

# Tillamook County: 2020 Strategic Vision

## 2009 Indicator Report

Baseline Assessment

**A Product of the Vital Tillamook Indicator Project**

A collaboration of:

The Tillamook County Futures Council and  
Oregon State University Extension Service & Rural Studies Program



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## Vital Tillamook Indicator Project Indicator Report – January, 2010

### Vital Tillamook Indicator Project Overview

Vital communities are those in which residents work together and attain a balance of positive social, economic, and environmental outcomes. As rural communities today face various economic, ecological, and population changes it is important that they pay close attention to their vitality. Such focus can illuminate the targets for coordinated community action and strategic planning during challenging times. That said, within this broad notion of community vitality, for which specific goals should rural communities aim? And once the goals are set, how will the community know if they are being met?

In 2008 and 2009, Oregon State University Extension Service and Oregon State University's Rural Studies Program partnered with Tillamook County in an effort to answer the questions posed above. The purpose of the project was to work together to define the specific elements of community vitality for the county that reflect the goals and values held by residents, measure vitality by constructing indicators and gathering data for the indicators, and finally assess the vitality of Tillamook County using the indicator data and community input. With a set of goals and a clear way of gauging the attainment of those goals in hand, the county can then initiate or continue to support policies or programs designed to bolster vitality. In the future, changes in the indicators can provide residents and decision-makers some insight into how community decisions have affected the county's vitality.

While the focus of the project in Tillamook County was to understand community vitality from the local perspective, the project is part of a larger effort to come to a better understanding of rural community vitality at large. Oregon State University's Rural Studies Program is engaged in an effort to work with rural communities across the state to better understand how rural communities conceptualize vitality and how the university and communities can effectively partner in applied research projects. The purpose of this larger effort is two-fold. On the one hand, the aim is to advance social scientific understanding of rural communities in the modern, post-industrial context. On the other hand, the aim is to help rural communities understand their economy, environment, and social context so they can proactively plan for and realize a vital future. Community participation in the process of defining indicators can build a community's capacity and help foster many of the characteristics that are seen in successful rural communities. Involving community stakeholders creates a sense of ownership of the indicators, increasing the likelihood that they will be accepted and used to guide community decision-making.<sup>1</sup>

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<sup>1</sup> Martinrodgers, Nicole, Ela Rausch, ad Paul Mattessich. 2009. Communities That Don't Bowl in the Fog. *Contexts* 8(1): 26-31.

The partnership between Oregon State University and Tillamook County was formally established between the Tillamook County Futures Council (hereafter referred to as the Futures Council) and three OSU faculty members. In order to collaboratively develop indicators that reflect the community-held understanding of vitality, the project team relied exclusively on the community-based Tillamook County: 2020 Strategic Vision. The Tillamook County: 2020 Strategic Vision was established in 1997 with community input and updated in 2007 based on the input of over 1,000 Tillamook County residents and homeowners. With input from community members and members of the Futures Council, OSU faculty members developed a list of 50 indicators of Tillamook County Vitality (see Table 1) that directly reflect the goals outlined in the Strategic Vision. The Tillamook County Futures Council approved this indicator list on February 2, 2009.

**Table 1**

<b>Indicators of Tillamook County Vitality</b>	
<b>GROWTH &amp; DEVELOPMENT</b>	
1. Land Conversion	2. Home Construction within Urban Growth Boundaries
3. Road Condition	4. Road Capacity
5. Utility System Growth Capacity	6. Public Transportation Coverage
7. Pedestrian & Bike Access	8. Natural Hazard & Disaster Plans
<b>ECONOMY</b>	
9. Employment in Forestry, Agriculture, and Fishing	10. Forest, Agriculture, and Fishing Productivity
11. Skill Training Opportunities	12. Industry Employment Diversity
13. Small & Large Business Health	14. Living Wage Jobs
15. Tourism	16. Workforce Housing
<b>NATURAL ENVIRONMENT</b>	
17. Salmon Runs	18. Forest Health
19. Land Conservation	20. Public Natural Resource Education
21. 303d Listed Waterways	22. Watershed Restoration Projects
23. Riparian Area Quality	24. Participation in Recycling
<b>SOCIETY &amp; CULTURE</b>	
25. Open Space	26. Civic Participation
27. Community Capacity	28. Museums, Cultural Centers & Historic Buildings
29. Community Events	30. Discrimination Experiences
31. Arts & Cultural Establishments	32. Culture of Lifelong Learning
33. Educational Diversity for Adults	
<b>YOUTH &amp; EDUCATION</b>	
34. Culture of Youth Engagement	35. Educational Diversity for Teens
36. Youth Unemployment Rate Post-High School	37. Educational Achievement
38. Teen Pregnancy	39. Teen Substance Abuse

HEALTH & HUMAN SERVICES	
40. Distance Traveled for Care	41. Delay of Health Care due to Cost, Quality, or Availability
42. Availability of Long-Term Care	43. Health Outcomes
44. Substance Abuse Crimes	45. Language Service in Public Arenas
46. Poverty	47. Low-Cost Food Access
48. Index Crime Rate	49. Emergency Services Coverage
50. Affordable Housing	

Community Vitality indicator data were collected from three types of sources:

1. External secondary sources (e.g., Census, Dept. of Human Services, OR Dept. of Ag, OR Dept. of Fish & Wildlife)
2. Local secondary sources (e.g., County Commissioners, Historical Societies, School Districts, Watershed Councils, Chambers of Commerce)
3. Primary sources (e.g., adult survey) – for collection methods and margin of error estimates, see Appendix 1 – Vital Tillamook Indicator Project Survey Methods

After compiling all data, indicator targets were set based on the input of the Tillamook County Futures Council, Oregon State University faculty members, experts in particular fields, and any standards set by independent agencies or organizations. Targets were articulated in various ways. In some instances they were expressed simply as percentages, rates, or amounts equal to, higher, or lower than those observed in 2009. In other instances the goal was expressed as a specific percentage, rate, or amount. In yet other instances the target was stated as being equal to the rate or amount observed in the state. Based on these targets, assessments for each indicator were made. Though the target values may change with further community conversation, the 2009 targets provide a preliminary lens through which to gauge the extent of vitality within the county.

The remainder of this report describes how each indicator was measured, the target or goal associated with each indicator, and finally a baseline assessment of the attainment of the goal. In order for a community to be fully vital, all observed indicator levels must meet the targets.

## GROWTH & DEVELOPMENT INDICATORS

### 1. Land Conversion

Indicator	Measure	Data	Year	Source
<b>Land Conversion</b>	# of acres approved for zoning change from farm, forest, or small farm/woodlot to residential or commercial	5.48	2008	Tillamook County Department of Community Development

In Tillamook County, the extent to which farm- or forest-land is converted to residential or commercial land is one component of vitality. Re-zoning land that was available for its natural resources into land available only for residential and commercial growth is viewed as diminishing the overall “rurality” of the community. The hope within the county is to preserve the rural nature of the community as much as possible.

In order to measure this indicator we relied on data from the Tillamook County Department of Community Development. This department provided data about the total number of acres that were approved for re-zoning from resource to residential or commercial in 2008.

In 2008, 5.48 total acres (corresponding to two properties) were re-zoned from natural resource farm, forest, or small farm/woodlot use to residential or commercial uses. Specifically, of these two properties, one was converted from farm (F-1) to rural residential and the other was converted from farm (F-1) to industrial (M-1).

#### *Indicator Target*

The goal for this indicator is for the number of farm, forest, or small farm/woodlot acreage converted to residential or commercial land to remain close to zero.

#### *Assessment*

In 2009, Tillamook County was slightly below the target with respect to the number of farm or forest land acres converted to residential or commercial land.

### 2. Home Construction within Urban Growth Boundaries

Indicator	Measure	Data	Year	Source
<b>Home Construction within Urban Areas</b>	% of dwelling permits issued for construction within city limits & Urban Growth Boundaries	22%	2008	Tillamook County Department of Community Development (personal communication)

Another key indicator of the extent to which Tillamook County is preserving its rural nature is the prevalence of home construction within the Urban Growth Boundaries established by the Tillamook County Comprehensive Plan.

According to data provided by the Tillamook County Department of Community Development via personal communication with OSU faculty members, 22% of the dwelling permits issued in 2008 were issued for dwellings to be constructed within the Urban Growth Boundaries of cities or directly within city limits. The remaining 78% of permits were for dwellings to be constructed on county lands, some of which may be close to existing unincorporated towns.

*Indicator Target*

The goal for this indicator is for the majority of dwelling permits to be issued inside the Urban Growth Boundaries during a given period.

*Assessment*

As of 2009, Tillamook County was below the target for this indicator, as less than 51% of dwelling permits issued in the county were for properties inside of the Urban Growth Boundaries.

**3. Road Condition**

Indicator	Measure	Data	Year	Source
Road Condition	% of state roads in good or better condition in ODOT Region 2, District 1 (Tillamook County and portions of Clatsop and Lincoln counties)	64%	2008	OR Department of Transportation
	% of county roads in satisfactory or better condition in Tillamook County	40%	2008	Tillamook County Public Works

The condition of roads throughout Tillamook County is important to residents, as automotive transportation is the prime form of transportation across the often long distances between communities. Roads are also used by visitors to the county, and their quality may encourage or discourage visitors from exploring areas of the county for goods, services, or amenities.

In order to measure this indicator, road data from the Oregon Department of Transportation (ODOT) and the Tillamook County Public Works Department were obtained by OSU faculty. The data reported by ODOT correspond to the district in which Tillamook County is situated (Region 2, District 1), and therefore includes portions of Clatsop County and Lincoln County. In order to assess the condition of roads in this area, ODOT conducts windshield surveys by staff teams. Based on the visual survey of state

roads, the team assigns scores on a 1 to 100 scale for particular road segments. The scores of the scale are then categorized as very poor, poor, fair, good, and very good. For the purposes of this indicator assessment, we used the number of state road miles within the district that received a good or very good rating. The Tillamook County Public Works Department uses a similar visual survey method, but the categorization scheme is slightly different. Instead of a five-point scale, the county uses four categories; poor, fair, satisfactory, and good. For this report, we used road miles that received a good or satisfactory score as the summary measure of county road condition. Unfortunately, because the county condition scale differs from the state road scale used, it is not possible to compare the two measures side-by-side.

Examining first the condition of state roads, we see that, according to the ODOT surveys, 64% of state road miles were in good or very good condition in 2008.

With respect to county roads, the Tillamook County Public Works data reveal that 40% of county road miles were in satisfactory or good condition in 2008. Taken in historical perspective, 40% represents a sizeable and rapid decline in road condition for Tillamook County as 64% of county road miles were in satisfactory or good condition in 2001. This difference indicates that county roads deteriorated by 33% between 2001 and 2008.

Overall, in 2008, the majority of state roads were in good or better condition and the majority of county roads were in fair or worse condition.

#### *Indicator Target*

Ideally, the goal within Tillamook County would be for county roads to be in the same or better condition than the average condition of county roads across the state.

Unfortunately, however, an average condition of county roads across the state has not been determined by a central agency (county roads are managed by separate counties, which also conducts its own separate condition assessments). For this reason, the target is simply for the percentage of county roads in Tillamook County that are in satisfactory or better condition to increase in the future.

#### *Assessment*

As of 2009, the condition of Tillamook County roads owned by the county (Public Works Department) were below target.

**4. Road Capacity**

Indicator	Measure	Data	Year	Source
<b>Road Capacity</b>	% of Tillamook County sampled roads with volume-to-capacity ratio greater than ODOT standards	0%	2008	OR Department of Transportation

The extent to which roads in Tillamook County can handle the level of traffic they receive serves as an indicator of the growth the county could support and the development needed. Transportation infrastructure is just one way of gauging the growth potential of the county, but one that was specifically identified as important to residents.

In order to measure road capacity in Tillamook County, data were obtained from the OR Department of Transportation (ODOT). In 2008, ODOT sampled the state, county, and national roads across Oregon and calculated a volume to service flow (capacity) ratio for all sampled segments. ODOT uses this ratio to measure congestion. OSU faculty obtained volume to capacity data for road segments sampled in Tillamook County in 2008 from ODOT via personal communication with a staff member. In 2008, ODOT staff sampled 49 total miles of road in the county, and calculated a volume to capacity ratio for all of these miles.

In 2008, according to the sample data collected and provided by the OR Department of Transportation, none of the state or county roads was “at capacity,” or congested, according to ODOT standards. In other words, no roads had volume to capacity ratios greater than 1.4.

*Indicator Target*

The goal for this indicator is for no roads to be operating at capacity in Tillamook County.

*Assessment*

In 2009, Tillamook County was on target as there were no congested roads in the county.

**5. Utility System Growth Capacity**

Indicator	Measure	Data	Year	Source
<b>Utility System Growth Capacity</b>	No data			

In order to gauge the extent to which Tillamook County can sustain future population growth, the capacity of utility systems throughout the county was chosen as the



indicator. Specifically, information about the relationship between use capacity and the current use of water and sewer systems was used.

In 2009, according to information provided by the Tillamook County Assessor’s Office, there were 32 water districts or water companies operating in Tillamook County. With respect to the total number of sanitation districts or authorities operating in the county, OSU faculty were unable to obtain this information.

In order to get accurate information about the relationship between system capacity and current usage it is necessary to communicate with each utility company or district to get the most recent statistics. This information is best collected by systematically contacting each company or district with a short mail survey or a short phone survey. In 2009, OSU faculty members did not have the resources to implement such a data collection effort.

**6. Public Transportation Coverage**

Indicator	Measure	Data	Year	Source
Public Transportation Coverage	% of unincorporated & incorporated places served by WAVE	84%	2009	WAVE

Within the vision for Tillamook County’s growth and development is a desire to have a viable rural public transportation system. Specifically, the goal is for public transit to be available countywide for residents and visitors.

In 2009, the WAVE was the only agency that provided public transportation for residents of and visitors to Tillamook County. The WAVE provides services with small buses along fixed routes and with a dial-a-ride program that picks up individuals who have reserved a ride at their specified location and drops them off at the door of their destination. For the purposes of this indicator, the WAVE’s bus system coverage was used as the measure. Important to note, however, is the presence of the dial-a-ride service for those in need of more tailored public transportation. Users of dial-a-ride may have ambulatory difficulties or are able to plan their travel arrangements between two hours and two weeks ahead of time.

Using the WAVE route maps in conjunction with Google Maps™, we were able to assess the extent of community coverage by this transit system. In 2009, there were 32 incorporated and unincorporated communities in Tillamook County. Out of those 32 communities, the WAVE had official stops at 17, yielding a coverage rate of 53%. The WAVE also serves communities without an official stop, however. Riders can request stops between official stops by specifically asking the driver to do so, or by waving the driver down at a safe spot along the route road. Taking into consideration the flexibility

of this service, there were 27 communities that were served by official and unofficial stops of the WAVE (84% of all Tillamook County communities).

*Assessment*

In 2009, Tillamook County was on target with respect to the proportion of communities in the county served by the public transportation system.

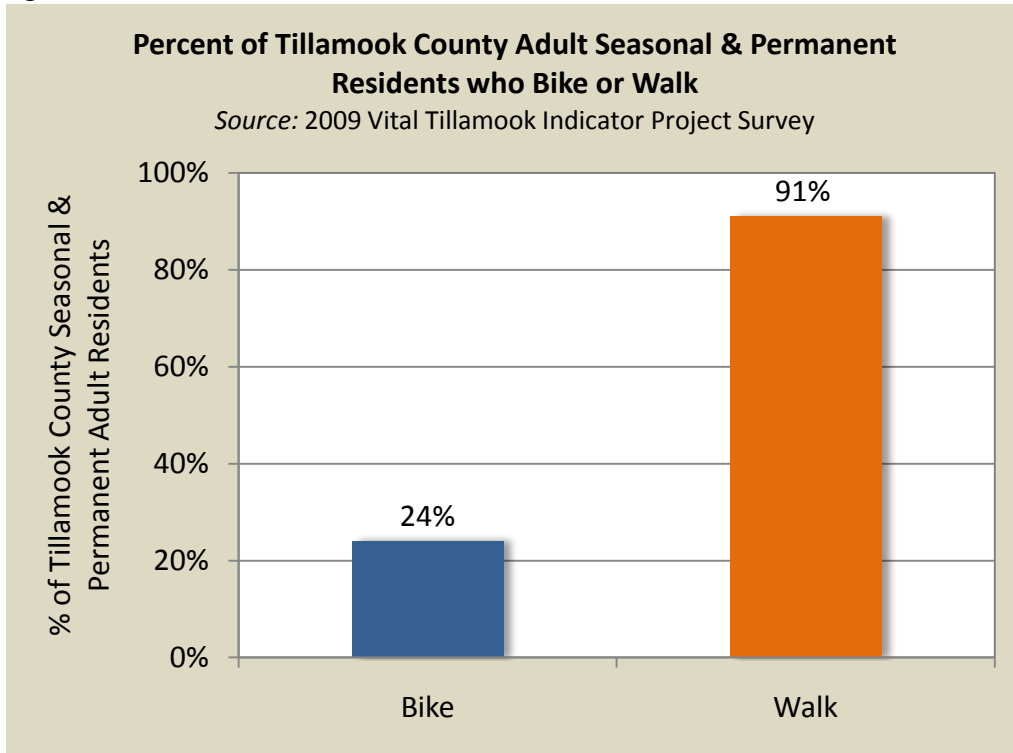
**7. Pedestrian & Bike Access**

Indicator	Measure	Data	Year	Source
<b>Pedestrian &amp; Bike Access</b>	% of adult permanent and seasonal residents who bike	24%	2009	VTIP Survey
	% of adult permanent and seasonal residents who walk	91%	2009	VTIP Survey
	% of adult permanent and seasonal residents who are satisfied with access to safe streets and paths:			
	To bike on	23%	2009	VTIP Survey
	To walk on	53%	2009	VTIP Survey

Encouraging the use of alternative forms of transportation is another goal expressed in the Tillamook County: 2020 Strategic Vision. In order to understand the extent to which residents are indeed using alternative modes of transportation, the indicator focuses on biking and walking behaviors and access.

In order to assess walking and biking behaviors among adult seasonal and permanent residents of Tillamook County data from the Vital Tillamook Indicator Project survey were used (See Appendix 1 for details of the survey methodology). On the survey, respondents were asked sets of questions related first to biking and then to walking. One set of questions asked about the frequency of biking or walking activities in the last 12 months, another asked about why respondents may have walked or biked in the last year, and the third set asked about satisfaction with access to safe streets and paths to bike or walk on in the county.

Figure 1

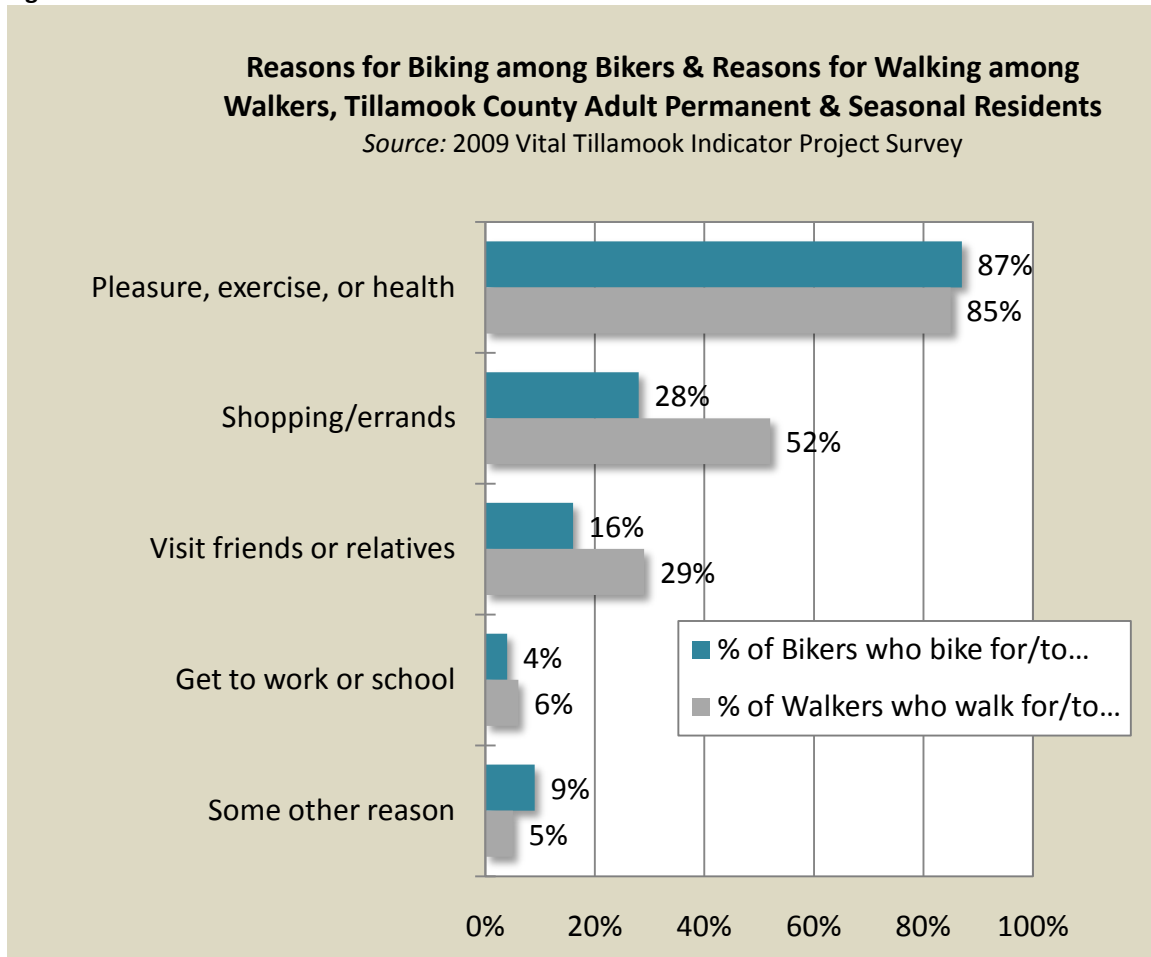


According to the 2009 VTIP survey, as Figure 1 displays, nearly one quarter of seasonal and permanent residents took trips by bike over the last year. Approximately 16% biked only a few times in the year, five percent biked a few times per month, two percent a few times a week, and one percent biked almost daily. By contrast, a full 91% of residents walked in the county for a variety of reasons in the last 12 months.<sup>2</sup> About 24% walked only a few times in the year, 28% walked a few times per month, 19% walked a few times a week, and 20% walked almost daily. Clearly, walking is more popular than biking and nearly equal proportions of the population walk frequently as do so infrequently.

With respect to reasons for biking and walking within the county Figure 2 illustrates that doing so for pleasure, exercise, or health was the most often cited reason by residents in 2009.

<sup>2</sup> Survey respondents were specifically instructed not to consider walking from a parking lot to a building entrance as a form of walking that counted on the survey.

Figure 2

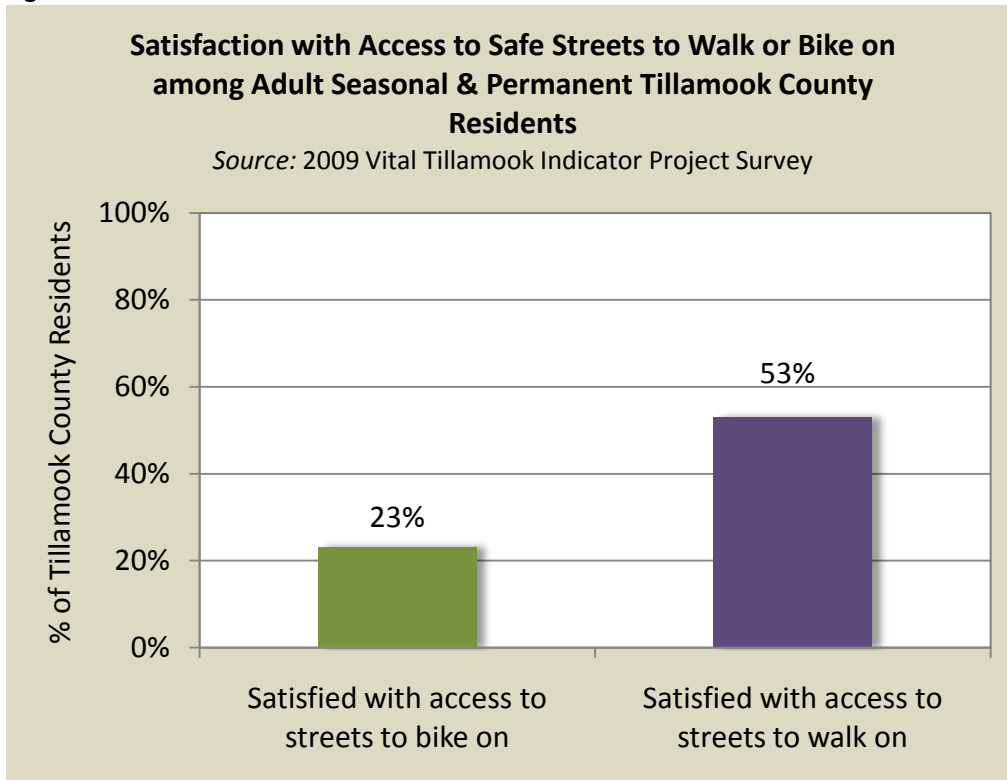


As Figure 2 illustrates, of the adult permanent or seasonal residents who biked in the last year, 87% did so for pleasure, exercise, or health and among those who walked in the last year, 85% did so for these reasons. The reason that the next greatest proportions of the biker and walker populations gave for biking or walking, was for shopping or other errands followed by doing so to visit friends or relatives. Biking and walking to school or work was not often a reason given by bikers or walkers. Examining the popularity of these reasons illuminates that in 2009, seasonal and permanent residents most often associated these alternative modes of transportation with leisurely pursuits. According to the 2009 survey findings, residents did not often bike or walk for reasons that can substitute for automotive transit, such as getting to work or school.

Turning now to the perceptions held by residents about access to biker- or walker-friendly streets and paths we note a contrast between modes (See Figure 3). With respect to satisfaction with access to safe streets and paths to bike on, 23% of adult permanent and seasonal residents were mostly to completely satisfied. By contrast, about half of residents were mostly to completely satisfied with their access to safe streets and paths to walk on. While nearly half of residents were not satisfied with their

access to safe streets to walk on, an even larger proportion of residents were not satisfied with the road infrastructure for biking.

**Figure 3**



In sum, many Tillamook County residents bike or walk, though walking is the more popular of the two modes. The majority do so for pleasure, exercise, or for health reasons and lesser proportions bike or walk explicitly for reasons that can replace automobile transit. Not surprisingly, given the lower proportion of residents who bike as opposed to walk, fewer residents are satisfied with their access to safe streets to bike on than the proportion of residents who are satisfied with their access to safe streets and paths for walking.

#### *Indicator Target*

The primary goal for this indicator is for the proportion of residents who are satisfied with their access to safe streets for biking and walking to be at a reasonable level. With respect to the proportion of residents satisfied with their access to safe biking streets, the goal is for at least 40% of residents to be mostly to completely satisfied. In the future, the goal is for there to be no net decline in the proportion of residents who are satisfied with their access to safe streets for walking.

The secondary goal for this indicator relates to the prevalence of walking and biking among residents. The intent is for increases in the proportion of residents satisfied with

access to safe routes to bike on and safe streets to walk along to drive subsequent increases in the percentages of residents who bike or walk.

*Assessment*

In 2009, Tillamook County was slightly below the targeted percentage of residents who are mostly to completely satisfied with their access to safe streets to bike on; and subsequently in the proportion of residents who bike. With respect to meeting the targeted percentage of residents who are satisfied with their access to safe walking streets, Tillamook County was on target in 2009.

**8. Natural Hazard & Disaster Plans**

Indicator	Measure	Data	Year	Source
County Natural Hazard & Disaster Plans	# of types of warning systems in place	3	2009	Tillamook County Office of Emergency Management
	# of flood mitigation projects and/or measures (completed)	2	2009	County Commissioners Office & Tillamook County Office of Emergency Management

Tillamook County’s geography makes the county susceptible to flooding, tsunamis, landslides, and other natural disasters. Given these challenges, it is important for the community to both prepare for and respond to natural hazards in an appropriate manner. The measures chosen to represent the extent to which the county prepares for and responds to natural hazards relate to public warning systems and flood mitigation projects.

The engagement of the county in flood mitigation projects speaks to its ability to prepare for the occurrence of floods and to reduce their damaging effects on the community. According to information provided by the Office of the Tillamook County Commissioners and the Tillamook County Office of Emergency Management, in 2009 two flood mitigation projects were completed. It is unclear the number of mitigation projects needed in the county, however, so this measure is difficult to interpret on its own.

According to data provided by the Tillamook County Office of Emergency Management there were three types of emergency warning systems in place in the county in 2009. The presence of these warning systems reflects the county’s ability to respond to natural hazards. One type of warning system relies on radio, the second the ability to call all area inhabitants using reverse 9-1-1, and the third type of warning system is the use of sirens. All three of these warning systems can quickly alert residents and visitors to danger related to tsunamis or other natural disasters. In fact, Tillamook County is one

of only three coastal counties in Oregon to be designated “Tsunami Ready” by the National Weather Service. Communities earn this designation by meeting specific guidelines set by the National Weather Service related to communications and coordination infrastructure, tsunami warning reception and dissemination systems, community awareness education, and administrative planning (<http://www.tsunamiready.noaa.gov/guidelines.htm>). In 2009, Tillamook County satisfied all dimensions of this guidance that were set based on its population size.

In sum, according to data provided by county officials, Tillamook County is actively engaged in efforts to prepare for, respond to, and recover from natural hazards related to tsunamis and flooding. Two flood mitigation projects were completed in 2009 and three types of warning systems were in place to alert residents and visitors to dangers associated with tsunamis or other widespread events in 2009.

*Indicator Target*

In the future, the goal for Tillamook County is to have no net loss along either of these dimensions of natural hazard and disaster planning. The target is to have at least three types of warning systems in place in the county and, in a given year, to complete no fewer than two flood mitigation projects.

*Assessment*

In 2009, Tillamook County met its goals with respect to natural hazard and disaster planning.

## ECONOMIC INDICATORS

### 9. Employment in Forestry, Agriculture, and Fishing Industries

Indicator	Measure	Data	Year	Source
<b>Employment in Forestry, Agriculture, &amp; Fishing</b>	% of employment in forestry and fishing	4.6%	2007	Regional Economic Information System, US Bureau of Economic Analysis
	% of employment in farming	5.1%	2007	
	% Change in employment in forestry and fishing	-9.0%	2003-2007	
	% Change in employment in farming	2.5%	2001-2007	USDA Census of Agriculture
	% of farms that are family owned	77%	2007	

Tillamook County places a high value on the extent to which traditional industries, such as forestry, fishing, and farming, continue to be a part of its economic engine. Toward this end, employment in forestry, fishing, and agriculture along with the prevalence of family owned farms were chosen as indicators for this component of the vitality assessment.

In 2007, according to employment data from the US Bureau of Economic Analysis, almost five percent (5%) of jobs in the county were in the forestry or fishing industries, and about five percent (5%) were in the farming industry. Included in these figures are the owners of businesses in these sectors. Over the decade, forestry and fishing experienced some decline in their share of jobs in the county, but farm employment increased slightly. The number of workers employed in forestry and fishing declined nine percent between 2003 and 2007, while the number of workers employed in farming increased nearly three percent between 2001 and 2007. These changes could reflect short-term fluctuations or be indicative of long-term trends.

With respect to the prevalence of family owned farms in Tillamook County, the USDA Census of Agriculture from 2007 provides some insight into the extent to which families own and operate their own farms. According to these USDA data, families or individuals owned and operated nearly 8 out of 10 Tillamook farms in 2007. According to the USDA, these farms were owned and operated solely by individuals or family members, not by corporations, partnerships, or other types of institutions.

Overall, forestry and fishing declined in their contribution to the employment base of Tillamook County between the early and later 2000s. While agriculture increased slightly in its share of employment, it still employed relatively few individuals. In 2007, approximately 1 out of 10 workers was employed in the forestry, fishing, or agricultural industries. Farm ownership appears to have been dominated by families in 2007.



*Indicator Target*

The goal for this indicator is for a moderate percentage of Tillamook County residents to be employed in the farming, forestry, and fishing sectors. At the heart of this desire is for these industries to remain a part of the economy in the county. In addition, it is important to recognize that other industries make up significant portions of successful rural economies; therefore the goals for future levels of employment in these three sectors are modest. In the forestry and fishing sector, the goal is for approximately seven percent of workers to be employed in these fields, while within the farming sector the goal is for about ten percent of workers to be employed therein.

*Assessment*

According to 2008 data from the US Bureau of Economic Analysis, Tillamook County was slightly below target with respect to the percentage of workers employed in forestry, fishing, or farming.

**10. Forest, Agriculture, and Fishing Productivity**

Indicator	Measure	Data	Year	Source
<b>Forest, Agriculture, &amp; Fishing Productivity</b>	Board feet cut from private land (industrial and NIP)	103,531,000	2008	OR Department of Forestry
	Board feet cut from all public land (State, Federal, County & Municipal)	80,908,000	2008	OR Department of Forestry
	<u>Pounds of fish &amp; shellfish commercially harvested:</u>			OR Department of Fish & Wildlife
	Garibaldi	1,783,026	2008	
	Nehalem Bay	0	2008	
	Netarts Bay	1,705	2008	
	Pacific City	63,086	2008	
	Pounds of dairy products produced	5,352,582	2008	OR Agricultural Information Network

Another indicator of the extent to which traditional industries continue to be a part of Tillamook County’s economic engine is their productivity. In order to measure the productivity of forestry, fishing, and agriculture a variety of statistics were used.

In order to measure forest productivity, the board feet of timber cut on private and public land in Tillamook County was used. According to figures provided by the OR Department of Forestry, 184,439,000 board feet of timber were harvested from public and private lands in the county in 2008. Greater amounts of timber were harvested off private land than public land in 2008.

The number of pounds of fish and shellfish that were commercially harvested off the Tillamook County coast serves as an indicator of fishing productivity. In 2008, according to statistics provided by the OR Department of Fish & Wildlife, the total number of pounds of fish and shellfish harvested off the Tillamook Coast was 1,784,731. Garibaldi appeared to be the most productive port and had the greatest number of pounds recorded, a distant second was Pacific City, and third was Netarts Bay. Nehalem Bay had no record of fish or shellfish harvested (for commercial purposes).

With respect to agricultural productivity, we relied on dairy production figures. In 2008, according to the OR Agricultural Information Network (OAIN), an estimated 91% of the agricultural commodity sales in Tillamook County were dairy products, indicating that the productivity of this sector is a relatively good proxy for measuring the productivity of all agriculture in the county. According to the dairy production estimates produced by the OAIN, Tillamook County farmers produced more than 5.3 million pounds of milk in 2008. Also according to the OAIN, 100% of these dairy products were sold that year for a total of more than \$107 million. The estimated pounds of dairy produced and sales in 2008 were down only slightly from the statistics recorded in 2007 (2007 sales were \$108 million and 2007 production was 5.7 million pounds). The 2008 sales figures were up from 2005, however, by ten million dollars despite the total number of pounds produced being about 500,000 pounds less than that produced in 2005.<sup>3</sup>

#### *Indicator Target*

In the future, the goal for Tillamook County is to have no net loss in forestry, fishing, or agricultural productivity. Within forestry productivity, a gain of approximately ten percent (to 113,000,000 board feet cut on private land and 89,000,000 on public land) is desired. In fishing and farming, the goal is moderate growth, within the range of zero to five percent from 2008 figures.

#### *Assessment*

According to the 2008 data, Tillamook County appears to be only slightly below its target with respect to forestry, fishing, and farming productivity.

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<sup>3</sup> Important to note in these sales amount statistics is that the values of sales in a particular year reflect commodity prices and amount of milk produced. Year to year fluctuations in values reflect both changes in the amount of dairy products sold and changes in the price per unit offered in the commodity markets.

## 11. Skill Training Opportunities

Indicator	Measure	Data	Year	Source
Skill Training Opportunities	# vocational and job training degrees and classes at Tillamook Bay Community College	48	2009-2010	TBCC
	# vocational and job training classes at Management & Training Corporation	10	2009	MTC
	# vocational and job training at Neah-Kah-Nie HS	12	2009-2010	School District
	# vocational and job training classes at Nestucca Valley HS	10	2008-2009	School District
	# vocational and job training classes at Tillamook HS	19	2009	School District

The relationship between the skills of the labor force and the potential of the economy is a close one. Employers present in the local economy signal to potential workers their needs with respect to skills and expertise, and the skills held by the labor force signal to potential employers (and industries) the feasibility of locating in that area. In a county such as Tillamook that wishes to both preserve traditional industries and expand into new areas, the skills of its labor force are key indicators of potential economic growth and stability. For this reason, an economic indicator adopted by Tillamook County was the prevalence of skill training opportunities. The indicator answers the question: To what extent does the Tillamook County workforce have access to the education they need to work in emerging industries and those already present in the local economy?

In order to measure this indicator, we relied on data from the major educational institutions in Tillamook County namely, the high schools, the community college, and the workforce-training agency. We found that at the Tillamook Bay Community College, according to the 2009-2010 course catalog, 48 career and technical degrees or certificates were offered. These certificates and degrees represented a variety of professions and industries including accounting, computer information systems, culinary arts, early education, electrician, construction, hospitality and tourism, marketing, nursing, corrections, mechanics, and agriculture.

The Management & Training Corporation (MTC) in Tillamook County also offers job-skill training to adults in the county. In 2009, their website reported offering 10 of these services. Primarily, the trainings focus on office management-related proficiencies such as computers and internet, software, and clerical work. In addition, MTC offers other services to job seekers such as resume writing and job searching. These services were not included in the tally of training classes however, as they were not focused on skill-building for particular professions or industries.

At the high schools in Tillamook County, according to their respective course catalogs, youth were offered a number of courses and course tracks in 2009-2010 that aim to prepare them for the workforce. At Neah-Kah-Nie High School, students had access to 12 courses, Tillamook High School students had access to 19 courses, and Nestucca Valley High School students had access to 10 courses. These courses and educational tracks related to a variety of industries including health services, construction, engineering, accounting, computer aided design (CAD), web design, forestry, horticulture, journalism, veterinary medicine, and media production.

Overall, the data indicate that through the high school system, the community college, and a private company (MTC), youth and adult residents of Tillamook County have access to many skill training opportunities for industries such as agriculture, forestry, construction, health care, recreation and tourism, and information services.

#### *Indicator Target*

The goal for this indicator is for there to be growth in the number of skill-training opportunities offered by each of the institutions in Tillamook County. Specifically, the goal is for Tillamook Bay Community College to offer 60 vocational and job training degrees and classes, for the Management & Training Corporation (MTC) to offer approximately 13 vocational and job training classes, and for the high schools to increase their offerings by ten percent (13 classes at Neah-Kah-Nie, 11 at Nestucca, and 21 at Tillamook).

#### *Assessment*

According to data corresponding to the 2009 to 2010 academic year, Tillamook County was slightly below the target for the number of skill training opportunities available to youth and adults in the county.

## 12. Industry Employment Diversity

Indicator	Measure	Data	Year	Source
Industry Employment Diversity	Tillamook County Herfindahl Index Score (range: 0-1, 0=diverse, 1=not diverse)	0.029	2008	OR Employment Department
	<u>Industries of top 5 employers</u>			
		Manufacturing: Food	2007	Infrastructure Finance Authority
		Manufacturing: Lumber and Wood Products	2007	Infrastructure Finance Authority
		Services: Health Services	2007	Oregon Job Match
	Public Administration: General Government	2007	Oregon Job Match	

Another dimension of economic vitality for Tillamook County residents is the concentration of jobs in the various industrial sectors. Again, the hope is to maintain jobs in farming, fishing, and forestry, but also to expand into additional areas such as tourism. In order to gauge the concentration of jobs in particular industries, a variety of measures were used. The first measure illustrates the concentration of jobs by industry in the county and the second illuminates the industries of the top employers in the county.

One way that economists gauge the diversity of an economy is to use a Herfindahl index score. The Herfindahl Index is a statistical measurement that takes into consideration the shares of employment by industry in a locale, and by squaring the proportional shares and summing across all industries for a county the index yields a standardized and singular measure of industry diversity. Values of the index range between zero and one; where a one means that the economy of the county is not diverse at all (one industry is the predominant employer in a county) and a zero means that the economy is completely diversified. In 2009, the Oregon Employment Department used 2008 employment data by industry for each county to calculate the Herfindahl index for all counties in Oregon. According to these 2008 employment data, Tillamook County's Herfindahl index was 0.029. The county ranked 24<sup>th</sup> out of the 36 Oregon counties with respect to index score of diversity. Metropolitan counties accounted for the top four, most diverse, economies with index values that ranged from 0.013 to 0.014. The fifth county with the most diverse economy was a non-metropolitan county, namely Linn County and Josephine County ranked seventh (another non-metropolitan county).

Another way of looking at employment by industry is to examine the rates of employment in each industry in the county. In order to see how Tillamook County jobs are distributed by industry, and specifically identify which industries dominate the local economy. Figure 4 shows the percentage of jobs in Tillamook County that were in each of 18 industries in 2007. The data come from the US Bureau of Economic Analysis and include full-time and part-time jobs.

Figure 4

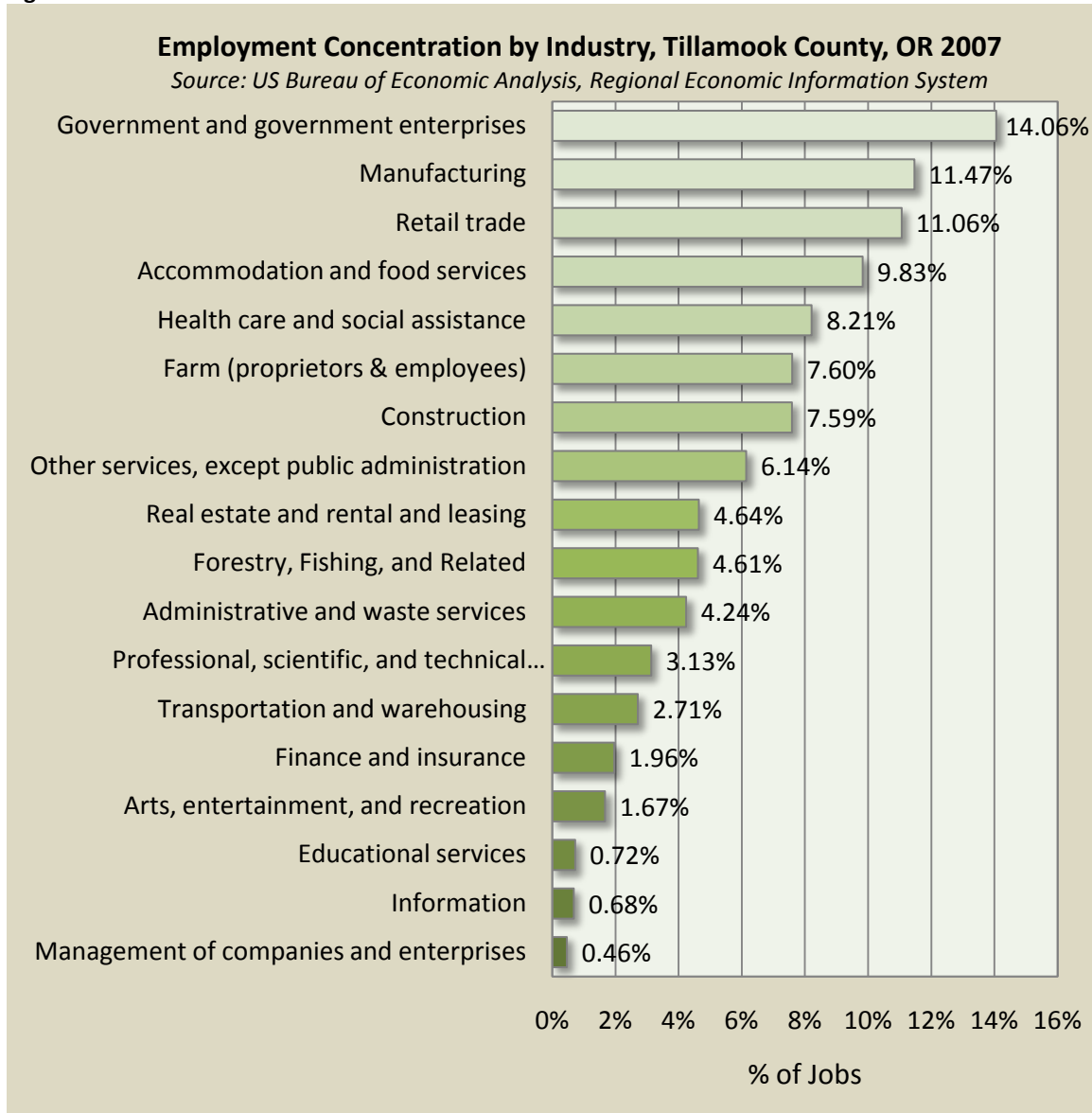


Figure 4 shows that in 2007, the five industries in Tillamook County that employed the greatest shares of workers were government, manufacturing, retail, accommodation and food services, and health care/social assistance. Farming was in sixth place and forestry, fishing and related industries were in tenth place.

Figure 5 indicates the potential for diversification or consolidation of industry employment over time by illustrating change in employment by industry over a seven year period.

Figure 5

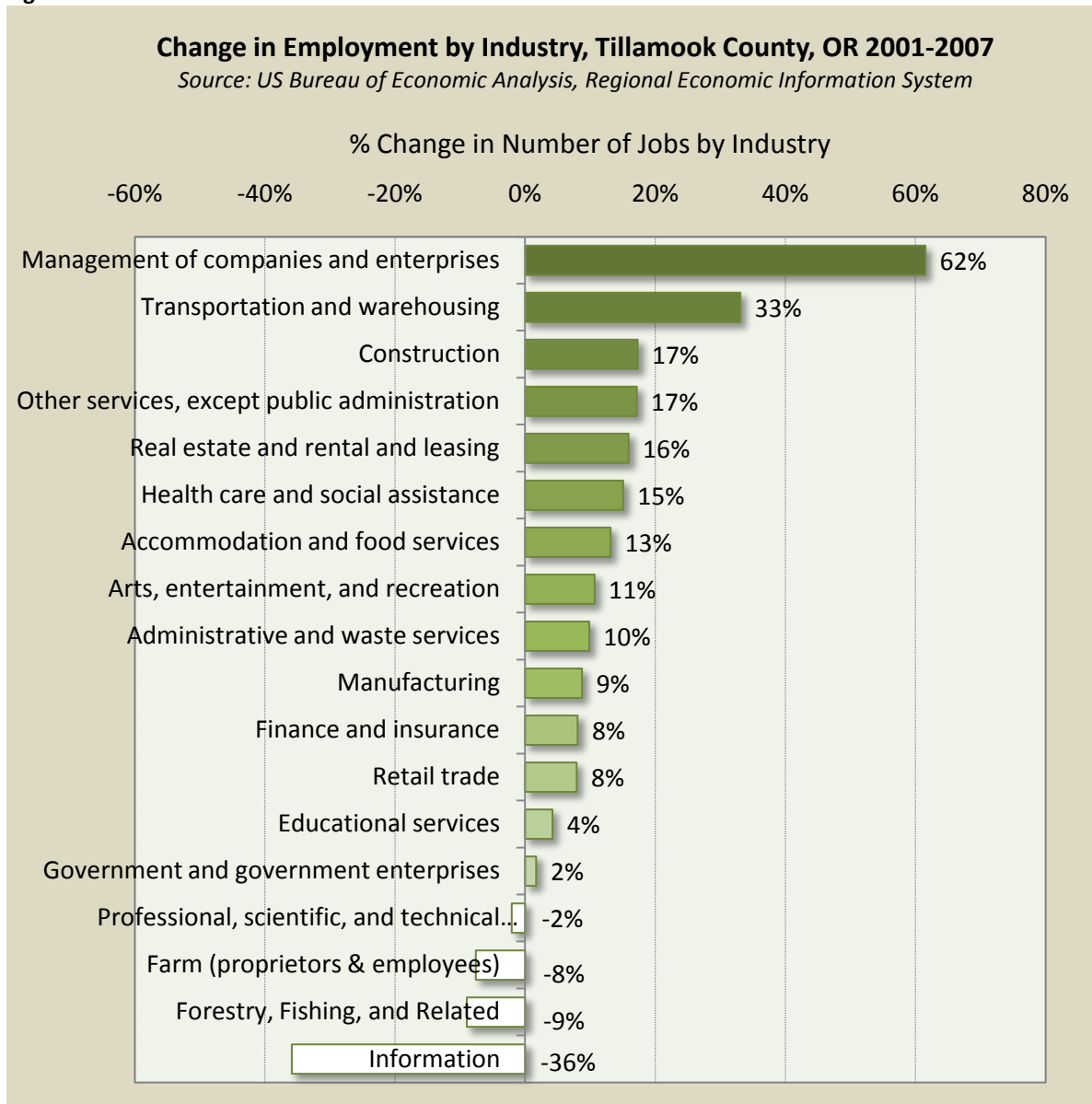


Figure 5 reveals that many industries grew in the number of people they employed between 2001 and 2007. The greatest rates of growth occurred in the management (between 2003 and 2007) and transportation and warehousing industries. Note that these were industries that employed a relatively small proportion of the workforce in 2007. Construction, other services, real estate, health care/social assistance, and accommodation/food services experienced moderate growth between 2001 and 2007. Some of these moderate growth industries employed large proportions of the labor force in 2007. The largest industry employer in 2007 (government and government enterprises) saw very small growth (2%), however, between 2001 and 2007.

Between 2001 and 2007, four industries experienced declines in the number of people they employed. Professional services (between 2004 and 2007) saw the smallest decline, followed by farm, forestry, fishing and related, and information. While Figure 2 reveals the industries that, over the prior six years, gained and shed employees, it is important to note that when comparing the shares of employment by industry between '01 and '07 we find overall stability in the relative distribution of jobs across industry sectors. In other words, between 2001 and 2007 no industries increased or lost so many workers as to change their position much in the industry employment hierarchy.

The final measure of industry employment diversity applied in this assessment was the industries of the top five employers in Tillamook County. While the OR Employment Department collects information about the number of employees by firm, this agency cannot divulge the names of the firms with the greatest number of employees to the public. Therefore, in order to approximate this measure, estimates from Oregon Infrastructure (<http://www.orinfrastructure.org/>), collected between 2005 and 2007, and Oregon Job Match (<http://www.oregonjobmatch.com/employers-TILLAMOOK-County-Oregon.htm>), collected in 2003, were used. According to these estimates, Tillamook County Creamery Association, Tillamook County General Hospital, and Tillamook County public agencies had the greatest numbers of employees between 2005 and 2007. After these, Stimpson Lumber, Tillamook Country Smoker, and Tillamook Lumber Company had the next highest estimated numbers of employees. The employee size estimates of these three firms were equal, making it impossible to determine which two employed more workers. These six employers represent four unique industries, namely health services, government services, wood manufacturing, and food manufacturing.

Overall, the Tillamook County economy appears relatively diverse, though less so when compared to other counties in Oregon (ranked 24 out of 36). None of the 18 industries examined here employed more than 16% of all workers in 2007. With respect to the share of employment in natural resource based jobs, in 2007, 13% of all Tillamook County jobs were in the farming, forestry, and fishing industries. While small proportions of workers are employed in food and fiber production, many workers are involved with food and fiber processing (manufacturing). In terms of growth industries,



between 2001 and 2007 management, transportation, and construction grew the most to add the greatest relative number of jobs to their sectors.

*Indicator Target*

The goal for this indicator is for the Herfindahl index score of industry diversity to approach zero.

*Assessment*

According to 2008 data from the Oregon Employment Department about the shares of employment by industry in Tillamook County, the county was relatively diverse on the scale of 0 to 1 but was not equal to 0, the goal for this indicator.

**13. Small & Large Business Health**

Indicator	Measure	Data	Year	Source
<b>Small &amp; Large Business Health</b>	Growth rate of small businesses (with 0-4 employees)	+ 13%	2008 to 2009	OR Employment Department
	Growth rate of large businesses (with 50+ employees)	+ 15%	2008 to 2009	OR Employment Department

Tracking the lifecycle of small and large businesses is another important aspect of tracking the vitality of the Tillamook County economy, according to residents. In order to measure this indicator we relied upon data from the Oregon Employment Department.

According to data from the Oregon Employment Department, in the first quarter of 2009 there were 477 small business firms in Tillamook County (firms with zero to four employees) while in the first quarter of 2008 there were 422 firms of the same size. These data illustrate that between 2008 and 2009 there was an increase in the number of small businesses in Tillamook County, by approximately 13%. On the surface, this figure implies health within the county business environment for businesses, but it is important to note that growth in the number of firms that employed 0-4 people could be due to the emergence of brand new small businesses in Tillamook County or due to the reclassification of firms from one size class to this smaller one because they laid off workers between first quarter 2008 and first quarter 2009.

With respect to large businesses, data from the OR Employment Department indicate that the number of large businesses (those that employed 50 workers or more) rose slightly between 2008 and 2009 in Tillamook County. In the first quarter of 2008 there were 13 large firms operating in Tillamook County and by the first quarter of 2009 there were 15. These two additional firms represent a 15% increase in the number of large

businesses in Tillamook County. This growth could be due to existing firms in the county increasing the number of workers they employed in the year, or to new firms of this size entering the county.

In order to get an overall picture of the prevalence of firms of different sizes in Tillamook County figure 6 displays the proportion of firms by size in the county in 2009.

Figure 6

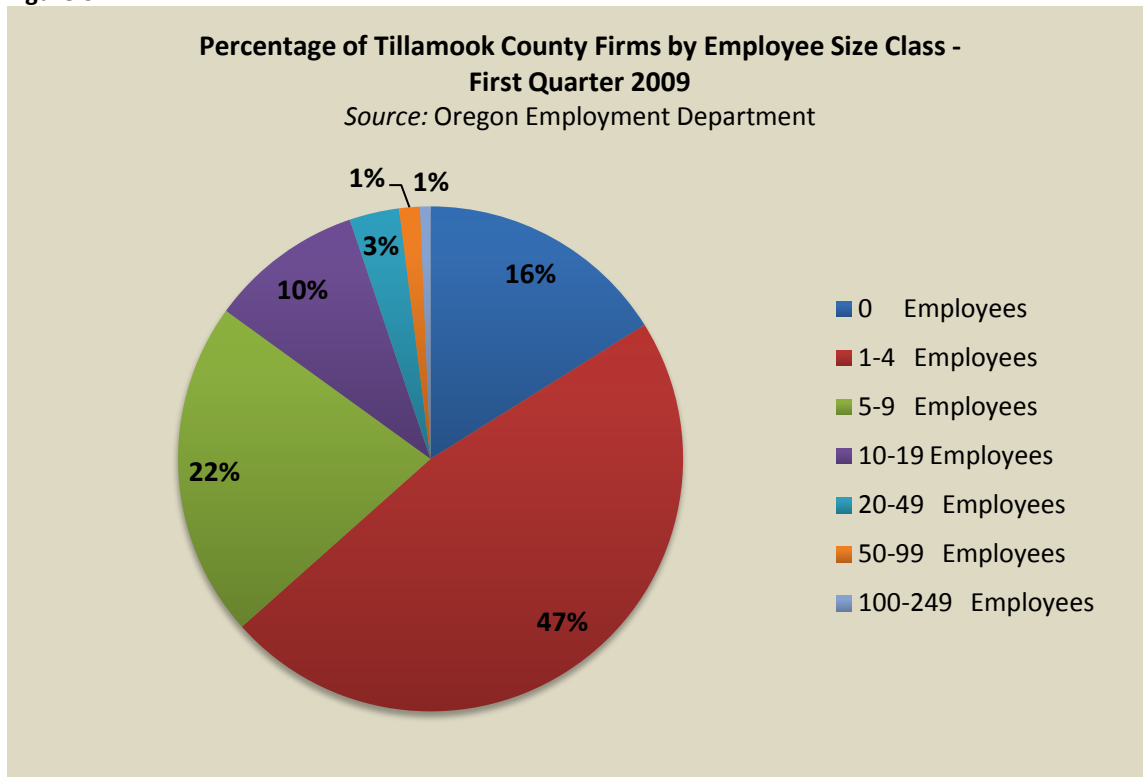


Figure 6 clearly indicates that Tillamook County is dominated by firms with zero to nine employees (85% of all firms). First quarter 2009 did not vary greatly from the first quarter of 2008, though the share of firms with zero employees was slightly smaller in 2008 (11%).

*Indicator Target*

The goal for this indicator is for the growth rates of small and large firms to be greater than growth rates observed between 2008 and 2009; namely +13% and +15% respectively.

*Assessment*

In 2009, according to business size data from 2008 to 2009, Tillamook County small and large businesses were just below target. In future years, we hope to see increases in growth rates from 2008-2009 levels.

**14. Living Wage Jobs**

Indicator	Measure	Data	Year	Source
<b>Living Wage Jobs</b>	Ratio of county average earnings to county basic family budget for families of:			
	1 parent with 1 child (one wage-earner)	0.91	2007	OHCS
	2 parents with 1 child (one wage-earner)	0.77	2007	OHCS
	Average Earnings per job	\$29,903	2007	BEA

Tillamook County residents included in their Strategic Vision a goal that jobs in the county provide a living wage. In order to measure the extent to which jobs in Tillamook County provide a living wage, two factors must be considered. First, it is necessary to determine the cost of living for the county, then that cost of living amount must be compared to prevailing wages in the county.

Cost of living data were obtained from the Oregon Housing and Community Services department (OHCS). OHCS calculated for each county in Oregon, in 2007, a basic family budget for different size families, which is equivalent to the cost of living. The agency calculated the basic family budget for each county by using information about costs of housing, food, childcare, transportation, health care, other necessities (31% of housing and food costs), and taxes in each area. Table 2 presents the basic family budgets, or cost of living, estimated by OHCS for Tillamook County families of various types. According to these OHCS data, in 2007 the cost of living in Tillamook County varied greatly by family type; at the low-end, for a family of one parent and one child the basic family budget was \$32,880, while for a family of two parents and three children the basic family budget was \$58,452.

**Table 2**

<b>2007 Cost of living (Basic Family Budget) for Tillamook County families of various compositions:</b>	
1 parent with 1 child	\$32,880
1 parent with 3 children	\$54,024
2 parents with 1 child	\$38,640
2 parents with 3 children	\$58,452

Source: OR Housing & Community Services

The second piece of information needed to understand the extent to which jobs in the county pay a living wage is prevailing wage information. This information comes from the US Bureau of Economic Analysis (BEA), and is obtained primarily from quarterly unemployment insurance (UI) reports that are filed with the state by employers in industries that are covered by, and subject to, state UI laws ([www.bea.gov](http://www.bea.gov)). For industries not completely covered by state UI programs (such as agricultural services, private education, and religious membership organizations) and for industries not covered by UI programs, wages and salaries are estimated using a number of different

procedures, detailed on the BEA website.<sup>4</sup> According to the BEA, the average earnings per job in Tillamook County in 2007 was \$29,903, which includes wages, salary, pension, insurance, and social security contributions by the employer.

In order to compare the average earnings per job to the basic family budget amounts we calculated a ratio of earnings to the cost of living for families of one parent and one child (assuming that the one parent works for pay) and for families of two parents and one child (assuming that only one parent works for pay). These ratios reveal that the average earnings of Tillamook County jobs fall short of meeting the needs of these types of families. For families of one working parent and one child, average earnings in Tillamook County covers approximately 91% of this type of family's basic budget, while for families of one wage-earning parent, one non-wage earning parent, and one child the average county earnings only covers 77% of this type of family's cost of living.

If we assume, however, that in two-parent families both parents work outside the home and earn the average prevailing wage in the county, we see that the average job will provide just enough with a bit left over for savings for families of two working adults with three children, while for families of two working adults and one child the average job provides more than enough, with quite a bit left for savings. For other types of families, namely, those with one working adult and one child or more, the average job will not provide enough to make ends meet.

Overall, the comparison of the basic family budget for various family types and the average earnings in Tillamook County reveals that no family types can pay for housing, health care, food, and other needs if only one adult works for pay and if he or she earns the average wage observed for the county. In addition we note that among two parent families, if both adults earn the prevailing wage, some family types will be better off than others.

#### *Indicator Target*

The goal for this indicator is for the ratio of the average prevailing wage and the cost of living for families of one parent and one child to be equal to one and for the ratio for families of two parents and one child, with one wage-earning adult, to approach one.

#### *Assessment*

According to 2007 data, Tillamook County was below their target for living wage jobs.

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<sup>4</sup> See <http://www.bea.gov/regional/pdf/lapi2007/wagsal.pdf> for more information

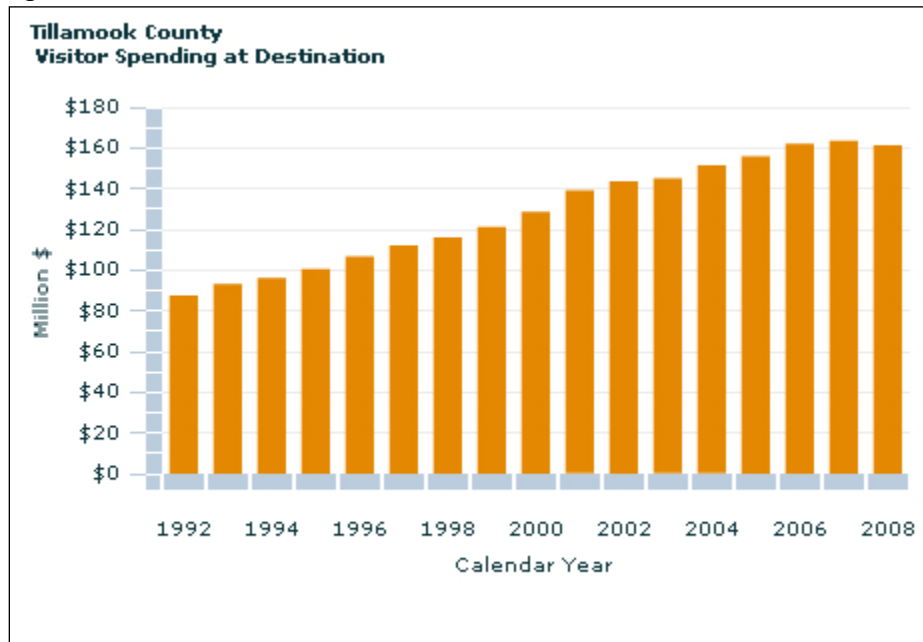
## 15. Tourism

Indicator	Measure	Data	Year	Source
Tourism	Tourism spending (visitor spending at destination, in millions)	\$161.2	2008	Oregon Tourism Board
	County Campground usage: Total Number of Occupants	59,645	2008	Tillamook County Parks Department
	Visitor #s for Tillamook Creamery Visitors Center	916,395	2008	Tillamook County Creamery Association
	Visitor #s for Tillamook Forest Center	43,154	2008	Tillamook Forest Center, ODF
	Visitor #s for Tillamook Air Museum	85,000	2008	Tillamook Air Museum

One specific area of the economy in which Tillamook County wishes to grow is the area of tourism. In order to measure the depth of tourism in the county we relied on tourism spending data and data about the number of visitors at each of the major tourist attractions in the county.

According to 2008 data from the Oregon Tourism Bureau, calculated by Dean Runyan Associates, visitors to Tillamook County spent \$161,200,000. In comparison to previous years, 2008 spending was down slightly from 2007 (see figure 7). The amount observed in 2008 for Tillamook County represented two percent of total visitor spending in Oregon.

Figure 7



Source: Dean Runyan Associates

Note: Dollar amounts have not been adjusted for inflation

Examining the specific tourism destinations in Tillamook County gives us a sense of the popularity of particular tourist attractions as well as overall tourist traffic in the county. Based on visitor numbers provided by each organization for 2008, the Tillamook Creamery Visitors Center received the greatest number of visitors, followed by the Tillamook Air Museum, county campgrounds, and the Tillamook Forest Center.

When interpreting visitor statistics it is helpful to relate total visitor numbers to capacity at each location, in order to gauge the extent to which growth in existing tourism destinations is possible. Unfortunately, limited data were available to assess the data in such a manner. County campgrounds were the only tourism location for which capacity data were calculable. For this location, comparing the capacity between January 1 and December 31, 2008 of 138,831 available camp site days and camp site occupancy during the same period of 30,612 days we see that the county campgrounds were not operating at full capacity. Indeed, in 2008 the campgrounds were operating at approximately 22% of capacity.

#### *Indicator Target*

The goal for this indicator is for future levels of tourism to increase by approximately five to ten percent. Thus, for spending, the goal is for spending to be between \$170 million and \$177 million in the future. In addition, at each tourism location, the goal is for the number of visitors to increase five to ten percent. It may not be feasible, however, for all of these locations to accommodate such increases without physically

expanding. Thus for the purposes of this report, the indicator target is limited to tourism spending.

*Assessment*

According to 2008 data, Tillamook County was slightly below the target goal with respect to tourism spending. In the future, growth in this figure is desired.

**16. Workforce Housing**

Indicator	Measure	Data	Year	Source
<b>Workforce Housing</b>	% low-income residents, housing cost-burdened: renters	59.4%	2000	OHCS, US Census Bureau
	% low-income residents, housing cost-burdened: owners	35.2%	2000	OHCS, US Census Bureau
	% of all households, housing cost-burdened	25.25%	2000	US Census Bureau
	Average residential property sale price (April – September)	\$ 257,204.35	2008 - 2009	Tillamook County Department of Assessment & Taxation - Sales Data Report

The final indicator of the economy that reflects the stated economic goals of the Tillamook County community is the prevalence of affordable housing. In order to measure the prevalence of affordable housing we relied on the rate of housing cost-burden, a rate commonly used to assess area housing affordability, and the average residential property sale price.

According to data from the 2000 US census calculated by the Oregon Housing & Community Services Department, approximately 60% of renters and 35% of homeowners in Tillamook County were housing-cost burdened. These were renters and homeowners whose incomes were less than the county median income and who paid housing costs equal to 30% or more of their own income. In other words, the majority of Tillamook County renters and a sizeable percentage of homeowners, who earned less than \$34,269 in 1999, spent 30% or more of their income on housing. In addition, among the total population, regardless of income, one quarter of Tillamook County residents were housing cost-burdened, and therefore had housing costs that were 30% or more of their income. Federal agencies, such as the Department of Housing & Urban Development and the Census Bureau, use this threshold of 30% of income spent on housing costs as the housing affordability threshold.

According to the OHCS calculation of 2000 census data, in Oregon 70% of low-income renters were housing cost-burdened and 40% of low-income homeowners were cost

burdened. In rural Oregon counties, the percentages were slightly lower. In 2000, 68.3% of rural Oregon county low-income renters were cost burdened while 37.6% of rural county low-income homeowners were cost burdened in 2000. In comparison, Tillamook County appears to have below average prevalence of housing cost burden among low-income renters and owners.

The final measure of housing affordability used here is the average residential property sale price. These data were obtained from the Tillamook County Department of Assessment and Taxation's sales data report, and covered sales made between April 2008 and September 2009. Averaging across all sales of property with a residential property class code made during this time, we see that the average adjusted sale price was slightly over a quarter of a million dollars. Of these 646 sales, the average lot size was .38 acres and not all properties sold had homes on them at the time of the sale.

According to these data from the 2000 census, the majority of Tillamook County's low-income families, who rent, live in housing that is unaffordable to them, given their income. In addition, a sizeable minority of low-income families, who own their home, also live in unaffordable housing. Given the high average price of residential property and the relatively low median income of \$34,269 in Tillamook County (the US median income was \$42,000 in 2000) it is no surprise that sizeable proportions of residents are housing cost-burdened. Important to note however, is that the prevalence of housing cost burden among Tillamook County renters and homeowners was less than that observed in Oregon or rural Oregon in 2000.

#### *Indicator Target*

The goal for this indicator is for the prevalence of housing cost burden to decline in the future, among low-income owners and renters, as well as among the general population.

#### *Assessment*

According to data from 2000, Tillamook County was below the targeted level of housing affordability.



## NATURAL ENVIRONMENT INDICATORS

### 17. Salmon Runs

Indicator	Measure	Data	Year	Source
Salmon Runs	Ratio of estimated # of wild adult coho salmon spawners in Tillamook County to population needed to fully seed existing coho habitat in county	1.22	2008	OR Department of Fish & Wildlife
	Pounds of salmon commercially harvested and landed at Tillamook County ports			
	Coho	818	2008	OR Department of Fish & Wildlife
	Chinook	21,870	2008	OR Department of Fish & Wildlife

Salmon populations are an important indicator of ecosystem health throughout Oregon, and Tillamook County is no exception. The Tillamook County: 2020 Strategic Vision explicitly states that a goal for the county’s rivers and estuaries is to support “magnificent runs of wild salmon” (p. 6).

In order to measure the abundance of the wild salmon population, we relied on data from the Oregon Department of Fish & Wildlife’s (ODF&W) Coastal Salmonid Inventory Project (<http://oregonstate.edu/dept/ODFW/spawn/index.htm>) in combination with a salmon population threshold value from the 1998 Nickelson report. Using sample data collected by ODF&W in the Nehalem River, Tillamook Bay, Nestucca River, Sand Lake, and Neskowin Creek basins, the wild adult coho spawner population in Tillamook County basins was estimated at 26,571 in 2008. These estimates of wild adult coho spawner population are based on randomly selected spawning surveys, following the US Environmental Protection Agency’s EMAP protocol.<sup>5</sup> The spawning surveys are conducted from October through at least January each year following standard ODF&W spawning survey protocols.<sup>6</sup> Table 3 provides detailed data about salmon counts by watershed in Tillamook County.

<sup>5</sup> For more information on this protocol procedure see:  
<http://oregonstate.edu/dept/ODFW/spawn/pdf%20files/reports/DesignStevens.pdf>

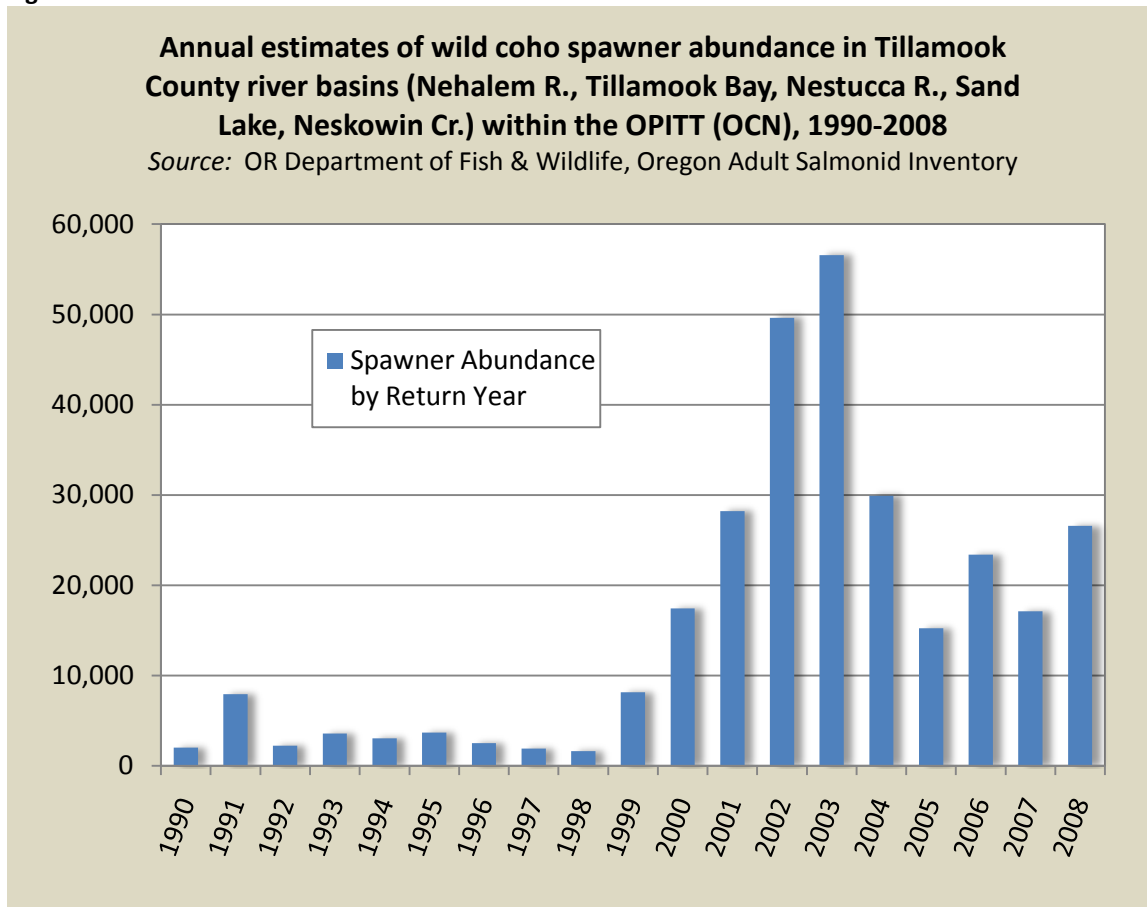
<sup>6</sup> For more information on this protocol procedure see:  
[http://oregonstate.edu/dept/ODFW/spawn/pdf%20files/reports/09\\_SManual.pdf](http://oregonstate.edu/dept/ODFW/spawn/pdf%20files/reports/09_SManual.pdf)

Table 3

<b>2008 Estimates of wild coho spawner abundance in coast river basins within the OPITT (OCN)</b>	
Oregon Adult Salmonid Inventory Project, OR Dept. of Fish & Wildlife	
Nehalem R.	15,690
Tillamook Bay	4,897
Nestucca R.	5,444
Sand Lake & Neskowin Cr.	540
<b>Total</b>	<b>26,571</b>

Figure 8 presents historical population estimates of wild adult coho spawner in Tillamook County river basins, from 1990 to 2008. According to the OR Department of Fish & Wildlife, between 1990 and 2004 the estimates were done at the geographic scale of basin/groupings. Since 2005, however, the estimates have been made at the NOAA Fisheries TRT coho population scale. According to Mark Lewis, the lead on the Oregon Adult Salmonid Inventory and Sampling Project, “this switch in geographic scope caused only minimal changes for basins in Tillamook County.” Nevertheless, it is important to be aware of the shift in geography when viewing the historical data.

Figure 8



According to the 1990 to 2008 population estimate data, it appears that the watersheds within Tillamook County experienced a major upswing in coho population between 1999 and 2003, and then declined dramatically in the following two years. Between 2006 and 2008, however, the population increased again though at a slower rate than observed between 1999 and 2003.

Given the absolute abundance of coho spawners in basins throughout Tillamook County, it is important to understand if this level of abundance is adequate or desirable. Only by knowing a minimum optimum population value is it possible to make such an assessment. Chris Knutsen, Fish Biologist at the OR Department of Fish & Wildlife - North Coast Watershed District, recommends “using a spawner abundance threshold that is believed to fully seed the existing high quality juvenile coho winter rearing habitat” to judge the adequacy of the estimated number of wild coho spawners (personal communication, 2009). Applying this threshold concept in the North Coast (Nehalem, Tillamook, Nestucca, and Direct Ocean Tributaries), according to Nickelson (1998), the number of spawners needed to fully seed the habitat is 21,700 adults.<sup>7</sup> While Knutsen reports that the OR Department of Fish & Wildlife is in the process of updating the spawner abundance threshold values, the levels forwarded in the Nickelson report can appropriately be used for now as a target for determining the adequacy of the coho population in Tillamook County.

Using this information about the threshold values and the spawner estimates we can calculate a ratio of the estimated number of wild coho spawners to the threshold of 21,700. Doing so reveals that in 2008 there were adequate numbers of salmon spawners. Indeed, the ratio value of 1.22 indicates that the estimated population was approximately 22% higher than the threshold target.

In addition to using salmon population estimates, we also used commercial harvest figures to measure the abundance of salmon in the county. For a coastal community such as Tillamook County, in which commercial fishing is a part of the economy, fishing harvest serves as the lagging indicator of salmon abundance, where spawner estimates serve as a leading indicator. According to data provided by the Oregon Department of Fish and Wildlife, in 2008, two species of salmon out of three (Chinook, Chum, and coho) were commercially harvested and reported landed within Tillamook County. These commercial landings occurred only at the port of Garibaldi where 21,870 pounds of Chinook salmon and 818 pounds of coho were harvested.

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<sup>7</sup> Nickelson, T. 1998. A habitat-based assessment of coho salmon production potential and spawner escapement needs for Oregon coastal streams. ODFW Information Report Number 98-4. ODFW. Portland, Oregon.

*Indicator Target*

The goal for this indicator is for the ratio of the estimated number of wild coho spawners in Tillamook County to the threshold value for the number of adult coho salmon needed to produce enough juvenile salmon to fully occupy (seed) the high quality juvenile habitat to be equal to or greater than one. In future years of the indicator project, Knutsen recommends “shifting from a coho abundance goal to a coho habitat goal to bring the indicator in line with the Coastal coho Conservation Plan and the stated desired future condition for Oregon Coast coho” (personal communication, 2009).

*Assessment*

According to 2008 data on the estimated number of wild adult coho salmon spawners in Tillamook County and the number of spawners needed to fully occupy (seed) the Tillamook County watershed juvenile coho winter rearing habitat, Tillamook County met its targeted goal.

**18. Forest Health**

Indicator	Measure	Data	Year	Source
Forest Health	Age, diversity, and health of stands	No data		ODOF, Siuslaw NF, OSU reports

At this point, no adequate measure of forest health has been developed by forest ecologists for lay use.

**19. Land Conservation**

Indicator	Measure	Data	Year	Source
Land Conservation	% of land designated wilderness, preserved, or set aside by land trusts	0.11%	2009	The Nature Conservancy, Oregon Islands NWR, Arch Rocks NWR, Lower Nehalem Community Trust, North Coast Land Conservancy, US Census Bureau

Tillamook County residents desire “a sustainable balance between responsible use and protection of natural resources” within the community (Tillamook County: 2020 Strategic Vision, p. 6). While at this point, a definition of “sustainability” has not been created by social and natural scientists, we can begin to gauge the extent of protection and use of natural resources. Toward this end, land conservation was chosen to indicate the extent of land protection.

In order to measure land conservation, we relied on information about the amount of land in Tillamook County that was held by land trusts and designated wilderness in 2009. This land cannot be farmed, forested, grazed, fished, or hunted and thus represents a strict definition of conservation.

In 2009, the Nature Conservancy, the US Fish and Wildlife Service’s Oregon Coast National Wildlife Refuge, the North Coast Land Conservancy, and the Lower Nehalem Community Trust were the primary land trusts in Tillamook County. Combined, these four entities owned and managed 770 acres of land in the county. Dividing this number into the total number of acres in Tillamook County (705,376 acres) reveals that less than 1% of land in the county was designated wilderness in 2009.

*Indicator Target*

The goal for this indicator is for two percent of land in Tillamook County to be held in preserved, set aside, or wilderness status by land trusts.

*Assessment*

According to 2009 data, Tillamook County was below the target of two percent of land, or 14,000 acres, being held in trust and reserved from natural resource extractive use.

**20. Public Natural Resource Education**

Indicator	Measure	Data	Year	Source
<b>Public Natural Resource Education</b>	# of natural resource education programs available in or through public education system	27	2009	School Districts, OSU Extension Service, TBCC Course Catalog 2009-2010

Preparing the rural youth and adults for lives or careers in the natural resource field is another goal expressed in the Strategic Vision. This has the dual effect of encouraging people to pursue careers in natural resource management, and of integrating new methods and science related to natural resource management into the preparation of new resource managers in a systematic way. In addition, in a rural setting it is important that residents understand their natural environment and learn how to interact with it appropriately.

In order to assess the institutionalization of natural resource management education within the county, we relied on data from Tillamook County school districts, Oregon State University Extension Service in Tillamook County, and Tillamook Bay Community College. Specifically, we ascertained the number of courses, programs, or educational offerings related to natural resources, broadly defined, available to youth at schools or through the public education system.

According to data gathered from each of the three Tillamook County school districts' websites and course catalogs, there were 13 natural resource education opportunities available to youth through their schools. Specifically, all three of the sixth grades in the county have the opportunity to participate in the Tillamook County Outdoor School. In addition, at each of the three high schools, courses related to various aspects of natural resource management were offered in the 2009-2010 school year:

- At Tillamook High School: Natural Resources Science, Plant Science, and Agriculture Science
- At Nestucca High School: Natural History, Wildlife Biology, Environmental Science, and Oceanography
- At Neah-Kah-Nie High School: Oceanography, Forestry, and Environmental Science

Important to note is that the Tillamook School District also supports the implementation of various specific natural resource projects as part of its service-learning program. These projects did not appear to be formally institutionalized into the curriculum, however, thus were not included in the indicator tally.

According to the OSU Extension Service Tillamook County office, Extension also offered 13 unique types of natural resource educational opportunities via clubs, trainings, and workshops to county adults and youth between 2008 and 2009. Specifically:

- Through 4-H: Natural Resources Club, Tillamook Air Rifle Club, Earth-caching, Forestry Club, Geo-caching, Exploring Forestry, Where the Wild Things Live, Forest to the Sea, Outdoor Cooking, Tree Planting, Forestry Games & Crafts, Water-bugs

During the 2009-2010 academic year, according to the Tillamook Bay Community College course catalog, only one course or program was offered that related specifically to natural resource education. Wildland Firefighter Training was the only professional vocational enrichment opportunity offered to Tillamook County residents through Tillamook Bay Community College which related to natural resources.

In sum, according to public information from Tillamook County educational institutions, a variety of natural resource education programs and courses have been institutionalized within the public education system. In 2009, the majority of these opportunities were targeted at youth, but OSU Extension Service serves as a primary conduit for adult natural resource educational opportunities.

*Indicator Target*

The goal for this indicator is for there to be at least 27 natural resource educational opportunities available to county youth and adult residents.

*Assessment*

In 2009, according to data collected from public education institutions in Tillamook County, the county had met its targeted level of natural resource education opportunities.

**21. 303d Listed Streams & Lakes**

Indicator	Measure	Data	Year	Source
<b>303d listed streams &amp; lakes</b>	Miles of stream in Wilson-Trask-Nestucca Watershed 303d listed	79.1	2002-2004	OR Department of Environmental Quality

According to data from the Oregon Department of Environmental Quality (DEQ), approximately 80 miles of stream in Tillamook County (Wilson, Trask, and Nestucca watersheds) were considered water quality limited (303d listed) for the 2002-2004 assessment. “Water quality limited” is a general set of parameters set by the US Environmental Protection Agency (EPA) as part of the Clean Water Act. Specific parameters set by Oregon DEQ for this assessment included water temperature, pH, dissolved oxygen levels, turbidity, conductivity, and bacteria levels. Stream reaches may fail to meet standards for one or more criteria. It is not clear, however, the proportion of all stream miles in the county that these 303d listed miles represent.

*Indicator Target*

The goal for this indicator is for no miles of stream in Tillamook County watersheds to be water quality limited (303d listed) in the future. In addition, the hope is for a water quality plan to be established for all impaired stream reaches.

*Assessment*

According to 2002-2004 data, Tillamook County had not met its goal of zero miles of stream listed as water quality limited (303d) at the time of this assessment.

**22. Watershed Restoration Projects**

Indicator	Measure	Data	Year	Source
<b>Watershed Restoration Projects</b>	# active watershed restoration projects	48	2008	Tillamook Estuaries Partnership
	Total Watershed Restoration Project Costs	\$5,901,572	2008	

In addition to tracking environmental outcome indicators, an implicit element of the Tillamook County Strategic Vision is that process indicators be tracked as well. Understanding the processes or conditions that must be present in order to realize particular environmental outcomes is key to envisioning and attaining a vital future in the county. In particular, watershed restoration efforts are one way in which the county has expressed an environmental goal that focuses on process as opposed to outcomes, such as water quality or species indicators.

In order to obtain information about the number of active watershed restoration projects, OSU faculty contacted the Tillamook Estuaries Partnership (TEP). Staff from the TEP provided OSU faculty members a list of all restoration projects that occurred in Tillamook County in 2008. These projects occurred on private land and public land and were implemented by a variety of agencies and organizations, including OR Watershed Enhancement Bureau (OWEB), the Tillamook Estuaries Partnership (TEP), and OR Department of Environmental Quality (DEQ).<sup>8</sup> According to these data, in 2008 a total of 48 watershed restoration projects were implemented throughout Tillamook County. These 48 restoration projects had a combined cost of nearly \$6 million, and addressed restoration on 295 acres of land and 15 linear miles of waterways in the county.

At this point, no information about the total number of restoration projects needed across the Tillamook County watershed areas is available making it impossible to assess the extent to which current restoration efforts are meeting the needs in the county.

**23. Riparian Area Quality**

Indicator	Measure	Data	Year	Source
Riparian Area Quality	% of riparian area protected (adequate streamside vegetation)	limited		

With respect to natural environment outcomes desired by Tillamook County residents, the presence of high quality riparian areas is a significant one. Unfortunately, limited information about riparian area condition across the county was available at the time of this report. The only public information available across watersheds came from watershed assessments conducted in the late 1990s.

<sup>8</sup> The agencies and organizations involved with these projects also included: private industrial companies, the Lower Nehalem Community Trust, Natural Resources Conservation Service, Watershed Councils, OR Department of Fish & Wildlife, Tillamook County Public Works, Tillamook Estuaries Partnership, OR Watershed Enhancement Board, OR Department of Transportation, Bureau of Land Management, and the US Forest Service. The types of habitat targeted also varied, and included riparian areas, streams, field meadows, forest/woodland, and tidal wetland.



According to the Nehalem Watershed Assessment 1999, "Riparian buffers are generally in good condition. There are isolated reaches and small tributaries with poor conditions scattered throughout the watershed. These streams typically have no vegetation or only grass on their banks. The Upper Nehalem sub-watershed had the most marginally adequate riparian area. About 50% of the riparian zones in this sub-watershed were less than 30 feet wide." (Nehalem Watershed Assessment, <http://www.nehalem.org/>)

According to the Nestucca-Neskowin Assessment 1998, only general information about desired riparian area conditions was included: "A higher percentage and more diverse mixture of conifer species than currently exists *should* [emphasis added] make up the riparian tree species in both the lower and upper watershed, providing a source of high quality large woody debris and habitat diversity." (Nestucca-Neskowin Watershed Assessment, <http://www.oregoncoast.com/nnwc/>)

Finally, the Tillamook Bay Comprehensive Conservation Management Plan from 1999 only details conditions for the lower bay area (<http://www.tbnep.org/resource-center/tep-reports/ccmp>). Of stream miles surveyed in the lower Tillamook Bay, 29% were in good riparian vegetation condition, 66% in fair condition, and 8% in poor condition.

Unclear from any of these assessment synopses is the method used for judging riparian area condition. It is possible that each assessment could have been done using a different method thus making it impossible to compare conditions across watersheds. In addition, only two of these assessments pass any explicit judgment on quality of the riparian areas in the watershed. Clearly, more information for this indicator is needed in order to assess the condition of riparian areas across the county.

**24. Participation in Recycling Programs**

Indicator	Measure	Data	Year	Source
Participation in Recycling	Ratio of Tillamook County Material Recovery Rate to DEQ Goal Rate for Tillamook County	1.05	2008	OR Dept. of Environmental Quality

Another important dimension of the natural environment that Tillamook County residents wish to track over time is the participation of the community in recycling programs. Here again, is a desire on the part of residents to create the context for positive environmental outcomes to occur, where waste management practices represent an important component of that environmental context.

In order to measure this indicator, we relied on data provided by the Oregon Department of Environmental Quality. Every year, the OR Department of Environmental Quality (DEQ) administers a mandatory survey of all public and private recycling and

waste management operations to determine the material recovery rate (the number of pounds of waste recycled). According to the data collected by this agency in 2008, 32% of the total waste (38,000 tons) generated by Tillamook County was recovered via recycling, composting, or energy recovery. Compared to the goal set by DEQ for Tillamook County of 30% by 2010, Tillamook County has succeeded at meeting and surpassing this goal.

*Indicator Target*

The goal for this indicator is for the ratio of Tillamook County's material recovery rate to the goal rate set by the OR Department of Environmental Quality to be equal to one.

*Assessment*

According to data from 2008, Tillamook County has succeeded at meeting the indicator target.

## SOCIETY & CULTURE INDICATORS

### 25. Open Space

Indicator	Measure	Data	Year	Source
Open Space	% of land designated farm or forest	69%	2009	USDA Census of Agriculture, OR Dept of Forestry, Siuslaw National Forest, Bureau of Land Management, US Census Bureau, The Nature Conservancy, Oregon National Wildlife Refuge

Tillamook County residents hope to preserve the community's rural character, and open space is a clear visual element of rurality that many observers, be they residents or visitors, can easily understand. In order to measure this land indicator, data from a variety of sources were used. Data about total land area in Tillamook County were obtained from the US Census Bureau. Data about acreage privately owned as farm- or woodland came from the US Department of Agriculture (USDA) Census of Agriculture, while public forestland acreage data were provided by the various public agencies managing land in Tillamook County, and information about the number of acres owned by land trusts came from The Nature Conservancy and the Oregon National Wildlife Refuge.

According to the 2007 USDA Agricultural Census, 37,780 acres of land in Tillamook County was privately owned farmland or woodland. Some of this land may have been actively farmed or forested and some may have been in reserve programs or fallow at the time. Information provided by the Oregon Department of Forestry about the amount of forestland in the Tillamook State Forest revealed that 307,833 acres of Tillamook County land was contained therein in 2009. In 2009, there were 91,000 acres of Tillamook County land in the Siuslaw National Forest, managed by the US Forest Service. The US Bureau of Land Management held 48,643 acres of largely forestland in Tillamook County, in 2009. Finally, the Nature Conservancy, the National Wildlife Refuge, the Lower Nehalem Community Trust, and the North Coast Land Conservancy owned approximately 770 acres of Tillamook County land in trust, in 2009. Summing these publicly and privately held forest and farmlands in 2007 and 2009 together yielded a total acreage of 486,025. According to the Census Bureau, Tillamook County is 705,376 acres, thus dividing 486,025 into 705,376 yields a total percentage of land designated farm or forest (open space) of 69%.

In sum, the majority of land in Tillamook County in 2007/2009 was farm or forestland and therefore open space.

*Indicator Target*

The goal for this indicator is for the percentage of land designated farm, forest, or preserved to remain close to 69%.

*Assessment*

In 2009, Tillamook County was on target with respect to the percentage of land maintained as open space.

**26. Civic Participation**

<b>Indicator</b>	<b>Measure</b>	<b>Data</b>	<b>Year</b>	<b>Source</b>
<b>Civic Participation</b>	% of Tillamook County adult permanent and seasonal residents who participated in 2 or more civic activities in last 12 months	50%	2009	VTIP Survey

Within Tillamook County, residents cite civic involvement as an important part of realizing vitality in the community. Using the Vital Tillamook Indicator Project survey, we were able to measure the extent to which Tillamook County adult permanent and seasonal residents participate in civic activities in various ways. Specifically, survey respondents were asked if they had done any of six listed civic activities in the last 12 months within Tillamook County:

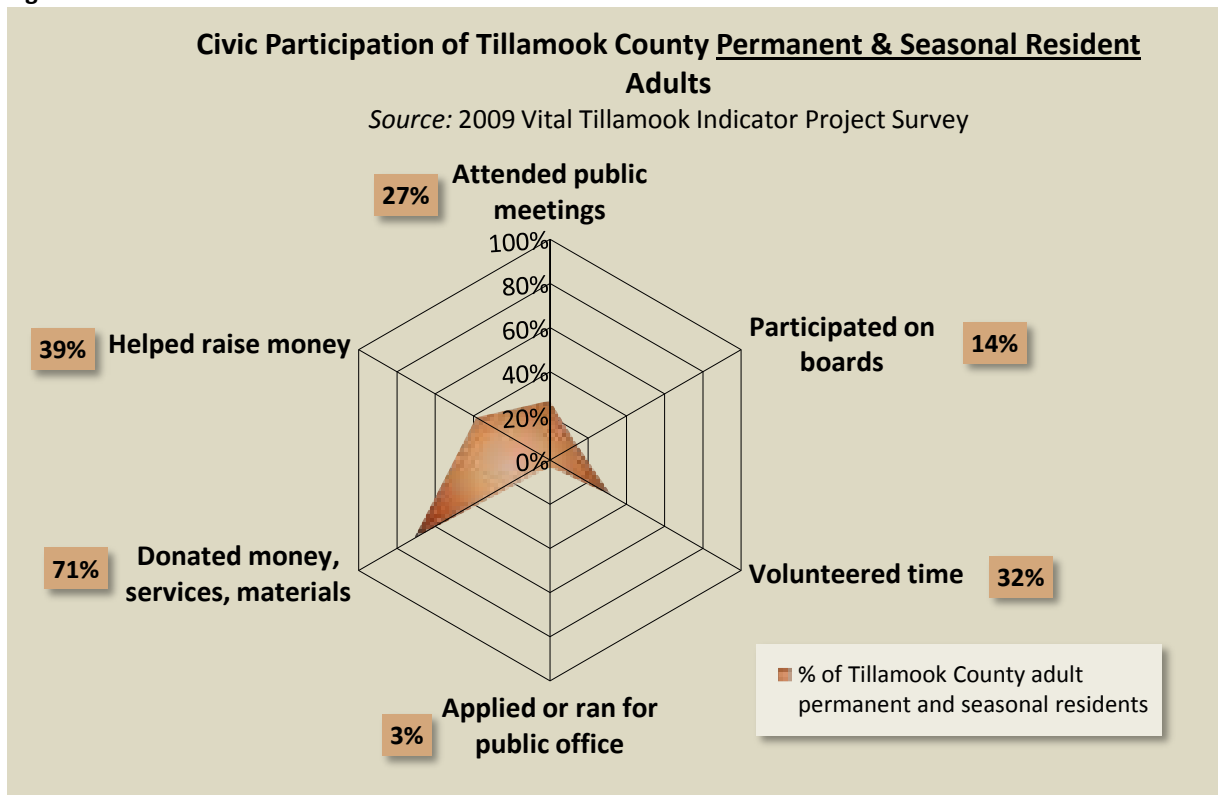
- Attended any public hearings, town hall meetings, community forums, or city council meetings
- Participated on the board of any local service agency or organization
- Volunteered time, in ways other than participating on the board, to any local service agency or organization
- Applied or ran for local public office
- Donated money, services, materials, or food to any local charities, groups, or associations
- Helped raise money for local cause

Ninety-five percent of respondents answered all six questions (yes or no), and for each of these individuals the total number of civic activities they reported participating in during the previous 12 months was tallied. This sum served as the basis of the indicator, as participation in two or more civic activities was determined by the VTIP working group as a suitable threshold level of civic participation for individuals. According to the survey results, an estimated 70% of adult permanent Tillamook County residents participated in two or more of the listed civic activities in the past year, while an estimated 50% of the combined permanent and seasonal resident population did. For the assessment purposes of this indicator, the civic participation of permanent residents

will be focused on while the participation of the combined population will be examined for illustrative purposes only.

Figure 9 shows the percentages of adult permanent and seasonal residents who participated in these six ways in the Tillamook County community. An estimated 27% of adults attended a public meeting of some sort in the last year. Fourteen percent (14%) of adult residents and property owners participated on a local agency board, and 32% had volunteered in some other way to a local organization or agency in the past 12 months. Only three percent of adult residents applied or ran for local public office in the last 12 months, but it is not likely that this figure will ever be particularly high given the small number of public office seats available in any given year. By contrast, many (71%) adult seasonal and permanent residents donated money, services, materials, or food to local groups during the last year, and a sizeable minority (39%) helped raise money for a local cause. Clearly, making donations, helping raise money, and volunteering were the most popular forms of civic involvement among Tillamook County seasonal and permanent residents in 2009.

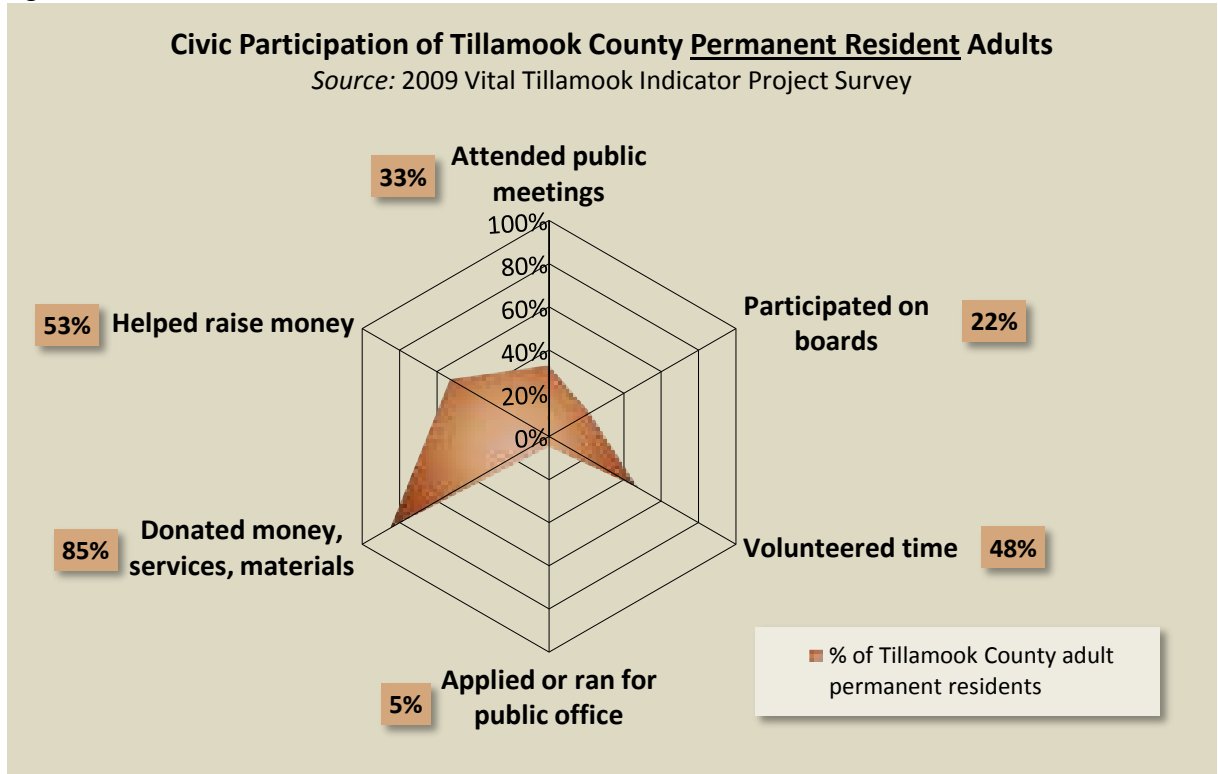
Figure 9



Overall, Tillamook County permanent and seasonal adult residents appear only slightly engaged with their community, and certain methods of engagement stand out in particular. This limited level of engagement in civic life is likely driven by the limited amount of time seasonal residents spend in the county and therefore the small number

of opportunities they may have to engage in these civic activities. Given this consideration, Figure 10 presents the percentages of Tillamook County adult permanent residents who engaged in these same six civic activities in 2009.

Figure 10



Separated out, Figure 10 illustrates that the overall civic participation rates observed in Figure 9 were influenced by the inclusion of seasonal residents. Indeed, permanent residents in Tillamook County participated at greater rates than the overall figures indicated in each of these civic dimensions. Donating money, services, or materials was still the most common form of civic participation, followed by helping raise money, and volunteering, but higher percentages of this population did these activities than observed among seasonal and permanent residents combined. Based on the percentages of adult permanent residents who participated in civic activities in 2008-2009 it appears that this population, overall, is moderately engaged in their community.

*Indicator Target*

The goal for this indicator is for at least 50% of the combined adult permanent and seasonal resident population as well as the permanent population alone to participate in two or more civic activities in a given year. With respect to participation in specific civic activities, however, the goal is for greater proportions of residents to participate on boards, run or apply for public office, and attend public meetings.

*Assessment*

According to data from the 2009 Vital Tillamook Indicator Project survey, Tillamook County was on target for the attainment of the broad goal related to civic participation. With respect to participation in specific forms of civic activities, the 2009 data revealed areas in which the county could improve.

**27. Community Capacity**

Indicator	Measure	Data	Year	Source
<b>Community Capacity</b>	<u>% of Tillamook County adult permanent and seasonal residents who perceive that:</u>			
	People in the community are willing to help their neighbors	82%	2009	VTIP Survey
	People in the community are trustworthy and get along with each other	75%	2009	VTIP Survey
	People in the community can be counted on to work together to address community issues	68%	2009	VTIP Survey
	Local government has the ability to deal effectively with important problems	40%	2009	VTIP Survey

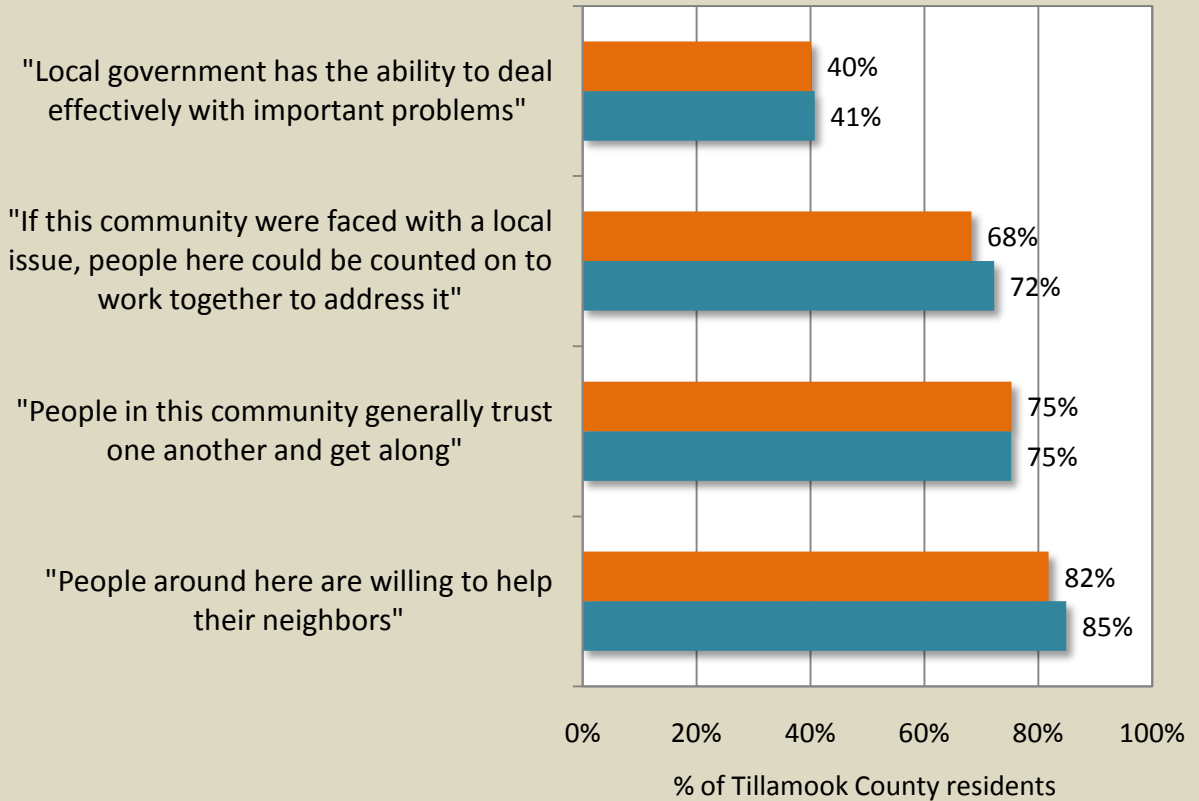
The extent to which Tillamook County residents can work together to get important tasks done in their community is an crucial part of having a functional community environment. In order to measure these concepts of community capacity and cohesion, the 2009 VTIP survey asked seasonal and permanent adult residents to indicate how much they agreed with four statements about their community in Tillamook County that, together, measure community capacity. Figure 11 displays the survey results broken down by combined permanent and seasonal resident population as well as only permanent residents.

Figure 11

**Community Capacity in Tillamook County, 2009**

Source: 2009 Vital Tillamook Indicator Project Survey

■ % of Tillamook County adult permanent and seasonal residents who agree or strongly agree that...  
■ % of Tillamook County adult permanent residents who agree or strongly agree that...



According to survey results, perceived levels of community capacity in Tillamook County are moderately high. Indeed, perceptions did not vary significantly between the two population categorizations of county residents (combined seasonal and permanent versus permanent only). Along three out of four dimensions of capacity, the vast majority of adults in the county feel that members of their community can work together well and accomplish their goals. The only dimension of community capacity that is significantly lower is the faith residents put in their local government. This has been found among a number of rural communities, and may be due to a number of factors.<sup>9</sup> Often the limited extent to which residents are involved with local government

<sup>9</sup> Etuk, Lena and Mindy Crandall. 2009. Vital Wallowa Indicator Project: 2009 Report. Colocousis, Chris R. 2008. The State of Coos County: Local Perspectives on Community and Change. Carsey Institute: Issue Brief No. 7, Spring.



shapes their perception negatively, while for others the perception that rural community issues are too complex for the local government may be the guiding force.

*Indicator Target*

The goal for this indicator is for 2009 levels of community capacity perceptions to serve as the benchmark for future assessments of community capacity in Tillamook County. In other words, the goal for this indicator is for approximately 40% of residents to agree or strongly agree with the statement that local government has the ability to deal effectively with important problems; about 70% of residents to agree or strongly agree with the statement that people in the community can be counted on to work together to address a local issue, should it arise; approximately 75% of residents to agree with the statement that people in the community generally trust one another and get along; and that approximately 84% of residents agree or strongly agree with the statement that people are willing to help their neighbors.

*Assessment*

In 2009, Tillamook County was at its desired level of perceived community capacity. Future assessments will use these 2009 values as the threshold for determining successful attainment of county goals.

**28. Museums, Cultural Centers, & Historic Buildings**

Indicator	Measure	Data	Year	Source
<b>Museums, Cultural Centers, &amp; Historic Buildings</b>	# of local museums, cultural centers and historic buildings	158	2009	Oregon Museum Association, Oregon Historic Sites Database, National Register of Historic Places, Tillamook County Arts Network

A clear goal of Tillamook County residents, as expressed in the Strategic Vision, is to preserve the history of the area and share it with others. One way of preserving local history and culture is to preserve historic buildings, another is to create museums that house local arts or history, and yet another way of actively preserving and sharing the local culture is to create centers of cultural education and expression. Indeed, the number of cultural centers, museums, and historic buildings was the indicator chosen to reflect the extent to which Tillamook County is succeeding at preserving culture and history.

In 2009, there were 158 local museums, cultural centers, and historic buildings in Tillamook County. According to the Oregon Museum Association, there were four museums in the county registered with the association, namely the Latimer Quilt

Museum, the Tillamook Forest Center, the Pioneer Museum, and the Air Museum. With respect to the number of cultural centers, information from the Tillamook County Arts Network (TCAN) website revealed that there were 25 arts and cultural groups or buildings registered on the TCAN website (registration is free of charge) in 2009. According to information from the Oregon Historic Sites Database, there were 100 state-registered historic places in Tillamook County. There were an additional 29 nationally-registered historic places in Tillamook County, in 2009, according to the National Register of Historic Places.

According to data from a variety of sources, Tillamook County was host to a very large number of places and groups in 2009 that actively create, preserve, and share local history and culture.

*Indicator Target*

The goal for this indicator is for the total number of museums, cultural centers, and historic buildings in Tillamook County not to decline from this 2009 value in the future.

*Assessment*

As of 2009, Tillamook County is on target with respect to the prevalence of places and groups in the county that actively create, preserve, and share local history and culture.

**29. Community Events**

Indicator	Measure	Data	Year	Source
<b>Participation in Community Events</b>	% of Tillamook County adult permanent and seasonal residents who attended at least one community event	86%	2009	VTIP Survey

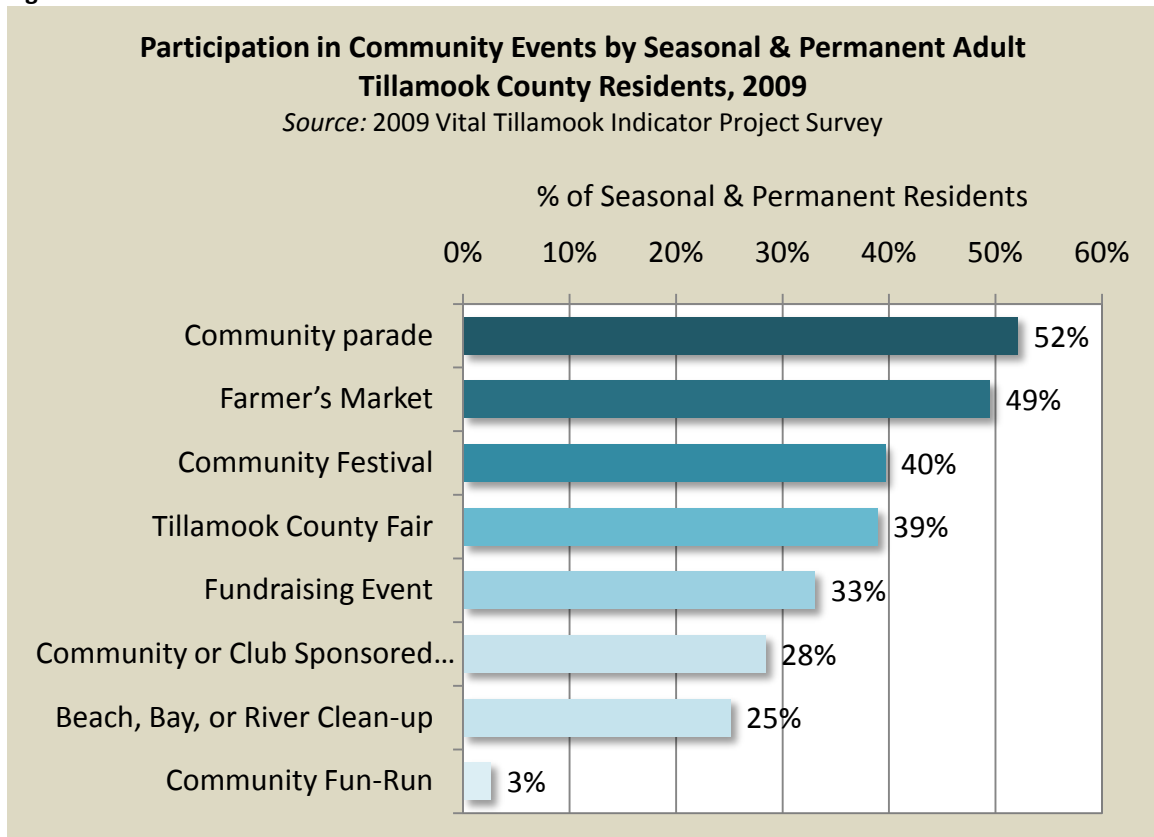
The extent to which Tillamook County permanent and seasonal residents come together in public arenas, so new relationships can be openly forged, old relationships can be strengthened, and community issues can be publicly discussed is another indicator of vitality. In 2009, the VTIP survey was used to gauge this behavior among permanent and seasonal residents. Specifically, respondents were asked if, in the last 12 months, they had attended or participated in eight types of community events:

- Community parade
- Tillamook County Fair
- Community Festival
- Fundraising Event
- Community Fun-Run
- Beach, Bay, or River Clean-up
- Community or Club Sponsored Breakfast, BBQ, or Dinner
- Farmer’s Market

Then, across all individuals the total number of people who had attended at least one community event in the last year was calculated. According to the survey findings, a full 86% of adult seasonal and permanent residents attended at least one event between summer 2008 and summer 2009.

Examining participation rates by community event type illuminates the types of events frequented most by residents and property owners. Figure 12 shows that the greatest proportions of residents attended community parades and farmer’s markets (almost 50% at each event). Approximately 40% of residents attended community festivals and about the same percentage attended the Tillamook County Fair. The community events that the smallest proportion of residents attended were fun-runs.

**Figure 12**



Overall, the vast majority of Tillamook County seasonal and permanent residents had at least one community event they participated in or attended that got them out into a public venue with members of their community. While some events are more popular than others, most draw a significant proportion of the community.

*Indicator Target*

The goal for this indicator is for the prevalence of community event attendance to not decrease below the 2009 value. In other words, the goal is for the percentage of seasonal and permanent residents who attend at least one community event during a given year to be close to 86%.

*Assessment*

In 2009, Tillamook County attained its targeted level of community event participation among residents. The vast majority of residents participated in at least one community event during the past year.

**30. Discrimination Experiences**

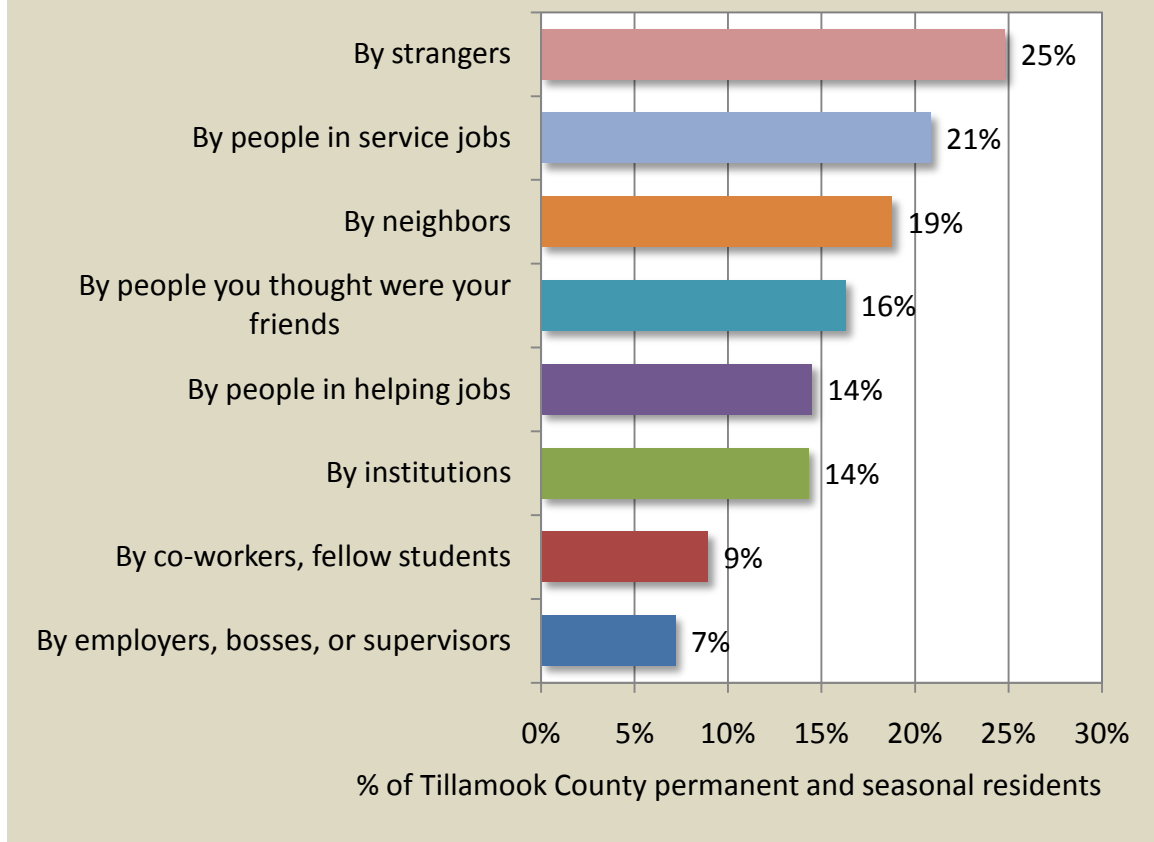
Indicator	Measure	Data	Year	Source
<b>Discrimination Experiences</b>	% of Tillamook County adult permanent and seasonal residents who have personally experienced negative treatment on the basis of race, culture, beliefs, status, etc. by anyone in the county	38%	2009	VTIP Survey
	% of Tillamook County adult permanent and seasonal residents who have personally experienced one form of discrimination or more	17%	2009	VTIP Survey

The Tillamook County community identified, in its strategic plan, a desire for “people to be valued and respected, regardless of race, culture, or beliefs” (Tillamook County: 2020 Strategic Vision, p. 8). Indeed, an important part of having a cohesive community that reflects the many population and social changes occurring in the world is having a community that does not tolerate or perpetuate discrimination along these lines. In order to gauge the extent to which Tillamook County is a place where people feel valued and respected we used data from the 2009 VTIP survey. Respondents were asked a variety of questions related to discrimination based on race, ethnicity, gender, age, religion, physical appearance, sexual orientation, or newcomer status. Specifically, respondents were asked if, in the last 12 months in Tillamook County, they had been treated unfairly because of the aforementioned characteristics by nine different types of people or groups. Respondents were then asked how often, in the last 12 months in Tillamook County, they had experienced four different types of discrimination. Finally, respondents, who had been discriminated against in the last 12 months, indicated the main reason for their discrimination.

Figure 13

**% of Tillamook County seasonal and permanent residents who felt unfairly treated due to race, ethnicity, gender, etc. by certain groups or people, 2009**

Source: 2009 Vital Tillamook Indicator Project



According to the 2009 VTIP survey, more than a third of adult permanent and seasonal Tillamook County residents felt unfairly treated between summer 2008 and summer 2009 by at least one of the nine groups listed. Figure 13 breaks out the percentages of residents who felt unfairly treated by perpetrator. The greatest proportion (25%) of residents and property owners reported being treated unfairly by strangers in the county, while roughly 1 out of 5 adults experienced unfair treatment from people in service jobs or neighbors. Between 7% and 16% of adults felt unfairly treated by employers or supervisors, colleagues, institutions, service job workers, or people they thought were their friends between 2008 and 2009. Overall, these numbers are quite high, and indicate that a sizeable minority of residents and property owners did not feel fully welcome in the community by particular people or institutions.

In order to understand the nature of the discrimination individuals feel in the county, we can examine responses to questions about how often people have experienced

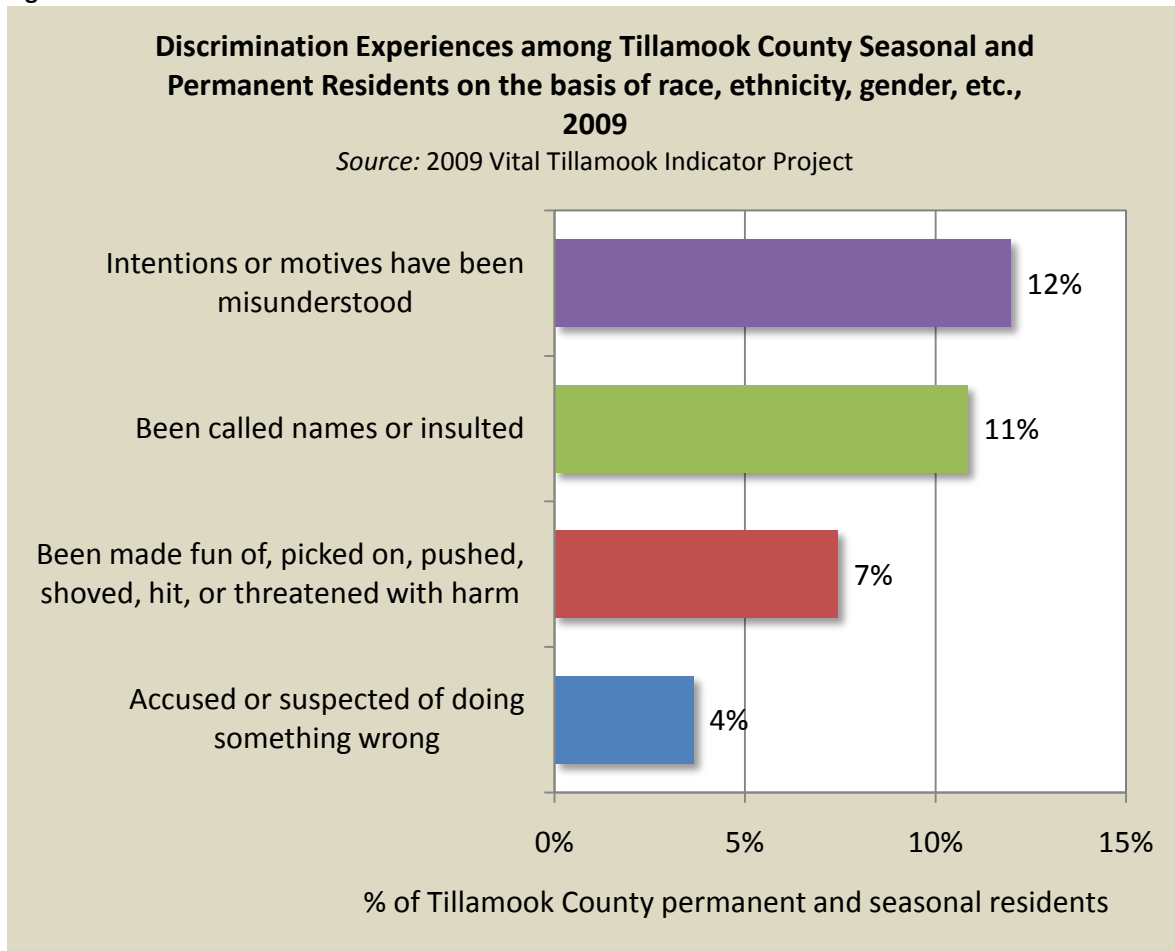
particular types of discrimination. Specifically, respondents to the VTIP survey were asked how often, in the last 12 months:

- They had been accused or suspected of doing something wrong (such as stealing, cheating, not doing their share of the work, or breaking the law) because of their race, gender, age, sexual orientation, or other characteristics
- People had misunderstood their intentions and motives because of their race, gender, age, sexual orientation, or other characteristics
- They had been called names or been insulted because of their race, gender, age, sexual orientation, or other characteristics
- They had been made fun of, picked on, pushed, shoved, hit, or threatened with harm because of their race, gender, age, sexual orientation, or other characteristics

According to findings from the survey, displayed in Figure 14, we note slightly smaller proportions of individuals who specifically identified any one of these four forms of discrimination happened to them in the past 12 months. The most often cited form of discrimination experienced among residents was that their intentions or motives were misunderstood, for reasons they felt were associated with their race, ethnicity, gender, age, sexual orientation, or other characteristics. Though this was the most cited of the four forms of discrimination listed, only 12 percent of residents indicated experiencing this in the prior year.

The next most often cited form of discrimination was being called names or being insulted because of one's race, gender, ethnicity, etc. Approximately one out of ten residents and property owners experienced this particular form of discrimination in the last year. Smaller proportions of individuals were made fun of, physically mistreated, or threatened (7%) or accused of wrongdoing (4%) based on personal characteristics. While these four forms of discrimination may not be fully exhaustive, they do cover a broad array of discrimination experiences. Based on these survey findings, it appears that a minority of residents and property owners experienced discrimination in these forms. Indeed, only 17% of residents and property owners reported experiencing at least one of these forms of discrimination over the last year.

Figure 14



Overall, it appears that a fair proportion of Tillamook County residents and property owners have experienced discrimination in the county in the last year. With respect to identifying the perpetrators of unfair treatment on the basis of personal characteristics, strangers and people in service jobs were most often cited by those who had perceived unfair treatment. When asked specifically about the form of discrimination, fewer people identified that some common forms of discrimination had happened to them in the last 12 months. Though the proportion of people who had experienced at least one of four forms of discrimination was smaller than the proportion that had been treated unfairly by at least one type of perpetrator, 12% represents a fair number of people (approximately 3,600 adults). Of note, is that discrimination based on age was the most common reason cited by residents and property owners who felt mistreated.

*Indicator Target*

The goal for this indicator is for the proportion of adult residents and property owners who feel unfairly treated or who have experienced one or more forms of discrimination to decline from 2009 values. Ultimately the goal is for these percentages to approach zero.

*Assessment*

According to 2009 data from the Vital Tillamook Indicator Project survey, Tillamook County was below their goal for the prevalence of discrimination experiences.

**31. Arts & Cultural Establishments**

<b>Indicator</b>	<b>Measure</b>	<b>Data</b>	<b>Year</b>	<b>Source</b>
<b>Arts &amp; Cultural Establishments</b>	# of arts & cultural organizations per 1,000 Tillamook County residents	.96	2009	Tillamook County Arts Network

Arts and culture are elements of the community that residents of Tillamook County value and wish to preserve into the future. In order to measure the extent to which arts and culture are present in the community we relied on the number of arts and cultural organizations in the county per 1,000 residents. Information about the number of organizations came from the Tillamook County Arts Network website while information about the estimated total number of residents in 2009 came from Portland State University, Population Research Center.

In 2009, according to the Tillamook County Arts Network, there were 25 organizations in the county that were centered on arts or culture. These organizations ranged in nature from museums to artisan groups to orchestras and cultural coalitions. Divided into the total population of Tillamook County, estimated by the Population Research Center at Portland State University at 26,130 people in 2009, reveals that there was nearly one arts or cultural organization for every thousand Tillamook County residents in 2009.

*Indicator Target*

The goal for this indicator is for the number of arts and cultural organizations per capita in Tillamook County to not dip greatly below the number observed in 2009.

*Assessment*

In 2009, Tillamook County was on target with respect to the prevalence of arts and cultural organizations. There was nearly one organization for every thousand residents of the county.



**32. Culture of Lifelong Learning**

Indicator	Measure	Data	Year	Source
<b>Culture of Lifelong Learning</b>	% of Tillamook County adult residents taking classes for personal development in the county	20%	2009	VTIP Survey

Having a population of Tillamook County adult residents who engage in learning throughout the life-course was another goal expressed for the county through the Tillamook County Strategic Vision. As an indicator of this goal, the Vital Tillamook Indicator Project chose to measure the extent to which a culture of lifelong learning exists among residents. In order to measure this indicator, we relied on data from the 2009 Vital Tillamook Indicator Project survey. Specifically, the survey captured information about participation in classes or workshops offered by the Hoffman Center, Bay City Arts Center, Tillamook Bay Community College, Oregon State University Extension, or some other organization in Tillamook County.

According to the 2009 VTIP survey, an estimated 20% of Tillamook County’s permanent resident adults took a class or workshop for personal growth from some organization within the county in the last year.

*Indicator Target*

The goal for this indicator is for the percentage of Tillamook County adult residents who take classes for personal development to be greater than 20% in the future.

*Assessment*

In 2009, Tillamook County was below its targeted proportion of residents who engage in lifelong learning and participate in workshops or classes for personal development.

**33. Educational Diversity for Adults**

Indicator	Measure	Data	Year	Source
<b>Educational Diversity for Adults</b>	# of degrees, certificates, and continuing education course categories at TBCC	58	2009-2010	TBCC Course Catalog 2009-2010

The presence of diverse educational opportunities for adults is also a key element of the Tillamook County Strategic Vision related to the youth and education area. In order to assess the diversity of educational opportunities for adults the focus turns to Tillamook Bay Community College, as it serves as the primary source of adult education in the county.

According to the 2009-2010 school year course catalog published by Tillamook Bay Community College (TBCC), there were 58 types of degrees, certificates, and continuing education courses available to adult students. The degrees offered were all Associate degrees; three focused on giving students the skills needed to transfer to a 4-year college while the other two were terminal in nature. Students could receive terminal Associate degrees in a variety of areas including Accounting, Alcohol and Drug Counseling, Marketing, Culinary Arts, and Fire Protection Technology. With respect to certificates, a fair amount of diversity was apparent. In the 2009-2010 course catalog, certificates were available in areas such as Manual Trades, Electrician, Accounting, Computer Applications and Office Systems, Corrections, Early Education, and Hospitality, Tourism, and Recreation Management. According to the catalog listing, seven courses focused solely on continuing education and covered areas such as nursing, phlebotomy, job skills training, and wild-land firefighter training.

*Indicator Target*

The goal for this indicator is for there to be approximately 70 types of courses, certificates, and continuing education courses available through Tillamook Bay Community College.

*Assessment*

In 2009 Tillamook County was slightly below the targeted number of course, certificate, and continuing education course types available through Tillamook Bay Community College.

## YOUTH & EDUCATION INDICATORS

### 34. Culture of Youth Engagement

Indicator	Measure	Data	Year	Source
<b>Culture of Youth Engagement</b>	no data			Youth Survey to be conducted in all 3 school districts

A goal expressed in the Tillamook County: 2020 Strategic Vision is for youth to have many opportunities to participate in different types of educational, civic, and cultural activities in the community. Instead of simply measuring the number of opportunities available to youth, the Indicator Project chose to assess the extent to which youth are actually engaged in these activities. In order to do so, we planned to rely on data collected from a survey of youth administered by the schools on an annual basis.

Unfortunately, the survey was not conducted in the 2008-2009 school year, therefore data for this indicator were not available in time for the 2009 baseline assessment.

### 35. Educational Diversity for high school-age Youth

Indicator	Measure	Data	Year	Source
<b>Educational Diversity for High-School age Youth</b>	<u># of language, lab science, and vocational training courses</u>			
	Neah-Kah-Nie High School	20	2009-2010	Neah-Kah-Nie High School Course Guide
	Tillamook High School	29	2009-2010	Tillamook High School Course Guide
	Nestucca Valley High School	18	2009-2010	Nestucca Valley High School Course Guide

In addition to gauging the extent to which youth achieve various educational milestones, the Vital Tillamook Indicator Project seeks to gauge the availability of educational opportunities. While the Tillamook County community recognizes the importance of the core curriculum in high schools, it also recognizes the value that non-core elements of a curriculum has for preparing the next generation of leaders in a knowledge-based economy. For this reason, the diversity of educational opportunities for high school students was chosen as an indicator of Tillamook County vitality.

As a measure of educational diversity, the count of language courses, laboratory science classes, and vocational/technical training courses was used. Relying on information contained in each high school's course guide for the 2009-2010 school year, we determined that there were 20 language, lab science, and vocational courses at Neah-Kah-Nie High School, 29 at Tillamook High School, and 18 at Nestucca Valley High School. Spanish was the only language offered at all of the three schools. Lab science

courses varied across schools, and included courses like biology, physics, astronomy, and oceanography. Finally, with respect to vocational, or career-oriented, courses each school varied in their offerings, and Tillamook High School had the greatest number of types of classes. The types of career-oriented courses offered at all these schools included health services, graphic design, photography, Computer Aided Design (CAD), and accounting. In addition to these specific types of elective classes (languages, vocational, and lab science), each high school had other electives of other types such as psychology, child development, comparative religion, art, and music. These electives were not included in the count of the number of language, vocational, or laboratory science classes by school for this indicator.

In sum, Tillamook County high schools appear to offer a relatively diverse array of non-core curriculum courses and academic options.

*Indicator Target*

The goal for this indicator is for the number of high school language, laboratory science, and vocational classes to remain the same as or increase from the number observed in 2009.

*Assessment*

In 2009 Tillamook County was on target with respect to the number of classes available to high school students that fall outside the core high school curriculum. Specifically, the number of language training, laboratory science, and vocational courses met the standards of the county.

**36. Youth Unemployment Rate Post-High School**

Indicator	Measure	Data	Year	Source
<b>Youth Unemployment Rate post-High School</b>	% of youth 20-24 in labor force and unable to find work	6%	2000	US Census Bureau

Having adequate employment prospects for young people in the county was another goal expressed in the Strategic Vision. One way of gauging the attainment of that goal is to examine the unemployment rate of youth in the county.

In 2000, according to data from the US Census Bureau, six percent of people age 20 to 24, who were part of the labor force at the time (employed or looking for employment), were unable to find paid work. Compared to the four percent adult unemployment rate at the time, we note that the unemployment rate among this particular age group was slightly greater.

*Indicator Target*

The goal for this indicator is for the percentage of youth age 20 to 24 who are looking for work but unable to find it should be less than or equal to six percent.

*Assessment*

According to 2000 census data, as of the 2009 indicator assessment, Tillamook County was on target with its goal of having six percent or less of its youth population (age 20 to 24) unemployed.

**37. Educational Achievement**

Indicator	Measure	Data	Year	Source
<b>Educational Achievement</b>	% of <b>kindergarteners</b> , ready to learn (meeting all 5 readiness dimensions)	86.4%	2006	OR Department of Education
	<b>% of 3rd graders who met or exceeded state standards in reading assessment scores</b>			
	Neah-Kah-Nie School District	86%	2008-2009	
	Tillamook School District	78%	2008-2009	
	Nestucca School District	93%	2008-2009	
	<b>% of 3rd graders who met or exceeded state standards in math assessment scores</b>			
	Neah-Kah-Nie School District	82%	2008-2009	
	Tillamook School District	76%	2008-2009	
	Nestucca School District	91%	2008-2009	
	<b>% of 5th graders who met or exceeded state standards in reading assessment scores</b>			
	Neah-Kah-Nie School District	83%	2008-2009	
	Tillamook School District	88%	2008-2009	
	Nestucca School District	91%	2008-2009	
	<b>% of 5th graders who met or exceeded state standards in math assessment scores</b>			
	Neah-Kah-Nie School District	76%	2008-2009	
	Tillamook School District	90%	2008-2009	
	Nestucca School District	>95%	2008-2009	
	<b>% of 8th graders who met or exceeded state standards in reading assessment scores</b>			
	Neah-Kah-Nie School District	83%	2008-2009	
	Tillamook School District	67%	2008-2009	
Nestucca School District	79%	2008-2009		

% of <b>8th graders</b> who met or exceeded state standards in <b>math</b> assessment scores		
Neah-Kah-Nie School District	68%	2008-2009
Tillamook School District	68%	2008-2009
Nestucca School District	80%	2008-2009
% of <b>10th graders</b> who met or exceeded state standards in <b>reading</b> assessment scores		
Neah-Kah-Nie School District	80%	2008-2009
Tillamook School District	45%	2008-2009
Nestucca School District	44%	2008-2009
% of <b>10th graders</b> who met or exceeded state standards in <b>math</b> assessment scores		
Neah-Kah-Nie School District	63%	2008-2009
Tillamook School District	32%	2008-2009
Nestucca School District	40%	2008-2009
High School Dropout Rates		
Neah-Kah-Nie HS	1.99%	2007-2008
Tillamook HS	2.98%	2007-2008
Nestucca Valley HS	2.25%	2007-2008

The outcomes of Tillamook County youth are a major concern of residents young and old. In particular, having a large proportion of youth who succeed academically is central to Tillamook County residents’ notion of a vital community. In order to capture this notion of academic success, as well as recognize that educational achievement is a concept best measured across the spectrum of youth ages, we relied on data about kindergarten achievement, as well as third grade, fifth grade, eighth grade, and tenth grade standardized test scores, and high school dropout rates. These data were obtained from the Oregon Department of Education, which the department compiled from data submitted by schools and school districts.

With respect to kindergarten achievement, data from the OR Department of Education about readiness to learn were used. “Readiness to learn” is a concept measured with a five-part Kindergarten Readiness Survey completed by kindergarten teachers. Teachers assess students’ ability to meet five developmental dimensions gauged to determine young children's readiness for school: Approaches to Learning; Social and Personal Development; Physical Health, Well-being, and Motor Development; General Knowledge and Cognitive Development; Communication, Literacy, and Language Development.<sup>10</sup> In 2006, OR Department of Education data reveal that 86% of Tillamook County kindergartners were “ready to learn.” This figure implies that a fair minority of students (14%) were not ready to learn in 2006. Compared to Oregon overall, however,

<sup>10</sup> Oregon Progress Board, 2009.

Tillamook County kindergartners appeared to fare slightly better. Only 80% of Oregon kindergartners were reported “ready to learn” in 2006.

Among third graders across all three school districts, reading outcomes were slightly stronger than those in math in the 2008-2009 school year. Tillamook School District students fared the worst of the three districts in third grade math and reading scores. 78% of third graders in Tillamook School District met or exceeded state standards for standardized test scores in reading, and only 76% met or exceeded state standards for standardized test scores in math.

Fifth grade achievement in the 2008-2009 school year was essentially the same story. Among this cohort, reading scores were generally higher than math scores with the exception of those in the Nestucca district, which were equal. Across all three districts, 83% to 91% of students met or exceeded state standards for reading. With respect to math scores, the variation was a bit wider across districts. In 2008-2009, Nestucca School District had the greatest proportion of students who met or exceeded state math score standards (more than 95%) followed by Tillamook with 90%, and then Neah-Kah-Nie with 76% of fifth graders meeting or exceeding state math score standards. We note that between third and fifth graders, in the Tillamook school district, more fifth graders met or exceeded state standards, while in Neah-Kah-Nie and Nestucca districts more third graders met or exceeded state standards (with the exception of math in Nestucca district schools).

Among eighth graders, the achievement of youth in both math and reading in all school districts was lower than that observed among fifth or third graders. The proportion of students who met or exceeded state math score standards was slightly greater, however, than the proportion who met or exceed state reading score standards in Tillamook and Nestucca districts. Neah-Kah-Nie School District had greater percentages of its students meet or exceed reading standards, compared to the proportion who met or exceeded math standards, and in fact this district’s eighth graders out-performed the other districts’ in reading scores at 83%. Tillamook School District had the lowest percentages of eighth graders who met or exceeded state standards in reading, while similarly low percentages of Neah-Kah-Nie and Tillamook eighth graders met or exceeded math standards compared to Nestucca.

Turning now to high school achievement, here we used two measures, one that again gauges achievement through standardized testing and another that views achievement through the lens of high school dropout.

With respect to standardized test achievement, among tenth graders we see similar trends as were observed for younger students. In general, greater proportions of students meet or exceed state reading score standards than math. At the older age we again see smaller proportions of students meeting standards in reading or math.

Between 44% and 80% students met or exceeded state standards in reading, and only between 32% and 63% met or exceeded state standards in math. Across school districts, the highest percentage of tenth graders who met or exceeded standards were observed in the Neah-Kah-Nie district (80% for reading and 63% for math), while the lowest percentage of tenth graders who met or exceeded reading standards was observed in Nestucca Valley High School (44%) and the lowest percentage of tenth graders who met or exceeded math standards was found in Tillamook High School (32%).

Our second measure of high school achievement is the observed dropout rates among the three high schools in Tillamook County during the 2007-2008 school year. Dropout rates correspond to the number of students who dropped out of grades 9-12 between July 1 and June 30 divided by the number of students enrolled in the fall of that school year. According to the OR Department of Education:

A dropout is a student who withdrew from school and did not graduate or transfer to another school that leads to graduation. Dropouts do not include students who:

- are deceased,
- are being home schooled,
- are enrolled in an alternative school or hospital education program,
- are enrolled in a juvenile detention facility,
- are enrolled in a foreign exchange program,
- are temporarily absent because of suspension, a family emergency, or severe health problems that prevent attendance at school,
- received a GED certificate, or
- received an adult high school diploma from a community college.

(<http://www.ode.state.or.us/search/page/?id=1>)

According to the dropout rate data from the Oregon Department of Education, overall, dropout was low across the county in the 2007-2008 school year. Neah-Kah-Nie High School had the lowest dropout rate of 1.99% and Tillamook High School had the highest rate of 2.98%. Dropout rates at all three high schools were lower than the Oregon dropout rate in 2007-2008, which was 3.7%.

Overall, the picture of Tillamook County educational achievement is mixed. Among the very young, a fair proportion of children failed to meet achievement standards, as viewed through readiness to learn lens, in 2006. While Tillamook kindergartners fared better than Oregon kindergartners overall, approximately one out of seven kindergartners in Tillamook County were not deemed “ready to learn” by their teachers. Among third graders, the achievement levels picked up in 2006, but among fifth graders achievement was lower, among the eighth graders achievement was yet lower, and among tenth graders achievement was alarmingly low in some schools. In addition, among high school students, using a different metric we see an uptick in achievement, with relatively small proportions of students dropping out of school.



*Indicator Target*

The goal for this indicator is for the achievement gap observed across age cohorts to narrow and for achievement to increase in all ages. In other words, the percentages of fifth, eighth, and tenth grade students who meet or exceed state standards in reading and math standardized testing should approach the percentages observed among third graders which should improve slightly in the future. With respect to high school dropout the goal is for dropout rates to approach zero in the future.

*Assessment*

In 2009 Tillamook County was far below target on this indicator. The achievement gap across age cohorts was large and achievement in all schools was lower than desired.

**38. Teen Pregnancy**

Indicator	Measure	Data	Year	Source
Teen Pregnancy	Teen pregnancy Rate (per 1,000 females age 15-19)	40.5	2007	OR Department of Human Services

Another goal of the Tillamook County Strategic Vision related to youth outcomes is the prevalence of teen pregnancy. In order to measure this indicator we relied on data from the Oregon Department of Human Services.

In 2007, according to data collected by the Department of Human Services, 40.5 women per 1,000 between the ages of 15 and 19 were pregnant in Tillamook County. In Oregon as a whole in 2007, 50.1 teens per 1,000 in the state were pregnant.

*Indicator Target*

The goal for this indicator is for the rate of pregnancy among teens between the ages of 15 and 19 to be less than 40.5 per 1,000.

*Assessment*

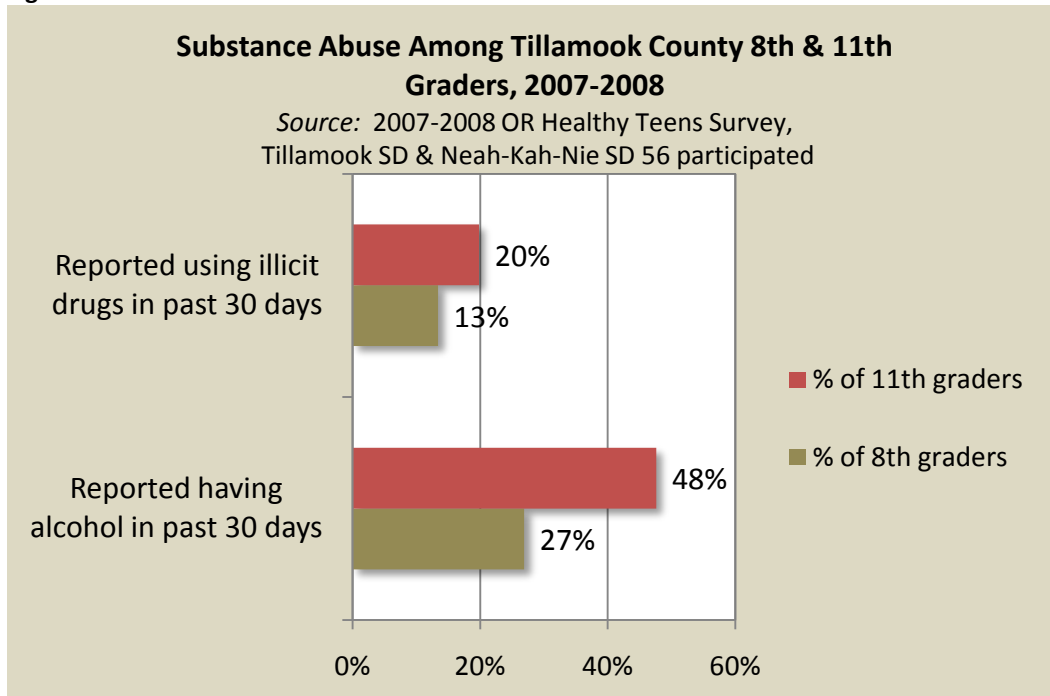
In 2009, according to 2007 data, Tillamook County did not meet its targeted rate fewer than 40.5 pregnant teens per 1,000 between the ages of 15 and 19.

39. Teen Substance Abuse

Indicator	Measure	Data	Year	Source
Teen Substance Abuse	<u>% of 8th grade youth</u>			
	Reporting having alcohol on at least one occasion in past 30 days	26.9%	2007-2008	OR Department of Human Services, OR Healthy Teens Survey
	Reporting having used illicit drugs in past 30 days	13.4%	2007-2008	
	<u>% of 11th grade youth</u>			<u>Note:</u> Only Tillamook SD & Neah-Kah-Nie SD participated in survey
	Reporting having alcohol on at least one occasion in past 30 days	47.6%	2007-2008	
	Reporting having used illicit drugs in past 30 days	19.8%	2007-2008	

Substance abuse among Tillamook County teens is another issue that Tillamook County residents identified as important to their vitality in the Strategic Vision. In order to measure this indicator, data from the Oregon Healthy Teens Survey were used. The OR Healthy Teens Survey is an annual survey conducted by the Oregon Department of Human Services within schools across the state. A sample of districts is randomly selected, and a subsequent random selection of schools is asked to participate in the survey. Within these sampled schools, 8<sup>th</sup> and 11<sup>th</sup> graders are asked to take the survey. The survey is voluntary; therefore some students, some schools, and some districts do not participate. Because the survey is administered to a sample of the population, the results are subject to sampling error and non-sampling error.

Figure 15



In the 2007-2008 school year, according to data from the OR Healthy Teens Survey displayed in Figure 15, nearly a third of eighth graders reported having alcohol on at least one occasion in the last 30 days. A much greater proportion of 11<sup>th</sup> graders reported engaging in the same behavior, almost half of that population. With respect to illicit drug use, approximately 13% of 8<sup>th</sup> graders during the 2007-2008 school year reported using in the last 30 days, and a slightly higher proportion of 11<sup>th</sup> graders reported the same activity. These rates were very similar to the rates observed in the state during the same time period. Drug use among 11<sup>th</sup> graders for the whole state was 23.5% and for 8<sup>th</sup> graders 14.6%. Alcohol use among 11<sup>th</sup> graders in Oregon was 46.2% and 28.9% among 8<sup>th</sup> graders.

Of note is the fact that not all eighth or eleventh graders in the county participated in the OR Healthy Teens Survey during the 2007-2008 school year. Only the Tillamook and Neah-Kah-Nie School Districts participated in the survey.

*Indicator Target*

The goal for this indicator is to see a reduction in the prevalence of substance abuse among eighth and eleventh graders over time.

*Assessment*

According to the 2007-2008 school year data used for the 2009 assessment, Tillamook County did not meet its targeted percentages of youth who use illicit drugs or drink alcohol. Improvement will be apparent when the percentages are reduced below the levels observed for the 2007-2008 school year.

## HEALTH & HUMAN SERVICE INDICATORS

### 40. Distance Traveled for Health Care

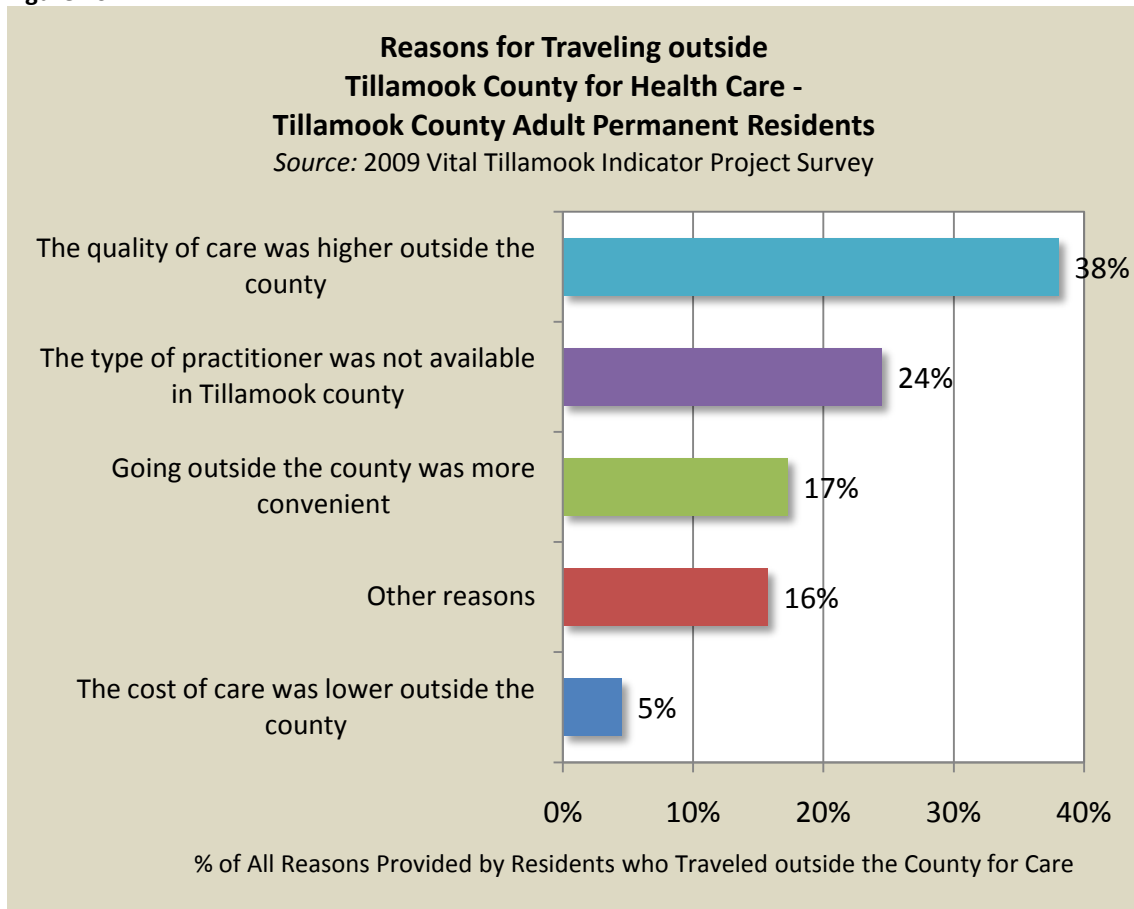
Indicator	Measure	Data	Year	Source
<b>Distance Traveled for Health Care</b>	Of the Tillamook County permanent residents who saw a health care provider in the last year, the % who saw only health care providers inside the county	38%	2009	VTIP Survey

Access to health care is a function of many things, including the physical availability of health care services close to those who need care. Through the “distance traveled for health care” indicator, we hope to gauge the extent to which Tillamook County residents indeed feel that the care they need is close to them. At the core of this indicator is the concept that residents should be able to access the health care they need within the county boundaries. This idea reflects the value placed on bolstering the Tillamook County economy (by reducing the number of local dollars being spent on health care in another county) and the value placed on making health care accessible to residents of the county.

In order to measure this indicator, we relied on data from the VTIP survey. On the survey, respondents were asked to indicate for each of the twelve health care provider types listed whether or not they had visited one in the last twelve months. If a respondent had visited a particular provider type in the last year he or she was then asked to indicate if that provider was located inside or outside Tillamook County. Then in order to construct a measure of health care utilization within the county, for each respondent we added up the number of health care visits that were made inside Tillamook County and divided that sum by the total number of health care visits made in the last year. This figure corresponds to the proportion of health care visits made within Tillamook County for each individual. For example, for a respondent that saw only a general practitioner and a dentist over the last year, and no other provider types, if he or she saw both of these practitioners within the county borders then the calculation would show that 100% of the provider types this person saw over the last year were in Tillamook County. If, however, this particular person saw the dentist in Tillamook County and the general practitioner in Clatsop County then the calculation would indicate that 50% of the visits made were in Tillamook County. Calculating this proportion across all respondents and then examining the number of people who saw providers 100% of the time in Tillamook County revealed that nearly 40% of adult permanent residents, who visited a health care provider in the prior 12 months, had done so 100% of the time within the county.

Given that the majority of adult permanent residents of the county travelled outside the county for at least one health care visit in the last year, it is helpful to get an understanding of why. In the survey, respondents were asked a set of follow-up questions that solicited information about the rationale for seeking health care outside the county, if they had done so. Figure 16 shows the results of this set of follow-up questions.

**Figure 16**



Naturally, for any one individual who traveled outside Tillamook County to visit particular practitioners over the last year, the reasons could vary by practitioner type. For example, someone who saw a dentist in Clatsop County may have done so because he or she perceived the quality of this particular dentist to be higher than any dentist in Tillamook County, but this same person who saw a pediatrician in Clatsop County may have done so because the cost was lower there. This point illustrates the need to look at the relative frequencies of the reasons given for traveling outside the county across all reasons provided, not just the relative frequencies of reasons across all individuals. Given this logic, we see that of all reasons cited for travelling outside Tillamook County for health care by permanent residents, doing so in order to get higher quality care was the most popular. Not being able to find a particular type of health care practitioner

within Tillamook County was the second most often cited reason for seeking care outside the county, followed by convenience, other reasons, and finally cost considerations.

In sum, these data show that a sizeable proportion of Tillamook County adult permanent residents rely on Tillamook County providers for all their health care needs. Among those who travel outside the county for care, doing so because of perceived quality differences was the most often cited reason. While this perception of differences in quality may not wholly match the real differences in quality between providers within or outside the county, it is nevertheless a widely-held perception that drives decision-making about where to seek health care among residents.

#### *Indicator Target*

The goal for this indicator is for at least 54% of adult permanent county residents to see health care providers within Tillamook County for all of their health care needs. Ideally, increases in this indicator will be driven by declines in the number of people needing to travel outside the county to find certain types of practitioners and declines in the number of residents who perceive the quality of care to be higher outside the county.

#### *Assessment*

According to the 2009 data collected in the Vital Tillamook Indicator Project survey it is apparent that Tillamook County did not meet its goals with respect to the distance traveled for health care, as measured by the proportion of residents who saw Tillamook County health care practitioners for all of their health care needs in the last year.

### 41. Delay of Health Care

Indicator	Measure	Data	Year	Source
<b>Delay of Health Care due to Cost, Quality, or Availability</b>	% of Tillamook County permanent adult residents who delayed care due to cost, quality, or availability	45%	2009	VTIP Survey
	<u>% of Tillamook County permanent adult residents delaying care because:</u>			
	The type of health care provider needed was located too far away	18%	2009	VTIP Survey
	No transportation	2%	2009	VTIP Survey
	Dissatisfaction with local provider choices	26%	2009	VTIP Survey
	Care needed could not be afforded	23%	2009	VTIP Survey
	No health insurance	15%	2009	VTIP Survey

The ability of individuals to access health care is not only a function of distance, but also a function of affordability, access to transportation, and availability of particular providers. By gauging the extent to which adults in Tillamook County have limited their use of health care services due to location, satisfaction, and cost we note the severity of

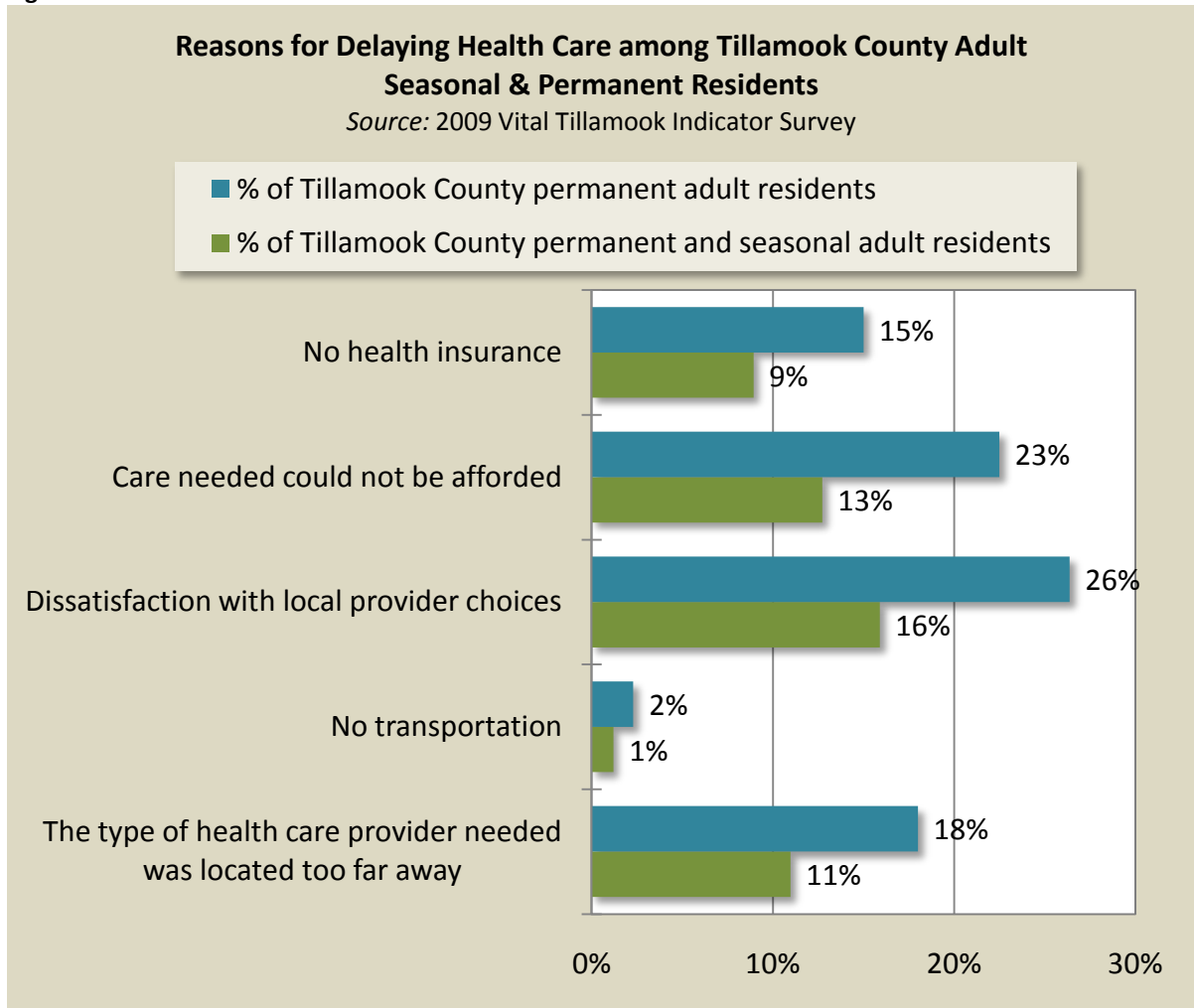
access problems among residents. Specifically, for this indicator we relied on data from the 2009 VTIP survey. Survey respondents were asked if they had delayed getting health care in the last 12 months because they:

- couldn't afford the care [they] needed
- the type of health care provider [they] needed (e.g., specialist or insurance network provider) was located too far away
- didn't have transportation
- were dissatisfied with the health care provider choices available locally
- didn't have health insurance

While the survey solicited information about the health care delay behaviors of both seasonal and permanent county residents this indicator focuses on the health care behaviors of permanent residents only. The reason for this focus is due to the fact that the Tillamook County community can do little to improve health care access for those who do not live there.

According to the VTIP survey data, in 2009, 45% of adult permanent residents put off seeking the treatment of a health care professional for at least one of the reasons listed above. Figure 17 displays the proportions of permanent residents who delayed care in the last year for each reason, along with the proportions of the seasonal and permanent resident population combined.

Figure 17



According to the results of the VTIP survey, the greatest proportion of adult permanent and seasonal residents delayed care because of dissatisfaction with local provider choices. Of this population, an estimated 16% delayed getting medical care in the previous 12 months because they were dissatisfied with local provider choices. Among permanent residents only, however, more than a quarter delayed seeking medical care for this reason in the last year. This statistic is an indication of extreme dissatisfaction with health care, which may lead to negative health outcomes for Tillamook County residents. To verbally express dissatisfaction with provider options is one matter, as someone who vocalizes dissatisfaction may still seek treatment, but to delay necessary care due to this perception is potentially dangerous. It is important to note that individuals who delayed care because they were dissatisfied with the local provider choices could have been dissatisfied for a variety of reasons including quality, cost, distance, or type.

The second greatest proportions of both the combined Tillamook County adult population and the population of permanent residents only, who delayed seeking



medical care for a particular reason, were observed for the reason of cost. According to the 2009 survey, an estimated 13% of seasonal and permanent residents delayed care because they could not afford the cost while 23% of permanent residents delayed care for the same reason. Regardless of being covered by health insurance, a sizeable percentage of adults found the cost of health care prohibitive and did not see a practitioner when they should have. We do not know, however, the duration of the delay. For some, this delay could have been a matter of days, while for others a matter of months or years.

Distance from the health care provider was the reason for delay for 11% of the combined permanent and seasonal adult population. Among permanent residents only, 18% delayed seeking medical care because the provider was located too far away. Slightly fewer residents delayed care because they did not have insurance, and for both populations the proportions were notable. The smallest percentages of residents delayed visiting a health care provider because they lacked transportation. Between the combined population and the permanent resident population only, the difference in proportions was negligible: one percent versus two percent.

In sum, data from the 2009 VTIP survey reveal that almost half of the permanent Tillamook County adult population delayed seeking health care that they needed for any reason over the last year. The greatest proportion of the population delayed care in the last year because of their dissatisfaction with local provider choices. The survey data also reveal that permanent residents delayed care for all reasons at a greater rate than the population of permanent and seasonal residents combined.

#### *Indicator Target*

The goal for this indicator is for 35% or less of the adult permanent resident population of Tillamook County to delay getting needed care from a health care professional.

#### *Assessment*

According to 2009 data collected through the Vital Tillamook Indicator Project survey, Tillamook County was below its targeted goal for this indicator. In future years, the goal is for the percentage of adult permanent residents who delay health care treatment to be at least ten percentage points lower than the 2009 rate.

## 42. Availability of Long-Term Care

Indicator	Measure	Data	Year	Source
Availability of Long-Term Care	# of residential senior care facility beds per 1000 people age 65+	64	2009	Personal Communication w/staff at assisted living facilities

As a county with a large population of older adults, and a population trajectory that indicates growth in this age group, it is important for Tillamook County to have the capacity to meet the health care needs of the senior population. In order to gauge this capacity, the Vital Tillamook Indicator Project chose to track the availability of long-term care within the county.

In order to gauge the capacity of Tillamook County to provide for the long-term health care needs of the older population, OSU faculty obtained live-in care capacity data for the 11 assisted living facilities in Tillamook County from facility.<sup>11</sup> Though the majority of these facilities do not have age requirements, and some house people age 55+, the capacity of these facilities was considered in light of the population age 65+ in 2000.

According to the information provided by the assisted living facility staff, the capacity of the 11 facilities in Tillamook County was 307 people in 2009. Dividing this figure by the total number of people age 65 and older in 2000 (4,797) and multiplying the quotient by 1,000 yields a total of 64 beds per 1,000 people age 65 and over.

### *Indicator Target*

The goal for this indicator is for there to be no fewer than 64 senior assisted living beds per 1,000 people age 65 and over in Tillamook County.

### *Assessment*

In 2009, according to data from the various staff at Tillamook County assisted living facilities, Tillamook County had met its goal of 64 beds per 1,000 people age 65 and over.

<sup>11</sup> The assisted living facilities included in this assessment were: Nehalem Bay House, ABC Comfort Homes/Garibaldi Home by the Bay, Five Rivers Assisted Living & Retirement Community, Kilchis House, Nehalem Valley Care Center, Country Haven Estates, Pleasant Valley Adult Foster Home, Lees Manor, Miami River Inn Elder Care, Above the Valley, and a private individual who offers assisted living care.

## 43. Health Outcomes

Indicator	Measure	Data	Year	Source
Health Outcomes	<u>Obesity</u>			
	% of 8 <sup>th</sup> graders at or above 95 <sup>th</sup> percentile of Body Mass Index	11.2%	2005-2006	OR Department of Human Services (DHS): OR Healthy Teens Survey (ORHT)
	% of adults with Body Mass Index greater than 30 (age-adjusted rate)	24.1%	2004-2007	OR Department of Human Services (DHS): Behavioral Risk Factor Surveillance System (BRFSS)
	<u>Smoking</u>			
	% of 8th graders who smoked on any day in the past 30	6.0%	2005-2006	DHS: ORHT Survey
	% of 11th graders who smoked on any day in the past 30	13.8%	2005-2006	DHS: ORHT Survey
% of adults who smoked sometimes or every day (age-adjusted rate)	20.2%	2004-2007	DHS: BRFSS	
<u>Sexually Transmitted Disease Rates per 100,000 population: Ratio of Tillamook County rates to Oregon rates</u>				
	Syphilis Incidence	0	2008	DHS: Public Health Division
	Gonorrhea Incidence	0.23	2008	
	Chlamydia Incidence	0.48	2008	
	HIV/AIDS Prevalence	0.41	2008	

Another element of the Tillamook County Strategic Vision relates to a desire to promote healthy lifestyles among residents. While assessing the number of health promotion activities in the county would be one way of measuring this goal, the Indicator Project group felt that measuring health outcomes would be a more appropriate way to assess the extent to which residents live healthy lifestyles.

The health outcomes the group chose to track fell along three dimensions, namely obesity, smoking, and sexually transmitted disease. Obesity data came from two sources: the Oregon Healthy Teen Survey for eighth grade statistics and the Behavioral Risk Factor Surveillance System for adult statistics. Both surveys gather data from a sample of the respective populations, therefore may suffer from sampling and non-sampling error. Smoking data came from the same surveys, though in addition to eighth graders and adults we included data from eleventh graders. Information about the

incidence of sexually transmitted diseases and the prevalence of HIV/AIDS came from the Oregon Department of Human Services, the Public Health Division. The Public Health Division receives disease incidence data from county public health offices, who receive reports from local doctors. All doctors are required to report cases they diagnose, without identifying information about the patient (thus preserving the patient's rights to confidentiality).<sup>12</sup>

With respect to obesity among youth and adults in Tillamook County, data from the OR Healthy Teen Survey and the Behavioral Risk Factor Surveillance System (BRFSS) indicate that a minority of teens and adults are obese. Approximately one out of ten eighth graders, in the 2005-2006 school year, had a Body Mass Index (height to weight ratio) that put them in the 95<sup>th</sup> percentile or higher for their age group. The 95<sup>th</sup> percentile is the threshold marker for obesity used by the OR Healthy Teens Survey. According to data from the BRFSS, obesity among adults was much more prevalent. Between 2004 and 2007, on average, nearly one in four Tillamook County adults had a Body Mass Index greater than 30. Body Mass Index greater than 30 is the threshold determined by the Centers for Disease Control (CDC) as obese. Obesity among adults in Oregon overall was exactly as prevalent as observed in Tillamook County during the same time, and among 8<sup>th</sup> graders only slightly lower. Table 4 presents data about obesity for Oregon, Tillamook County, as well as Tillamook County's non-metropolitan neighboring counties of Lincoln and Clatsop.

**Table 4**

	<b>% of 8<sup>th</sup> graders at or above 95<sup>th</sup> percentile of Body Mass Index (obese), 2005-2006<sup>1</sup></b>	<b>% of adults with Body Mass Index greater than 30 (obese), age-adjusted rate, 2004-2007<sup>2</sup></b>
<b>Oregon</b>	11%	24%
<b>Tillamook County</b>	11%	24%
<b>Clatsop County</b>	11%	25%
<b>Lincoln County</b>	--	29%

*Sources: 1 OR Healthy Teens Survey, note that Lincoln County did not participate in the survey in 2005-2006; 2 – Behavioral Risk Factor Surveillance System*

Table 4 clearly illustrates that Tillamook County is directly on par with its neighbors and the state with respect to 8<sup>th</sup> grade obesity, and very slightly below Lincoln and Clatsop counties with respect to obesity among adults. Please note, that 8<sup>th</sup> grade obesity information from Lincoln County was not available because Lincoln County did not participate in the Oregon Healthy Teens Survey in the 2005-2006 school year.

<sup>12</sup> According to Oregon Administrative Rules and Statutes, medical professionals are required to submit information about disease incidence for Oregon residences to the OR Office of Public Health. See these documents for more information:

<http://www.oregon.gov/DHS/ph/hst/docs/3330120270permsostextjan092007.pdf>

<http://www.oregon.gov/DHS/ph/hst/docs/3330180030permsostextjan092007.pdf>

<http://www.oregon.gov/DHS/ph/hst/docs/3330180005permsostextjan092007.pdf>

With respect to smoking, a comparison of three age groups (8<sup>th</sup> graders, 11<sup>th</sup> graders, and adults) reveals that on average, smoking was more prevalent in older cohorts in Tillamook County. According to the Oregon Healthy Teens Survey data, an estimated six percent of Tillamook County eighth graders smoked in the 30 days prior to the survey. Among eleventh graders, smoking was slightly more popular. The survey data estimate that nearly 14% of Tillamook County eleventh graders smoked during the 2005-2006 school year. Finally, smoking sometimes or everyday was the behavior of an estimated 20% of Tillamook County adults on average between 2004 and 2007. In Oregon, the same age trend is apparent, and the figures do not vary significantly from the statistics observed in Tillamook County (Oregon Center for Health Statistics). Table 5 presents smoking statistics for Oregon, Tillamook County, and Tillamook County's neighbors to the north, Clatsop County, and south, Lincoln County. The table also illustrates that Tillamook County smoking rates, though not significantly different from Oregon, do differ from those observed in Clatsop and Lincoln counties. In fact, Tillamook County outperforms Clatsop in all three age groups and most markedly among 8<sup>th</sup> graders and 11<sup>th</sup> graders. Compared to Lincoln County, among adults, a much lower proportion of Tillamook County adults, between 2004 and 2007, reported smoking.

Table 5

	<b>% of 8th graders who smoked on any day in the past 30, 2005-2006 <sup>1</sup></b>	<b>% of 11th graders who smoked on any day in the past 30, 2005-2006 <sup>1</sup></b>	<b>% of adults who smoked sometimes or every day (age-adjusted rate), 2004-2007 <sup>2</sup></b>
<b>Oregon</b>	9%	15%	19%
<b>Tillamook County</b>	6%	14%	20%
<b>Clatsop County</b>	14%	25%	23%
<b>Lincoln County</b>	--	--	29%

Sources: 1 - OR Healthy Teens Survey, note that Lincoln County did not participate in the survey in 2005-2006; 2 - Behavioral Risk Factor Surveillance System

Turning now to the prevalence and incidence of sexually transmitted disease among Tillamook County residents, table 6 presents the rates per 100,000 people in Oregon, Tillamook County, Clatsop County, and Lincoln County. In all areas, including Tillamook County, we note marked differences in the rates by disease type. In particular, the incidence of Chlamydia, or the number of new cases thereof, was the highest of the three types observed in 2008. Nearly 140 Tillamook County residents per 100,000 reported new cases of the disease. Gonorrhea incidence was quite small by contrast (only 7.7 new cases in Tillamook County per 100,000 people were reported) and according to public health data, no one in Tillamook County reported a new case of Syphilis in 2008. HIV/AIDS prevalence, or the number of people living with the illness, in Tillamook County was 52.2 people per 100,000 population or 5.22 people per 10,000 in 2008.

Table 6 also clearly indicates that in comparison to Tillamook County's neighbors and the state, rates of disease incidence and HIV/AIDS prevalence in Tillamook County are, on average, noticeably lower. The only exception to this trend is among 2008 incidence rates of Gonorrhea, where rates were lower in Lincoln County than in Tillamook County.

Table 6

	<b>Syphilis Incidence (Rate per 100,000), 2008 <sup>1</sup></b>	<b>Gonorrhea Incidence (Rate per 100,000), 2008 <sup>1</sup></b>	<b>Chlamydia Incidence (Rate per 100,000), 2008 <sup>1</sup></b>	<b>HIV/AIDS Prevalence (Rate per 100,000), 2008 <sup>2</sup></b>
<b>Oregon</b>	1.2	33.2	286.5	127.3
<b>Tillamook County</b>	0	7.7	138.1	52.2
<b>Clatsop County</b>	2.7	10.6	254.7	64.2
<b>Lincoln County</b>	0	2.2	203.5	76.2

Sources: 1 - OR Sexually Transmitted Disease Program (<http://www.oregon.gov/DHS/ph/std/index.shtml>)

2 - OR Public Health Division, HIV/AIDS Data (<http://www.oregon.gov/DHS/ph/hiv/data/index.shtml>)

In order to summarize Tillamook County's sexually transmitted disease incidence and prevalence data the Indicator Project group opted to use Oregon rates as benchmarks. Tillamook County rates were compared to Oregon rates by way of a ratio calculation; for each sexually transmitted disease Tillamook County rates were divided by Oregon rates. A ratio value greater than one indicates that Tillamook County has rates greater than Oregon, while a ratio value less than one indicates that Tillamook County has lower rates than those observed across the state. Indeed, for all diseases, Tillamook County was between 100% and 50% below the Oregon average in 2008 (Syphilis ratio: 0; Gonorrhea ratio: 0.23; Chlamydia ratio: 0.48; HIV/AIDS ratio: 0.41).

In sum, along most dimensions, the majority of Tillamook County residents appear to live healthy lifestyles. Though a minority of residents smoke or are obese, the sizes of these minorities are worthy of attention, in particular among youth as these characteristics are closely linked to additional health outcomes such as diabetes, heart disease, and cancer in later life. With respect to sexually transmitted diseases, the greatest number of new cases were reported for Chlamydia, though Tillamook County's rate per 100,000 people was exactly the same as that observed in Oregon overall in 2008.

#### *Indicator Target*

The goal for this indicator is for Tillamook County rates of obesity and smoking to be generally equal to or less than those observed in the county in 2008, but that among eighth graders the smoking rate should be very close to zero percent. With respect to disease prevalence and incidence, the goal is for the ratio of Tillamook County rates to the state rates to be equal to or less than one.

*Assessment*

According to the 2009 assessment of obesity data from the 2005-2006 school year for 8<sup>th</sup> graders and from 2004 through 2007 for adults in Tillamook County, it is apparent that Tillamook County has some room for improvement from these levels. With respect to smoking, Tillamook County performed better than its neighbors and the state in the proportion of youth and adults who smoked, but the prevalence of smoking among 8<sup>th</sup> graders was below the targeted level of 0%. In the area of sexually transmitted disease incidence and prevalence, according to our analysis of 2008 data, Tillamook County met its goal of having rates lower than the state.

**44. Substance Abuse Crime**

Indicator	Measure	Data	Year	Source
<b>Substance Abuse Crimes</b>	Reported Offenses: Drugs (rate per 100,000 population)	1,114.3	2007	OR Criminal Justice Commission
	Reported Offenses: DUII (rate per 100,000 population)	684.9	2007	OR Criminal Justice Commission

Substance abuse is a critical concern for many communities, and Tillamook County is no exception. One goal of the Strategic Vision is to reduce the prevalence of substance abuse in Tillamook County. Given the difficulty of measuring the extent of substance abuse in the county, we must use a proxy indicator, namely the incidence of substance abuse related criminal offenses.

According to data provided by the Oregon Criminal Justice Commission, in 2007 there were just over 1,000 drug offenses per 100,000 people reported in Tillamook County and approximately 680 DUII (Driving under the Influence of Intoxicants) offenses per 100,000 people. Some of these reported offenses may have led to arrests and subsequent convictions, but others may not have.

*Indicator Target*

The goal for this indicator is for the rate of reported substance abuse crimes to be below 2007 levels. In other words, the goal is for the reported drug crime offense rate to be less than 1,114 per 100,000 people and for the reported DUII offense rate to be less than 684 per 100,000 people.

*Assessment*

In 2009, according to data provided by the OR Criminal Justice Commission for 2007 crimes, Tillamook County had not met its goal with respect to substance abuse crimes.

#### 45. Language Services in Public Arenas

Indicator	Measure	Data	Year	Source
Language Services in Public Arenas	No data			

Another goal expressed in the Tillamook County Strategic Vision is for underrepresented populations to have access to the services they need. One way of gauging the attainment of this goal is to assess the extent to which people for whom English is not their first language can access services in their native tongue.

At this point, the project team did not have the capacity to interview staff at all of the public service agencies in Tillamook County. It is apparent that if this indicator is to remain, that some form of interview would need to be developed and administered to a clear and targeted group of public service agency personnel. The goal of the survey would be to ascertain the number of staff or volunteers in each agency who can serve as Spanish bilingual/bi-cultural interpreters.

#### 46. Poverty

Indicator	Measure	Data	Year	Source	
Poverty	% of Tillamook County children (age 0-17) in poverty	15%	2000	US Census Bureau, Long Form, Summary File 3	
	% of Tillamook County families in poverty	8%	2000		
	% of Tillamook County single-parent families in poverty	23%	2000		
	% of Tillamook County adults (age 18 and over) in poverty	10%	2000		
	<u>% of students using free &amp; reduced lunches</u>				
	Tillamook County (total)	58.4%	2008-2009	OR Department of Education	
	Neah-Kah-Nie School District	61.7%	2008-2009		
Tillamook School District	55.0%	2008-2009			
Nestucca School District	66.2%	2008-2009			

In addition to providing for the needs of non-native English speakers, a parallel goal of the Tillamook County community is to “provide resources to meet the basic needs of all populations.” The extent of poverty is a clear indicator of the extent to which the basic needs of the population are being met.

Four of the poverty statistics used here came from the 2000 long form US Census, which is administered by the Census Bureau to approximately one in six households. The



statistics generated from these data represent a sample of the population, and therefore may suffer from sampling and non-sampling error.

In 2000, according to data from the US Census Bureau, 15% of children below the age of 18 in Tillamook County were part of families in poverty. These families had income in 1999 below the official poverty thresholds assigned to them based on family size and age composition by the US Department of Health and Human Services. Among Tillamook County families in 2000, census data also reveal that eight percent of families were in poverty. Among single-parent families, however, the rate of poverty was much higher. According to the estimates derived from the 2000 sample survey of US households, 22.7% of single-parent families (with female or male heads of household) were in poverty. During this same time, one in ten adults in Tillamook County was in poverty.

In addition to using the 2000 estimate data derived from the census, participation of youth in the Free & Reduced Lunch Program was used as a measure of poverty in Tillamook County. In order to qualify for this program, families must demonstrate income eligibility. Children whose families earn income that falls below 130% of the federal poverty threshold qualify for free lunch and children whose families earn between 130% and 185% of the poverty threshold qualify for reduced price lunch. The advantage to using the proportion of students who participate in this meal program is that data are updated annually. The disadvantage of using this statistic to estimate child poverty is that it is a voluntary program; families that do not wish to enroll their children do not have to and thus these low-income children are not counted as participants. Nevertheless, the participation rate can shed some light on the prevalence of low-income among children.

During the 2008-2009 school year, the majority of students were enrolled in the Free & Reduced Lunch Program. The Nestucca School District had the greatest proportion of students enrolled in the program, followed by Neah-Kah-Nie, and finally Tillamook. Again, these numbers reveal the extent to which low-income youth and families utilize this low cost food program, not the full extent to which children in Tillamook County are low-income.

#### *Indicator Target*

The goal for this indicator is for all poverty figures to decline below the figures cited in the 2009 baseline indicator assessment. In addition, with respect to Free & Reduced Lunch Program participation rates, the goal is for these figures to decline from 2008-2009 levels, but to do so because of a decrease in need not because of an increase in stigma associated with participation.

*Assessment*

In 2009, according to data from the 2000 census and from the 2008-2009 school year, Tillamook County did not meet its goal with respect to the prevalence of poverty among residents.

**47. Low-Cost Food Access**

<b>Indicator</b>	<b>Measure</b>	<b>Data</b>	<b>Year</b>	<b>Source</b>
<b>Low-Cost Food Access</b>	# of Food Boxes distributed	9,633	2008-2009	Oregon Food Bank

Another indicator of the extent to which the basic needs of the population are being met is the access low-income families and individuals have to low cost food. In order to measure this indicator, information about food pantry utilization was used. While utilization figures are not exact indicators of access, they show that there are food resources in the community for low-income populations and they shed some light on the need for low cost food within the community.

In 2008-2009, according to data from the Oregon Food Bank, 9,633 boxes of food were distributed to Tillamook County residents by food pantries across the county. This statistic is up from previous years, likely due to the economic recession.

Compared to Tillamook's neighboring non-metropolitan counties (Lincoln and Clatsop) Tillamook County distributed slightly less food to its residents. In Lincoln County 13,580 food boxes were distributed between 2008 and 2009 and in Clatsop County 14,664 boxes were distributed. Data contained in table 7 illustrate that relative to the estimated number of people served by each of these three regional food banks, Tillamook distributed less than its neighboring counties. In Tillamook County, on average during 2008-2009, each person received approximately four food boxes. In Lincoln and Clatsop, on average, during this same period, each person received about four and a half boxes of food from the regional food banks.

**Table 7**

<b>Food Bank</b>	<b>Total Food Boxes Distributed</b>	<b>Estimated Number of People Served</b>	<b>Estimated, Average Number of Food Boxes per Person</b>
<b>Tillamook County</b>	9,633	2,418	3.98
<b>Clatsop County</b>	13,580	2,965	4.58
<b>Lincoln County</b>	14,664	3,322	4.41

Unfortunately, it is impossible to determine the extent to which need for low-cost food is being met in Tillamook County given current data availability. There is no public

information about the number of county residents in need of low-cost food. Therefore it is impossible to assess whether the current number of food boxes distributed is at, above, or below an acceptable level for the county. Future declines in the number of food boxes distributed could be driven by a number of factors, none of which are possible to single out. For one, a decline in the statistic could be driven by a real decline in the number of Tillamook County residents whose income is not sufficient to cover food costs. Alternatively, the statistic could decline because of a decline in the amount of food donated to the Food Bank and thus available to individuals in need. Finally, the number of food boxes distributed could decline because the number of low-income residents who feel that it is unacceptable to get food from the Food Bank even though they have a need goes up. Because it is extremely difficult to parse out the exact cause of a change in this indicator, and each cause yields a different interpretation of change, we cannot provide an assessment at this point. In the future, with no improved access to an estimate of the population in need of low-cost food, it may be advisable to remove this indicator from the assessment.

#### 48. Workforce Housing

Indicator	Measure	Data	Year	Source
Workforce Housing	% low-income residents, housing cost burdened: renters	59.4%	2000	OHCS, US Census Bureau
	% low-income residents, housing cost burdened: owners	35.2%	2000	OHCS, US Census Bureau
	% of all households, housing cost burdened	25.25%	2000	US Census Bureau
	Average residential property sale price (April – Sept.)	\$257,204.35	2008 - 2009	Tillamook County Department of Assessment & Taxation - Sales Data Report

See indicator #16 for a discussion of these data.

#### 49. Index Crime Rate

Indicator	Measure	Data	Year	Source
Index Crime Rate	Index Crime Rate (per 100,000 population)	2,867.2	2007	OR Criminal Justice Comm.

Another indicator of vitality within Tillamook County is the extent of general crime. The extent of crime relates to the larger concept of public safety, which was an area identified by residents as a key characteristic of vitality that was not explicitly addressed in the Strategic Vision. In order to gauge the extent of criminal activity in the county, the

index crime rate was used. According to the Oregon Criminal Justice Commission, index crimes correspond to:

Eight types of crimes selected and defined by the federal government used for general comparison purposes. Index crimes are further divided into person index crimes (willful murder, aggravated assault, robbery and forcible rape) and property index crimes (larceny, burglary, motor vehicle theft and arson). Index offenses are general categories, and generally cover more than one crime – or degrees of the same crime – under Oregon law.  
(<http://www.ocjc.state.or.us/CJC/State7999.shtml>)

In 2007, there were nearly 2,900 index crime reported offenses per 100,000 people in Tillamook County. Again, these reported offenses may or may not have led to arrests or convictions.

#### *Indicator Target*

The goal for this indicator is for the Index Crime Rate to be lower than 2,867 crimes per 100,000 Tillamook County residents.

#### *Assessment*

In 2009, according to 2007 data provided by the OR Criminal Justice Commission, Tillamook County had not met the goal of fewer than 2,867 crimes per 100,000 people.

### 50. Emergency Services Coverage

Indicator	Measure	Data	Year	Source
Emergency Services Coverage	Average Response time of fire, police, ambulance	5.9	2008	Personal Communication w/ staff
	Average Response time: Rockaway Beach Police (in minutes)	5.0	2008	Rockaway Beach Police
	Average Response time: Nehalem Fire Dept (in minutes)	6.7	2008	Nehalem Fire Dept
	Average Response time: Rockaway Fire Dept (in minutes)	7.0	2008	Rockaway Fire Dept
	Average Response time: Bay City Fire Dept (in minutes)	5.0	2008	Bay City Fire Dept
	Average Response time: Netarts-Oceanside Fire (in minutes)	5.5	2008	Netarts-Oceanside Fire
	Average Response time: Tillamook Fire District (in minutes)	6.0	2008	Tillamook Fire District

Public safety, though not explicitly mentioned in the Tillamook County Strategic Plan, was an issue that arose in community discussions about the vitality of the county. One

aspect of public safety that emerged as being particularly important was that of access to emergency services. Specifically, the coverage of emergency services throughout the county, as measured by the average response time was an indicator chosen to represent public safety; areas that are under-served will have longer response times.

In order to measure the response time of emergency services, OSU faculty members called the offices of the 16 emergency service providers: the Tillamook General Hospital, all of the fire departments, and the police departments. Of the 16 emergency services providers in the county, six responded to our calls. According to the information provided by these six offices, on average, emergency services in Tillamook County took about six minutes to arrive where they were needed in 2008. Among those six, there was relatively low variation in response times. It is not clear whether the emergency service providers who did not return our calls are in the same response time range.

#### *Indicator Target*

The goal for this indicator is for the average response time of fire, police, and ambulance in Tillamook County to be less than six minutes. In addition, the variation of response times across all districts in the county should remain small. The maximum average response time for an emergency service should not exceed 7.5 minutes.

#### *Assessment*

In 2009, according to data provided by emergency response agencies in Tillamook County, the county met its goal of a total average emergency response time of less than six minutes and a maximum response time for a single agency of less than 7.5 minutes.

## Vital Tillamook Indicator Project Summary

In 2009, the baseline assessment of community vitality indicator data for Tillamook County reveals that the county is doing well in many areas and has room for improvement in others. The areas in which Tillamook County appears to be meeting its goals are:

- Growth & Development
- Natural Environment
- Society & Culture

Though each of these vision categories performed well overall in the 2009 assessment, some specific issues of concern stand out within each.

In the area of growth and development, the issue of managing growth to preserve rural open space and foster the development of vibrant towns needs to be addressed in the future. The indicators associated with this goal are #1, land conversion, and #2, home construction in Urban Growth Boundaries, neither of which met goal levels in 2009.

In the area of the natural environment, the biggest issue of concern is getting access to more, and better, data for future indicator assessments. At this point, the county appears to be fostering a quality natural environment, as it has abundant fish populations, offers many natural resource education opportunities to residents, and manages refuse effectively through recycling. Without more data, however, it is impossible to speak definitively about the quality of the Tillamook County watersheds or the health of the forests that occupy a large proportion of land area in the county. In the future, effort should be made among forestry and watershed professionals inside and outside the county to systematically assess the quality of these two natural systems.

In the area of society and culture, the issues in need of future improvement are discrimination and lifelong learning. From the 2009 indicator data it is apparent that a sizeable proportion of residents do not feel valued and respected because of their age, race, culture, or beliefs in the county (indicator #30). In addition, indicators #32 and #33 reveal that the level of participation in education for personal development and the number of educational opportunities in which adults can participate do not meet resident expectations for the county's environment of lifelong learning.

Despite these shortcomings in the three broad vision areas, overall Tillamook County is meeting its goals. In growth and development, the county is doing well in its support of alternative modes of transportation and in its preparation for and response to natural hazards. With respect to the natural environment, Tillamook County is doing particularly well at providing natural resource education opportunities to residents and at recycling waste. Finally, in the area of society and culture the county is doing a good job of maintaining the rural character of the landscape, having a civically-involved and cohesive resident community, and preserving local culture. There is no doubt that the vitality of Tillamook County is enhanced by positive outcomes in these areas of the community.

The 2009 baseline assessment also reveals the areas in which Tillamook County appears to be less vital. These are the areas in which indicator levels do not meet the targets set by community members:

- Economy
- Youth & Education
- Health & Human Services

With respect to the performance of the economy, almost all of the Tillamook County indicators are below target. There will likely need to be concerted county-wide efforts to strengthen the farming, fishing, and forestry industries, increase tourism (and the revenues it generates), improve access to affordable housing, and improve the ratio of cost of living to prevailing wages. Many of these economic issues cannot solely be controlled locally, because many are caused by elements of the current macro-economic system. Some solutions can be devised locally, but it is important to be aware of the larger economic context that influences long-term local outcomes.

In the area of youth and education, some indicator levels are particularly worrisome. Improving the educational achievement of eighth and tenth graders throughout the county is one area in which Tillamook County would be well-served to focus some energy. In addition, the prevalence of substance abuse and teen pregnancy are at levels greater than residents desire; thus warranting some attention at the county level.

Finally, in the area of health and human services, poor performance in the indicators is apparent in resident access to affordable healthcare. Interestingly, the issue that appears to limit the extent to which residents perceive they have access to care in Tillamook County most is not cost (though it was an oft-cited limiting factor), but access to quality health care of the type they need. Another aspect of health and human services that stood out as being particularly poorly performing, relative to resident expectations, is the prevalence of poverty in the county. Here again, it is important to bear in mind the relationship between local outcomes and the macro-economic context, so that the burden for alleviating poverty not fall solely to the local community. That said, there may be ways in which the local community can realize gains in this area, albeit modest.

Overall, this assessment reveals that in 2009, Tillamook County is roughly fifty percent vital. Out of the six categories of the Strategic Vision, indicator levels in three categories meet targets set by residents while three categories do not. Given the extent to which community residents have been involved with crafting this vision it is highly likely that they will be motivated to work together and move the county toward better outcomes. In fact, this assessment should spark community conversation about the ways Tillamook County vitality can be improved in particular dimensions.

## Appendix 1 – Vital Tillamook Indicator Project Survey Methods

In the summer of 2009, the Oregon State University Vital Tillamook Indicator Project team administered a mail survey to a sample of adult Tillamook County residents and property owners. Combining data from the 2000 US census and data from the Tillamook County Assessor's office, we estimated that the target population of adult Tillamook County residents and property owners was 26,660 in 2009. In order to be 95% confident that, with repeated sample draws from the population, the (true) population statistics fall within a range of plus or minus 4 percentage points of our sample estimates we needed a sample of 587 Tillamook County adults to complete the survey. Given the mail format of the survey administration, a 40% response rate was expected.<sup>13</sup> Therefore, in order to get 587 completed surveys the team elected to use a stratified, unequal probability, random sampling strategy to select 1500 absentee-owner households and permanent residents to receive the survey. The sample was stratified based on residency, age, and location.<sup>14</sup>

At the conclusion of the survey distribution period, OSU had received 696 surveys from Tillamook County residents and absentee homeowners, yielding a response rate of 46%. Given the total number of surveys, overall, we can be 95% confident that, with repeated sample draws from the population, the (true) population statistics fall within a range of plus or minus 3.7 percentage points of our sample estimates.

Of the 696 respondents, 514 were from residents of Tillamook County and 182 (26%) were from absentee property owners. In analyses of the data that separate out the two populations, there are two different confidence intervals. For the resident sample, we can be 95% confident that the (true) population statistics fall within a range of plus or minus 4.2 percentage points of the sample estimates. For the absentee sample, we can be 95% confident that the (true) population statistics fall within a range of plus or minus 7.1 percentage points of the sample estimates. Lower confidence in the estimates was the trade-off of sampling absentee owners at a low rate to conserve resources.

The Vital Tillamook Indicator Project Survey data come from a sample of Tillamook County adult residents and property owners and therefore not the entire population. The sample data will be used, however, to create statistical estimates for the entire adult Tillamook County resident and absentee owner population. Given the intent to use these sample data as estimates of the total population, it is necessary to use statistical weighting procedures that reflect the way the sample was drawn, ensure the data represent the target population, and correct for non-response of individuals.

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<sup>13</sup> Dillman, Don. (2007). *Mail and Internet Surveys: The Tailed Design Method*. 2<sup>nd</sup> Edition. Hoboken, NJ: John Wiley & Sons, Inc.

<sup>14</sup> For details on the stratification method used please contact Lena Etuk via email: lena.etuk@oregonstate.edu or Jennifer Purcell: jkpurcell@oregoncoast.com for the full survey methodology report.



As with all sample surveys, the VTIP survey data suffers, to some degree, from sampling error. Some members of the adult, Tillamook County, resident population were not included in the list of voters we used to draw our sample, and some members of the Tillamook County absentee owner population may not have been included in the list of properties we used, each of which would result in sample bias. Other members of the target population may have been given a chance to participate, but simply chose not to, and they may differ in important ways from those people who did participate. Due to this potential error in the VTIP survey, statistics that are calculated using these data may not give us an accurate estimate of the true population statistics. For these reasons, it is important and necessary for the analysis of these survey data to include the application of sampling weights.<sup>15</sup> Sampling weights can account for the under-representation of certain elements of the population due to these errors in the sample. OSU constructed weights to account for the sampling design and survey non-response. These weights were then applied to individual respondents in order to make each represent a targeted number of adult Tillamook County residents and property owners. This weighting procedure brings the VTIP survey sample closer in line with the true population.

The full description of the methods used to weight and analyze the VTIP survey data is included in the VTIP Survey Methods Report. To request a copy of this full methodology report, please contact Lena Etuk at Oregon State University (lena.etuk@oregonstate.edu) or Jennifer Purcell at the Tillamook County Futures Council (jcpurcell@oregoncoast.com).

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<sup>15</sup> Groves, Robert M., Floyd Fowler Jr., Mick Couper, James Lepkowski, Eleanor Singer, and Roger Tourangeau. (2004). *Survey Methodology*. Hoboken, NJ: John Wiley & Sons, Inc.  
Levy, Paul S. and Stanley Lemeshow. (2008). *Sampling of Populations: Methods and Applications*. 4<sup>th</sup> Edition. Hoboken, NJ: John Wiley & Sons, Inc.