interventions as of 2018</th>
<th>Future Recommendations</th>
</tr>
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<tr>
<td>Increase the direct sale markets for farmers</td>
<td>Klamath Farmer’s Online Marketplace</td>
<td>Food Hub, plan for year round food production, branding, local processing, paid position for farmer’s market</td>
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<tr>
<td>Improve consumer education for farmers marketing products to encourage buying local</td>
<td>Blue Zones Project Demos, Find Your Farmer</td>
<td>Resources for small farmers, development of food systems non-profit</td>
</tr>
<tr>
<td>Improve education on renewable energy</td>
<td>OREC Clean Energy Series</td>
<td>Study impact of energy efficiency or other cost reductions on food security</td>
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**To sum up...**

Klamath and Lake County residents face challenges related to having food and eating healthy, that are complicated by cost, employment, isolation, and stigma associated with assistance. Successful interventions have buoyed their sustainability with collaborations with other organizations. Efforts combining food assistance with food education could improve food access, social connections, and health. Food production is changing, with fewer small farms and limited options to sell locally, though online markets and networking events are generating enthusiasm and making an impact. Ultimately the strength of community will chart the course to a sustainable health system, and innovative thinking paired with expansion of successful programs can help build a culture of health.
Methodology

This assessment used a variety of methods to gather local data, including in-depth interviews, attending local meetings to gather data and community feedback, and survey tools.

In-Depth Interviews

Interviews were conducted with community members and organizations engaged in food systems work. This included representatives from the Klamath-Lake Counties Food Bank, Oregon State University Extension Office, Sky Lakes Wellness Center, Blue Zones Project, South Central Oregon Economic Development, Senior Center, Friends Church, Klamath Tribal Health and Family, and many other individuals dedicated to progress in areas of food security, nutrition, and the community food system.

Community Food Survey and Pantry Survey

These survey tools were modeled after the surveys employed in the 2011 CFA. The surveys were distributed at food pantries, clinics, Klamath-Lake Counties Food Bank “Produce Connection” sites, schools, and online; the surveyed population covered communities of Klamath Falls, Keno, Chiloquin, Crescent, Gilchrist, Paisley, Merrill, and Malin. Surveys were made available in English and Spanish. Hard copy surveys were used, and data was subsequently inputted into an online survey to ensure data was saved and could be analyzed.

Community Meal Site and Food Pantry Manager Surveys

In order to collect information on multiple pantries and community meal sites, surveys were developed to gather input from those responsible for managing those sites (see Appendix). After initial contact to organizations was made, an online survey link was distributed.

Farmer/Rancher Survey

A survey was developed addressing key concerns and opportunities from the perspective of farmers and ranchers in the area. The hard copy surveys were distributed through community event sand local networks, then imputed into an online system.

Supplemental Data Sources

In addition to the primary data collected from the survey tools listed above, student research projects on relevant topics are included, as well as data from secondary sources.

Limitations of Data

While there are many advantages of local survey data, readers should be aware that drawing generalizations on the entire population of Klamath and Lake Counties is problematic, and this data should be used as a baseline and starting point for investigating food issues in the region. Additionally, literacy was a barrier with some community members, so their voice is not heard. Many questions on the survey could be interpreted in different ways depending on the respondent, so that should be taken into consideration when reviewing results.
Works Cited


**Local Food Issues in the News:**


https://ruralklamathconnects.org/2017/06/16/produce-connection-merrill-malin/

**Photo Contributors:**

Faith Marsali, Friends Church

Gardening in KF, Facebook Page

Stewart Decker

**Appendix**

- Community Food and Pantry Survey
- Community Meal Site Manager Survey
- Pantry Site Manager Survey
- Farmer and Rancher Survey
Community Food and Pantry Survey

Do you agree to complete this survey? o Yes o No

In the past year, have you or people in your household (Mark all that apply):

○ Skipped meals, or reduced their size because you did not have enough money to buy more If yes, how often? ____________________________ ○ Worried that you might run out of food before you had enough money to buy more If yes, how often? ______________________________ ○ Skipped a meal so that children could eat ○ Struggled to feed children in the summer, while they were not in school

Have you ever picked up food at a "Produce Connection" site? o Yes o No

If you have used "Produce Connection", how has it benefited you? Has it impacted your behavior/life? (i.e. pick up less food from food pantries, eat healthier, etc.)

In your opinion, is food available and conveniently accessible where you live? o Yes o No

In your opinion, is food affordable where you live? o Yes o No

Where do you get food? (Mark all that apply). o Full Service Grocery Stores in Klamath County o Convenience Stores/Gas Stations o Stores/Markets outside Klamath County o Sit down restaurant o Fast food restaurant o Trade/barter o Home Garden o Community Garden o Hunting/Fishing/Gathering o Farmers’ Market/Community Supported Agriculture/Farm Stands o Food Pantry/Food Share o Community Meals o Senior Center/Meals on Wheels o USDA Commodities o Other

What distance (one-way), do you typically travel for your main source of food? o Less than 1 mile o 1-2 miles o 2-8 miles o 8-25 miles o 25-80 miles o 80+ miles

What form of transportation do you use to get your food? o Walk or Bike o Car o Bus o Cab o Carpool

Do you ever have difficulty accessing the food you need? o Yes o No

What factors affect your ability to access the food you need? Mark all that apply. o Cost/price of food o Rising cost of other household expenses (heating/electricity/rent/childcare) o Lack of transportation o Cost of fuel o Distance o Lack of time o Lack of quality or variety in food available o I do not qualify for assistance o Other (Write in)

________________________________________

Which of the following does your community need better access to? Mark your top 3. o Nothing o Dairy o Eggs o Beef o Chicken o Fresh fruits and vegetables o Locally-grown food o Organic Food
☐ Culturally suitable food ☐ Brand name food ☐ Prepared food/meals ☐ Other (write in)
________________________________________________

What are your top TWO priorities while making food purchases? ☐ Price ☐ Health ☐ Quality ☐ Convenience ☐ Locally Produced ☐ Organic ☐ Taste ☐ Other (write in)________________________________________________

Do you eat any food that is grown or produced within Klamath County? (Mark all that apply). ☐ I don't know ☐ Fruits ☐ Vegetables ☐ Milk ☐ Poultry ☐ Meat ☐ Eggs ☐ Fish/Seafood ☐ Jam/Honey ☐ Other (write in) ________________________________

If you do not typically eat local food, what is the MAIN reason for that? (Mark one) o Not available where I shop o Too expensive o Do not know where to purchase it o Not much variety or selection o It is only available seasonally o Other (write in) __________________________________________

Have you ever purchased food/food products at a Farmers' Market in Klamath County? o Yes o No

If you do not regularly attend a farmers' market, what is the MAIN reason? (Mark one) ☐ Price ☐ Timings/dates of the market ☐ Distance ☐ Does not have the food I want/like ☐ I am not aware of a local Farmers' Market in my community ☐ I grow my own produce ☐ Other (write in) ________________________________

How many times per week do you typically cook/prepare meals at home? o 0 o 1-2 o 3-5 o 6-7 o 8 or more

If you don’t cook at home, what is the MAIN reason you do not cook your meals at home? (Mark one) ☐ I don't know how to cook ☐ It takes too much time to cook ☐ I am physically unable to cook ☐ I am homeless ☐ I do not have proper kitchen tools/appliances to cook with where I live ○ Home-cooked food does not taste good ○ Other (write in) ______________________________________

Would you like to learn about cooking healthy food? o Yes o No

If you would like to learn more about cooking healthy food, HOW would you like to learn about it? ☐ I'm not interested in learning more about cooking healthy food ☐ In person classes ☐ Farmers' market demonstrations ☐ Classes at the senior center ☐ Other (write in): ______________________________________

Do you grow any of your own food? o Yes o No If you do NOT grow your own food, what is the main reason you do NOT grow your own food? ☐ I don't have the interest ☐ I don't have the time ☐ I don't know how ☐ I don't have the space ☐ I am physically unable to grow my own food ☐ Other (write in): ______________________________________
If you would like to learn more about growing your own food, HOW would you like to learn about it? ○ I'm NOT interested in learning more about growing my own food ○ In person classes ○ Community garden sessions ○ Farmers' market demonstrations ○ Other (write in): __________________________

Are you or are any members of your household using any of the following programs? Mark all that apply. ○ SNAP (Food Stamps) ○ WIC ○ Meals on Wheels ○ Free or Reduced Lunch/Breakfast ○ Food Pantry ○ Farm Direct Nutrition Program (fruit and vegetable vouchers) ○ Free Community Meal ○ Produce Connection ○ I do NOT use any of the above programs

If you use any of the programs listed in the previous question, how have they benefited you? What do you like about them? Have they impacted your behavior/ life?

Do you have any of the following issues in signing up for OR using the programs listed in the previous question? (Mark all that apply) ○ Lack of transport to office or service sites ○ Long distance to offices or service sites ○ Inaccessible office or service site hours ○ Language barriers ○ Applications are difficult to fill out ○ Citizenship status of someone in the household ○ Feel embarrassed or uncomfortable asking for help ○ Other (write in): __________________________

How many adults and children are in your household currently? ○ Adults: ____ ○ Children: ____

What is your gender identity? o Male o Female o Other (write in): o Prefer not to answer

What is your age? o Write in: ______________________________________________________ o Prefer not to answer

What is your zip code? _________

What is your household income? o $0-25,000 o $25,000-50,000 o $50,000-75,000 o $75,000-100,000 o $100,000+ o Prefer not to answer

What is your highest level of education? o Less than high school o High school/GED o Some College o Bachelor's Degree o Master's Degree or Higher o Prefer not to answer
Community Meal Site Manager Survey

Do you agree to take this survey?

Organization:

Contact affiliated with on-site meals (Name, position, email and phone):

Do you currently serve free on site meals?

How often do you serve free on site meals PER WEEK?

What type of meals do you provide? (select all that apply) Breakfast/Lunch/Dinner/Snacks

How many people do you serve on a typical day?

How many meals do you serve in a typical year?

How has the amount of meals or persons served changed since 2011?

How do you do outreach to promote your community meals?

What other programs are affiliated with your community meals?

Do you partner with other organizations?

What organizations do you partner with?

Have these partnerships changed since 2011- how so?

How are your community meals funded?

What is the main challenge to providing community meals at your organization?

What additional resources would help support your organization’s mission?

What is one idea you have for a future program that you feel would be beneficial to your clients?
Pantry Site Manager Survey

Do you agree to take this survey?

Organization:

Contact affiliated with pantry (Name, position, email and phone):

How often do you serve free on site meals PER WEEK?

How many people do you serve on a typical day?

How many people do you serve in a typical year?

How has the amount of persons served changed since 2011? increased, decreased, stayed the same

How do you do outreach to promote your pantry?

What other programs are affiliated with your pantry?

Do you partner with other organizations?

What organizations do you partner with?

Have these partnerships changed since 2011- how so?

What is the main challenge at your pantry?

What additional resources would help support your pantry?

What additional food (or material) items do you think would be most helpful to your clients?

What is one idea you have for a future program that you feel would be beneficial to your clients?
Farmer and Rancher Survey

What do you grow/raise?

Are you certified organic or have organic practices?

What are your local sales outlets (e.g. grocery store, farmers market, etc.)?

Do you want to sell more locally?

What are the main barriers to selling more locally (to individuals or institutions)?

Do you produce any value-added or processed products from locally grown ingredients?

Do you allow gleaning on your farm?

What are the barriers to allowing gleaning on your farm?

How have water issues impacted your farm in recent years?

What processing/products do you think would be successful in Klamath County?

Do you utilize solar, geothermal, or other renewable energy practices?

What changes have you seen in the last 5-7 years with respect to local farming and selling?