

Final Draft Report

Commercial and Industrial Buildable Lands Inventory and Economic Opportunities Analysis for the Central Tillamook Region

Prepared for the City of Tillamook and Tillamook
County

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Disclaimer

ECONorthwest completed this report on behalf of the City of Tillamook and Tillamook County. This report is a regional economic opportunities analysis (EOA), which the City and County will use to comply with statewide planning Goal 9 and OAR 660-009 as well a factual basis as part of the update of their respective Comprehensive Plans.

Throughout the report we identify the sources of information and assumptions used in the analysis. Within the limitations imposed by uncertainty and the project budget, ECONorthwest has made every effort to check the reasonableness of the data and assumptions, and to test the sensitivity of the results of our analysis to changes in key assumptions. ECO acknowledges that any forecast of the future is uncertain. The fact that we evaluate assumptions as reasonable does not guarantee that those assumptions will prevail.

Acknowledgements

Numerous people contributed to the completion of this project. We would like to acknowledge the hard work of the project Technical Advisory Committee, State of Oregon Staff, and consultants.

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Executive Summary

This report presents a regional Economic Opportunities Analysis (EOA) consistent with the requirements of statewide planning Goal 9 and the Goal 9 administrative rule (OAR 660-009) for the Central Tillamook Region (the Region). Goal 9 describes the EOA as “an analysis of the community's economic patterns, potentialities, strengths, and deficiencies as they relate to state and national trends” and states that “a principal determinant in planning for major industrial and commercial developments should be the competitive advantage of the region within which the developments would be located.”

The EOA has two primary goals:

- **Identify comparative advantages for economic development in the Central Tillamook Region.** The EOA identifies the comparative and competitive advantages of the Central Tillamook Region, identifying economic opportunities based on these advantages, and identifying policy direction to capitalize on these advantages.
- **Determine if the Region has enough land to accommodate twenty-years of growth.** The EOA fulfills state planning requirements for a twenty-year supply of employment land by projecting the amount of land needed to accommodate the future employment growth within the Region between 2013 and 2033 and evaluating the existing employment land supply within the Region to determine if it is adequate to meet that need.

How much buildable employment land is within the Central Tillamook Region?

Table S-1 shows commercial and industrial land in acres by classification and constraint status for the Central Tillamook Region in 2012. Analysis by status (the table columns) shows that about 1,142 acres are classified as built or committed (e.g., unavailable for development), 532 acres were classified as constrained, and 788 were classified as vacant and suitable for employment uses.

Table S-1. Employment acres by classification, the Central Tillamook Region, 2012

Jurisdiction	Number of Tax Lots	Acres			
		Total	Developed	Constrained	Suitable
City					
Vacant	68	146	0	55	91
Unsuitable	16	29	1	28	0
Semi-Public	28	29	25	4	0
Public	47	62	41	21	0
Partially Vacant	4	14	3	2	9
Developed	575	322	262	60	0
Subtotal	738	601	332	170	99
County					
Vacant - Port	4	15	0	0	15
Vacant	24	135	0	13	122
Unsuitable	4	7	1	6	0
Semi-Public	4	3	3	0	0
Public	15	31	22	9	0
Partially Vacant - Port	1	1,471	653	318	500
Partially Vacant	10	91	36	4	51
Developed	94	107	95	12	0
Subtotal	156	1,860	810	361	689
Total	894	2,461	1,142	532	788

Source: Tillamook County GIS data; analysis by ECONorthwest

How much growth is the Central Tillamook Region planning for?

Table S-2 shows the forecast of employment growth by land use type in the Region from 2013 to 2033. Table 3-4 forecasts growth in all land-use types and it forecasts shifts in the composition of the Region's employment:

- The **low** growth scenario shows the about same distribution of employment in 2033 as in 2013. This scenario assumes little change in the amount and structure of employment in the Region.
- The **medium** growth scenario shows modest change in the distribution of employment in 2033 as in 2013. This scenario assumes that retail and services employment will lead growth, followed by growth in industrial employment , with government growing at a similar rate the OEA's forecast for population growth. **As described below, ECONorthwest identified the "medium" employment forecast as the most reasonable point forecast.**

- The **high** growth scenario shows a greater change in the distribution of employment in 2033 as in 2013. Achieving the growth in the high growth scenario will require growth driven by increases in industrial employment, especially in manufacturing, and increases in retail and services driven by an increase in overnight tourism.

Table S-2. Forecast of employment growth, the Central Tillamook Region, 2013-2033

Land Use Type	2013 Total	% of Total	2033 Total	% of Total	2013-2033 Growth
Low Forecast					
Industrial	2,320	29%	2,630	29%	310
Retail and Services	4,631	57%	5,206	57%	575
Government	1,149	14%	1,233	14%	84
Low Emp Total	8,100	100%	9,069	100%	969
Medium Forecast					
Industrial	2,320	29%	2,845	29%	525
Retail and Services	4,631	57%	5,690	58%	1,059
Government	1,149	14%	1,275	13%	126
Med. Emp Total	8,100	100%	9,810	100%	1,710
High Forecast					
Industrial	2,320	29%	3,513	33%	1,193
Retail and Services	4,631	57%	5,802	55%	1,171
Government	1,149	14%	1,331	13%	182
High Emp Total	8,100	100%	10,645	100%	2,545

Source: ECONorthwest

Note: Green shading denotes an assumption by ECONorthwest

Can some employment growth be accommodated on underutilized land?

Some new employment can be accommodated on underutilized lands, such as vacant buildings or businesses that can make more efficient use of existing office space. The analysis assumes that 10% of industrial employment can be accommodated this way and that 15% of retail and services and government employment can be accommodated in existing built space. In the medium growth scenario, 220 employees are accommodated in existing built space.

How much land will be required for employment?

The medium forecast of growth of 1,710 new employees will result in the following demand for vacant (and partially vacant) employment land: 39 gross acres of industrial land and 63 gross acres of commercial land for retail, services, and government uses.

Does the Central Tillamook Region have enough land to accommodate employment growth?

Table S-3 compares the supply of land within the Central Tillamook Region the forecast of land demand in the Region over the 2013 to 2033 period. **In all three forecast scenarios, the Region has sufficient industrial land to accommodate expected growth, without accounting for the desired site characteristics of the target industries. The Region has a small deficit of commercial land.**

- The **low** growth scenario shows a surplus of 708 acres of industrial land and 17 acres of commercial land.¹
- The **medium** growth scenario shows a surplus of 692 acres of industrial land and an 11-acre deficit of commercial land. The medium growth scenario is the preferred employment growth scenario and the scenario that represents the point-forecast for employment growth and land needs in the Region.
- The **high** growth scenario shows a surplus of 642 acres of industrial land and a 20-acre deficit of commercial land.

Table S-3. Comparison of land supply with land demand, Central Tillamook Region, 2013 to 2033

Land Use Type	Land Supply (Gross Acres)	Land Need (Gross Acres)	Land Surplus or (Deficit)
Low Forecast			
Industrial	731	23	708
Commercial	52	35	17
Low Forecast	784	58	725
Medium Forecast			
Industrial	731	39	692
Commercial	52	63	(11)
Medium Forecast	784	102	681
High Forecast			
Industrial	731	89	642
Commercial	52	72	(20)
High Forecast	784	161	622

Source: ECONorthwest

Note: Commercial land need is a combination of land for retail and services and government.

While Table S-3 shows that the Region has enough or nearly enough land to accommodate future growth, it does not tell the full story of employment land sufficiency in the Central Tillamook Region. The key issue for the Region is whether there is sufficient commercial land with the necessary

¹ Commercial land need is a combination of land for retail and services and government.

characteristics to accommodate expected growth. The specific issues are: (1) whether there is enough land that is primarily meant for commercial development in the Region, (2) the location of vacant commercial land, and (3) opportunities for commercial development at the Port.

- **Amount of commercial land.** The Region has an 11-acre deficit of commercial land to accommodate expected growth. In addition, the Region has relatively few large commercial sites, which include a 17-acre site in the City and a seven-acre site in the County.
- **Location of commercial land.** Much of the unconstrained vacant commercial land in the City of Tillamook is located outside of the City core, north of the City along Highway 101 or in the east of the City along Highway 6.² **The location of unconstrained vacant commercial land is not ideal if the City wants to concentrate retail and tourism activity in commercial district in or near downtown.**

One of the key economic opportunities and potential growth industries identified in this study is growth of tourism, such as restaurants, hotels, or small shops (e.g., a shop selling locally-produced crafts) for visitors. Higher-end hotels are likely to prefer to locate in a place with an ocean view, such as in Netarts or Oceanside. Some businesses for visitors may prefer to locate near hotels or in a location with an ocean view. There is, however, relatively little vacant commercial land in Netarts and nearly none in Oceanside. The scale of commercial development in these unincorporated communities will be limited by the County's zoning regulations.

Another option, which is articulated in policies presented in the economic element of the City of Tillamook's Comprehensive Plan, is to take steps to encourage redevelopment within the downtown area. This is clearly a priority for the City as described in Policy E-41:

Policy E-41: The City will encourage a downtown development plan with implementation strategy to guide the creation of a viable business organization, a restructured economic market mix of commerce in the

² The City of Tillamook has seven acres of Highway Commercial (C-H) located in the floodway north of the city center. While these lands are constrained, they can be developed for commercial uses if they meet the standards outlined in the Tillamook development code.

City Center and a design initiative which refreshes and underscores the pedestrian-friendly, livable aspects of the City Center.

- **Opportunities for commercial development at the Port.** The Port of Tillamook Bay has about 500 acres of vacant land, zoned M-1 (General Industrial). While a substantial amount of land at the Port will be used for industrial uses (e.g., the Industrial Park and the Airport Business Park), the Port expects land along Highway 101 to develop with a mixture of commercial and retail uses.

While the Port is not planning for large-scale retail development (e.g., a regional mall), this land may develop with some larger commercial uses, such as a new museum. The types of retail uses may vary from small shops that sell local goods (e.g., a hardware store or a crafts store) to regional commercial that serves locals and visitors (e.g., factory outlet stores), once the Region has sufficient population and overnight tourism to support large-format retail. Commercial uses at the Port should complement, rather than compete with, commercial uses within the City of Tillamook, Netarts, and Oceanside.

Planning for development of larger-scale retail will require addressing transportation issues for workers and shoppers, both at the Port, transportation connectivity with the Region, and options for alternative transportation.

It will be important for the key stakeholders (e.g., the City, County, Port and other interested parties) to engage in a dialog and planning process to determine what types of commercial uses are appropriate on the Port site. The key will be to identify uses that do not conflict with the City's policies as described in Chapter 11 of the City of Tillamook Comprehensive Plan.

What types of business does the Central Tillamook Region want to attract?

The characteristics of the Central Tillamook Region will affect the types of businesses most likely to locate in the Region. The attributes that may attract firms are the Region's comparative advantages: location in the North Oregon Coast, access to Highways 101 and 6, comparative ease of moving freight from Tillamook to Portland, range of businesses in the Region, access to natural resources for manufacturing, and high quality of life. The Region is likely to attract businesses that prefer to locate near to the ocean or businesses that have a choice of where to locate and prefer the quality of

life factors in the Central Tillamook Region. The types of businesses that may be attractive to the Region include:

- **Specialty food production**, such as production of wild rice, wasabi, horseradish, mushrooms, truffles, oysters, blueberries, artichokes, sea salt, specialty brewing yeast, and specialty flowers.
- **Forest products**, such as timber, moss, or wild-grown edibles (e.g., mushrooms).
- **Specialty agricultural and forest production** for locally grown products.
- **Alternative energy production**, such as manure waste digesters, forest biomass, or wind energy production.
- **Agricultural services and businesses**, such as feed and equipment stores.
- **Specialty manufacturing**, such as avionics and aeronautical equipment, value-added lumber productions, wood products manufacturing, or other specialty manufacturing.
- **Other manufacturing**, such as recreational equipment, furniture manufacturing, specialty apparel, or other light manufacturing.
- **Services for visitors, such as hotels, restaurants, and** activities such as recreation (e.g., bicycle tours), agricultural-based tourism (e.g., tourism for brewery or wine tasting), river- or ocean-resource-based tourism (e.g., fishing, crabbing, or oysters), ecological tourism, or special events.
- **Retail and personal services**, such as small specialty retail shops (e.g., a hardware store or a craft-supply store) and personal services such as financial institutions or beauty shops.
- **Medical services** for seniors and other residents.
- **Services for seniors**, such as assisted living facilities, retirement centers, or recreational services.

What are the implications of the key economic development issues in the Central Tillamook Region?

The conclusion of the economic opportunities analysis is that the City and County has enough industrial land to accommodate the forecast for employment growth within the Central Tillamook Region over the next 20-years. The Region has a deficit of commercial land (11 acres) to accommodate commercial growth over the next 20-years.

The challenge for the City and County is developing approaches to strategically position the land base and infrastructure to capitalize on the region's comparative advantages and identifying strategic public investments that retain existing businesses and attract new businesses.

- **Consider local preferences for growth.** Interviews with stakeholders and discussions with staff suggest that there is a strong preference to maintain the rural character of the community, while reinvigorating the economy to raise incomes while maintaining the rural, small-town atmosphere. The general preference for economic growth is for growth that fits with the existing character of the Region and for modest amounts of growth. This suggests an economic development strategy that focuses as much (or more) on business retention and expansion than on recruitment.

As the City, County, and Port continue work on economic development planning, decisionmakers should keep these preferences in mind. The local governments can plan for growth in employment and increases in income, while retaining the unique and desirable characteristics of the community. Economic development policies and strategies, however, will need to be crafted to provide opportunities for types of growth that are consistent with community values, as well as the comparative advantages of the Region. Moreover, it will be important for the three local government agencies as well as the Tillamook Economic Development Corporation to ensure that strategies and actions align and are coordinated.

- **Build from the Region's strengths.** The Region is most likely to successfully retain, grow, or attract businesses that require the qualities found in the Central Tillamook Region. The Region's strengths include: transportation access to Highways 101 and 6, freight and automotive proximity to Portland, high quality natural resources and agricultural products, ocean and bay access, developable and serviced land at the Port of Tillamook Bay, the large base of tourists who pass through Tillamook already (nearly 1 million visitors annually), access to labor from the Northern Oregon Coastal region, and high quality of life.
- **Capitalize on opportunities to grow manufacturing.** The Region's opportunities for growing manufacturing are in production of value-added, niche agricultural products, wood products, and specialty manufacturers who locate in Tillamook because of the Region's attributes (e.g., availability of serviced industrial land or quality of life). Much of the manufacturing growth in the Region is likely to be

at relatively small businesses and involve growth of a few jobs (e.g., one to nine jobs per firm). However, a larger manufacturer (e.g., one with 50 or more employees) might be attracted to the Region because the Port of Tillamook Bay's serviced land and the relative ease of transporting freight by truck to Portland.

- **Work together to create a coordinated framework for regional implementation of economic development strategies.** The primary purpose of the EOA is to provide a factual basis to support development of economic development policies and implementation strategies for the City of Tillamook and Tillamook County. It is important to acknowledge that the City, County, and Port already have policies and strategies that relate to economic development. A review of these strategies suggests a strong foundation exists on which to build from. ECO's evaluation is that appropriate policies already exist; the issue is the lack of a coordinated implementation framework.

Input received at the May 23rd Stakeholder meeting, suggests that an opportunity exists to engage in a regional dialog about how to best align strategies among the three government entities and the Economic Development Council of Tillamook County.

The next step is for the City and County to develop a plan to guide implementation of economic development within the Region. We recommend that the City and County work together with other local and regional partners (including the Port) to develop an economic development action plan to prioritize the implementation of existing policies and goals.

Economic development strategies commonly include goals and actions to address the following topics:

- Encouraging growth of businesses and employment in target industries.
- Managing the supply of commercial and industrial land in the Region.
- Ensuring that employment land has necessary services.
- Supporting workforce development.

Several approaches exist to addressing this recommendation. Based on ECO's review of the plans and input received through interviews and the Stakeholder meeting, we suggest that the regional organizations (city, county, port, and EDCTC) engage in one or more

joint meetings to identify specific short term actions that are consistent with the existing plans and policies and address specific opportunities outlined in this report. We recommend that the meetings be organized and facilitated by an outside individual or group.

- **Concentrate manufacturing growth at key sites.** Manufacturing businesses may benefit from locating near to other manufactures (i.e., clustering), especially the businesses have common inputs (e.g., natural resources) or common labor requirements. The City and County could also benefit from manufactures that cluster together because it may be less costly and easier to provide infrastructure to one larger area, rather than many smaller sites around the Region. The obvious opportunity for clustering manufacturing businesses and making strategic infrastructure investments is at the Port of Tillamook Bay's, both in the Industrial and Airport Business Parks. In addition, the Port site may provide opportunities for a mixture of commercial and retail development, some of which might complement the manufacturing (e.g., selling locally manufactured or processed products).
- **Address service deficiencies on industrial land.** The majority of industrial land in the Region is at the Port. Land at the Port has well-documented service deficiencies, most notably deficiencies in wastewater service and transportation limitations. The City and County should work with the Port to resolve these deficiencies and make land at the Port available for development.

The first step in this process is complete. The City and County modified the Urban Growth Management Agreement (UGMA) in 2011 to allow the city to extend wastewater infrastructure to the Port site. While this step is pre-requisite to providing services, identifying funding sources will likely be the biggest challenge.

In addition, some industrial lands within the City are unserved because of the prohibitive cost or complexity of providing services to the industrial sites. The City should consider options for servicing these sites or using the land for other purposes that do not require urban-level services. In addition, the City may want to consider removing unserviceable industrial sites from the UGB. The City could work with the County to bring the Rural Industrial site south of the UGB into the City, allowing more intense usage of this site for industrial uses.

- **Identify opportunities for commercial land infill and redevelopment.** This study concludes that the Region has a modest deficit of commercial land (11 acres) to accommodate commercial growth. The study identifies three key issues with the commercial land supply in the region are: (1) amount of commercial land in the Region, (2) few large sites (over five acres) for commercial development in the Region, and (3) very little vacant commercial land in Netarts or Oceanside. In addition, the 2010 Johnson-Reid study identified land needed for businesses to move out of flood-prone areas. The City and County should work together to identify opportunities for commercial infill and redevelopment.

In addition, there may be opportunities for other policy changes to allow for commercial development. For example, the City or County could redesignate land designated for other uses to allow commercial development. These opportunities are already addressed in policies in Chapter 11 of the City's Comprehensive Plan (Policy E-37). In addition, the Port may allow commercial uses at specific areas within the Port, such as along Highway 101.

- **Grow overnight tourism.** Nearly 1 million people visit the Tillamook Cheese Factory per year and Highway 101 has more than 5 million trips per year. The Region already has a lot of visitors and people who pass through the City. To grow tourism, the City, County and other stakeholders should:
 - *Develop a regional tourism marketing strategy.* The strategy should: (1) identify and involve stakeholders involved in developing tourism, (2) assess current and needed tourism infrastructure, (3) assess opportunities for growing tourism and increasing overnight stays in the Region, and (4) a concise action plan that identifies a few goals related to growing tourism and concrete actions to implement the goals. While the strategy should identify a long-term vision for growing tourism, we strongly recommend that the strategy focus on goals and actions that are achievable over the next one to three years and possibly as long as five years.
 - *Focus on increasing overnight tourism.* Average per person expenditures for overnight visitors to Oregon in 2009 was \$155, compared with \$46 for leisure visitors on a day trip. The Region provides most of the opportunities for the most

common activities and experiences that overnight visitors to Oregon engage in.³

- *Develop tourism infrastructure.* Increasing revenue from tourism (both for businesses and local taxes) will require building infrastructure to support tourism (e.g., hotels and restaurants) and activities to keep people in Tillamook for multiple days (e.g., outdoor recreation like fishing, attractions, or events).
- **The City, County and Port of Tillamook Bay should follow the recommended implications for Economic Development as described in this section. Specifically:**
 - Considering local preferences for growth
 - Building from the region's strengths
 - Capitalizing on opportunities to grow manufacturing
 - Addressing service deficiencies on industrial land
 - Working together to create a framework for regional implementation of economic development strategies
 - Concentrating manufacturing growth at key sites
 - Identifying opportunities for commercial land infill and redevelopment
 - Growing overnight tourism
 - Engage in a regional dialog about
 - Economic development vision and strategy
 - Land use within the UGB and at the Port
 - Develop an action plan to prioritize the many implementation steps in the comprehensive plan
 - Adopt regional EOA as part of the comprehensive plan fact base
 - Make comprehensive plan fact base and policy amendments as appropriate

³ Longwoods International, "Oregon 2009 Visitor Report," June 2010.

This report presents a regional Economic Opportunities Analysis (EOA) for the Central Tillamook Region consistent with the requirements of statewide planning Goal 9 and the Goal 9 administrative rule (OAR 660-009). Goal 9 describes the EOA as “an analysis of the community's economic patterns, potentialities, strengths, and deficiencies as they relate to state and national trends” and states that “a principal determinant in planning for major industrial and commercial developments should be the competitive advantage of the region within which the developments would be located.”

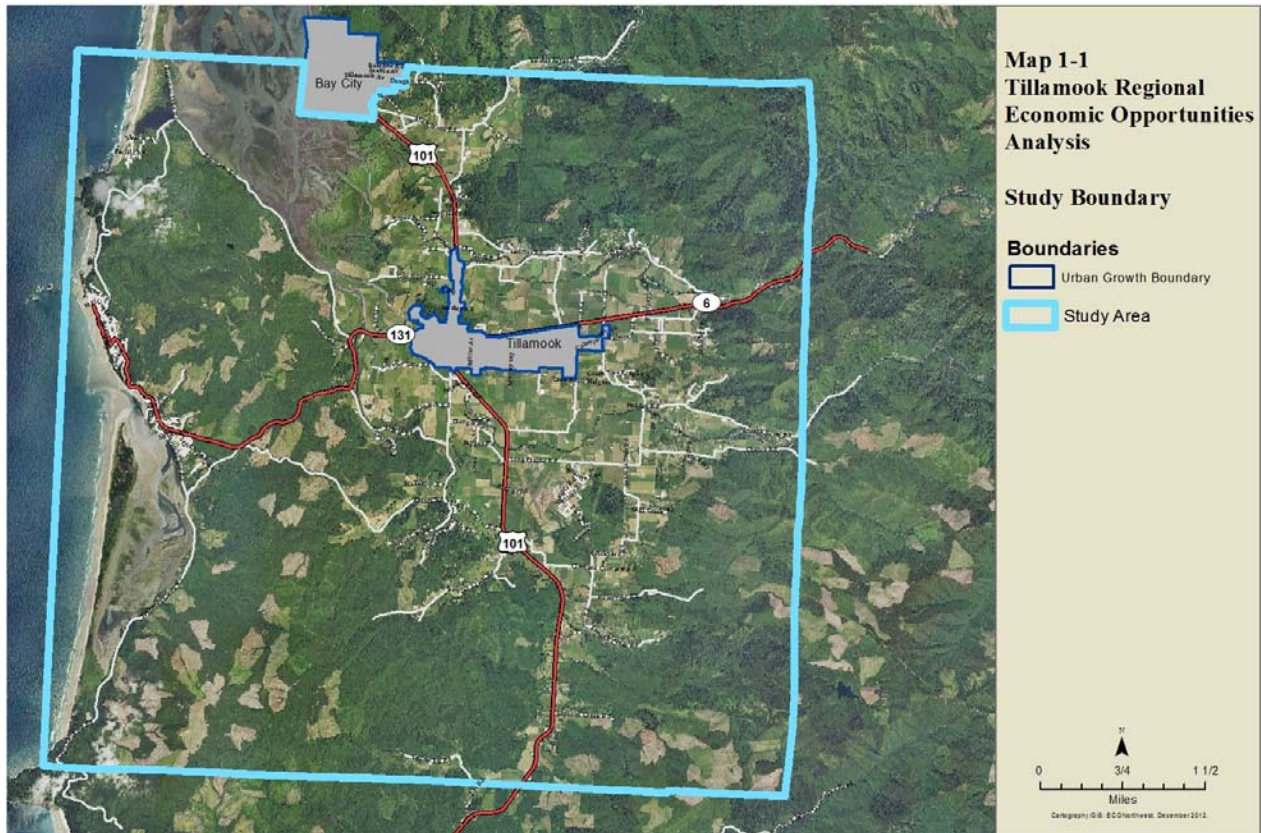
BACKGROUND

The City of Tillamook and Tillamook County are working together to develop a regional economic opportunities analysis (EOA), consistent with OAR 660-009, including the provisions for conducting a regional EOA in OAR 660-009-0030. The geographic focus of this project is the Central Tillamook Region, shown in Map 1-1. This project focuses on identifying the comparative and competitive advantages of the Central Tillamook Region, identifying economic opportunities based on these advantages, and identifying policy direction to capitalize on these advantages.

In 2011, Tillamook County had nearly 25,250 residents, with about 20% of residents living in the City of Tillamook. Tillamook County had about 8,300 covered jobs in 2011, down from a peak of nearly 8,800 jobs in 2007. The County's largest employment sectors were Manufacturing and Accommodation and Food Services, both accounting for about 15% of the County's jobs. In early 2012, the Tillamook Creamery Association announced a layoff of about 50 workers from the Tillamook Cheese Factory.

The purpose of the EOA is to develop an analysis that considers economic opportunities for the entire Central Tillamook region. This project provides the factual basis for subsequent policy work to update the City and County's Comprehensive Plan. Although this project does not focus on updating the jurisdiction's planning policies or implementing ordinances, a key product of the EOA is recommendations about directions for future changes to economic policy or economic development strategies.

Map 1-1. The Central Tillamook region



In 2010, Johnson-Reid developed the “Economic Opportunities Analysis, Commercial Receiving Site Analysis, and Flood Prone Areas Re-Use Analysis.” The purpose of the report was to: (1) identify locations within the City of Tillamook or nearby that would provide suitable relocation opportunities for businesses currently within flood-prone areas and (2) identify opportunities for reuse of vacated flood-prone land in a way that would enhance the community.

The study analyzed four “receiving sites” that would reasonably accommodate businesses seeing a new location out of flood-prone areas: (1) a 21-acre site at the east edge of Tillamook at the intersection of Highway 6 and Wilson River Loop Road, (2) a site at the intersection of Highway 6 and U.S. Highway 101 that would become available once that intersection is re-worked, (3) Downtown Tillamook, and (4) the Port of Tillamook Bay. All four of these sites are part of the study area of the Central Tillamook Region EOA.

FRAMEWORK FOR ECONOMIC DEVELOPMENT PLANNING IN OREGON

The content of this report is designed to meet the requirements of Oregon Statewide Planning Goal 9 and the administrative rule that implements Goal 9 (OAR 660-009). The Land Conservation and Development Commission adopted amendments to this administrative rule in January 2007.⁴ The analysis in this report is designed to conform to the requirements for an Economic Opportunities Analysis in OAR 660-009 as amended.

1. *Economic Opportunities Analysis (OAR 660-009-0015)*. The Economic Opportunities Analysis (EOA) requires communities to identify the major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the planning area based on information about national, state, regional, county or local trends; identify the number of sites by type reasonably expected to be needed to accommodate projected employment growth based on the site characteristics typical of expected uses; include an inventory of vacant and developed lands within the planning area designated for industrial or other employment use; and estimate the types and amounts of industrial and other employment uses likely to occur in the planning area. Local governments are also encouraged to assess community economic development potential through a visioning or some other public input based process in conjunction with state agencies.
2. *Industrial and commercial development policies (OAR 660-009-0020)*. Cities with a population over 2,500 are required to develop commercial and industrial development policies based on the EOA. Local comprehensive plans must state the overall objectives for economic development in the planning area and identify categories or particular types of industrial and other employment uses desired by the community. Local comprehensive plans must also include policies that commit the city or county to designate an adequate number of employment sites of suitable sizes, types and locations. The plan must also include policies to provide necessary public facilities and transportation facilities for the planning area.
3. *Designation of lands for industrial and commercial uses (OAR 660-009-0025)*. Cities and counties must adopt measures to implement

⁴ The amended OAR 660-009, along with a Goal 9 Rule Fact Sheet, are available from the Oregon Department of Land Conservation and Development at <http://www.oregon.gov/LCD/econdev.shtml>.

policies adopted pursuant to OAR 660-009-0020. Appropriate implementation measures include amendments to plan and zone map designations, land use regulations, public facility plans, and transportation system plans. More specifically, plans must identify the approximate number, acreage and characteristics of sites needed to accommodate industrial and other employment uses to implement plan policies, and must designate serviceable land suitable to meet identified site needs.

This report is an Economic Opportunities Analysis, the first key element required by Goal 9. This EOA includes an analysis of national, state, regional, and county trends as well as an employment forecast that leads to identification of needed development sites. It also includes an inventory of buildable commercial and industrial land in the Central Tillamook Region.

Goal 9 encourages multi-jurisdictional coordination in developing the EOA and designating lands for industrial and other employment uses. Jurisdictions can develop a single coordinated EOA and designate lands among the coordinating jurisdictions in a mutually agreed proportion (OAR 660-009-0030).

ORGANIZATION OF THIS REPORT

The remainder of this report is organized as follows:

- **Chapter 2, Land Available for Industrial and Other Employment Uses** presents a regional inventory of industrial and other employment lands.
- **Chapter 3, Land Demand and Site Needs in Tillamook** presents the employment forecast for Tillamook and an estimate of how much land is needed to accommodate the 20-year employment forecast. It also describes the types of sites that are needed to accommodate industries that are likely to locate or expand in Tillamook.
- **Chapter 4, Implications** presents a comparison of land supply and site needs and discusses the implications of the Economic Opportunities Analysis.

This report also includes four appendices:

- **Appendix A, Review of National, State, Regional, County, and Local Trends** describes national, state, and local economic trends that will influence the regional economy. Appendix A presents

detailed information about economic trends that may affect Tillamook, which is summarized in Chapter 3.

- **Appendix B, Economic Development Vision, Objectives, and Implementation Strategies** presents the City's policy approach to economic development.
- **Appendix C, Employment Forecast and Site Needs for Industrial and other Employment Uses** presents the forecast for employment growth in Tillamook and the characteristics of sites likely to be needed by employers in the future
- **Appendix D, Buildable Lands Inventory Methodology** describes the approach and definitions used to develop the inventory of buildable land.

Land Available for Industrial and Other Employment Uses

Chapter 2

The buildable lands inventory is intended to identify commercial and industrial lands that are available for development for employment uses within the Central Tillamook Region. The inventory is sometimes characterized as *supply* of land to accommodate anticipated employment growth. Population and employment growth drive *demand* for land. The amount of land needed depends on the type of development and other factors.

This chapter presents results of the commercial and industrial buildable lands inventory for the Central Tillamook Region. The results are based on analysis of GIS data by ECONorthwest and review by City and County staff. The remainder of this chapter summarizes key findings of the draft buildable lands inventory. This chapter includes tabular summaries and narrative descriptions.

LAND BASE

Table 2-1 shows acres of commercial and industrial within the Central Tillamook Region in 2012. According to the County GIS data, the Central Tillamook Region has about 2,461 acres in 894 tax lots. About one-quarter of the land in the Region (601 acres) is within the City of Tillamook's UGB, with the remainder in the County. Nearly two-thirds of the land in the Region (1,574 acres) is within the Port of Tillamook.

Table 2-1. Acres of commercial and industrial land in the Central Tillamook Region, 2012

Area	Tax Lots	Acres
City	738	601
County	156	1,860
Port of Tillamook	7	1,574
Total	894	2,461

Source: Tillamook County GIS data; analysis by ECONorthwest

Table 2-2 shows the 2,461 acres of employment land within the Central Tillamook Region by zoning designation. About three-quarters of the land designated for employment use is in unincorporated areas. In fact, the majority of the land (71%) is in the site of the Tillamook Airport owned by the Port of Tillamook.

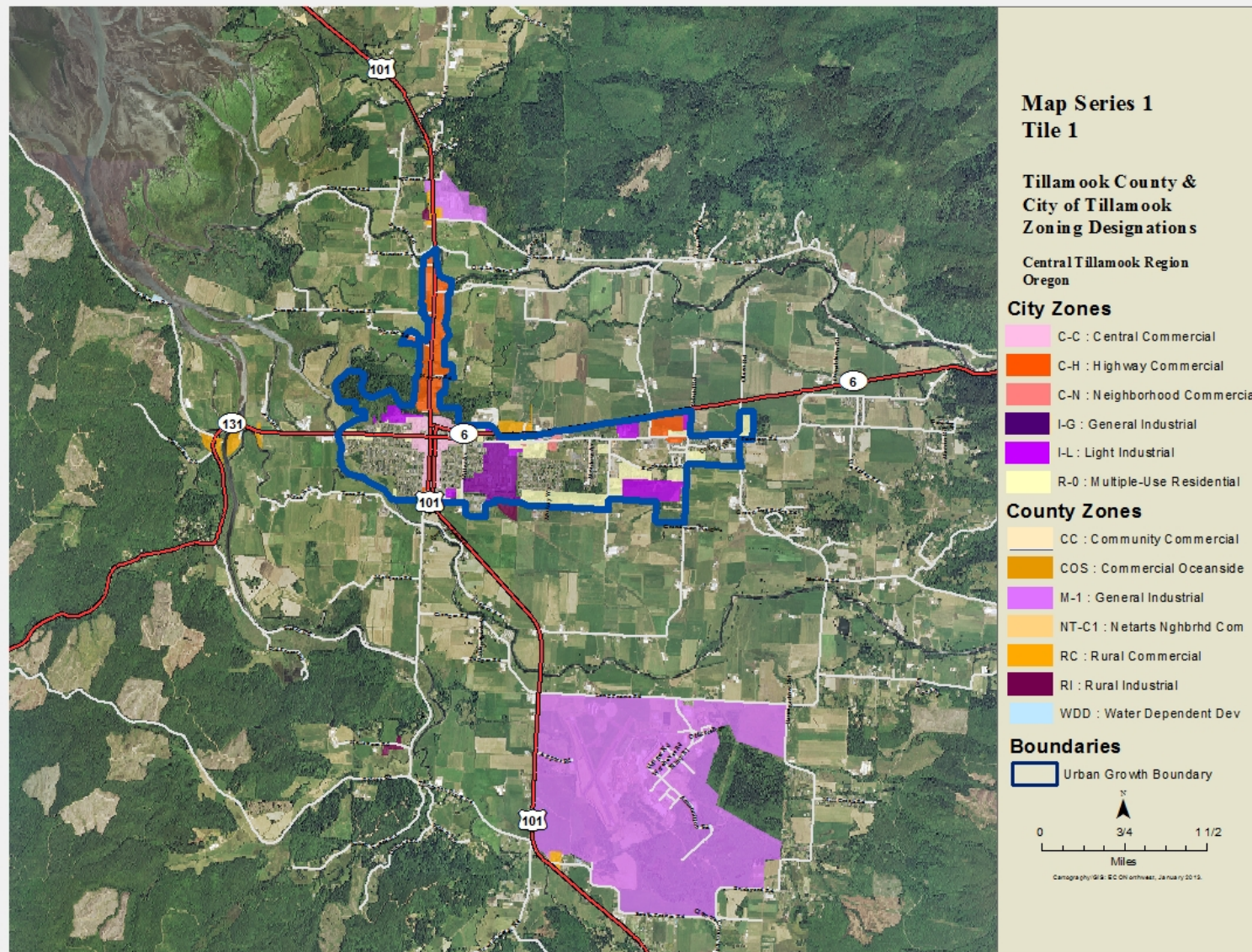
Table 2-2. Lands designated for employment uses, by zone the Central Tillamook Region, 2012

Jurisdiction	Zone Name	Tax Lots	Acres	Percent of Acres
City				
C-C	Central Commercial	227	51	2%
C-H	Highway Commercial	116	181	7%
C-N	Neighborhood Commercial	11	9	0%
I-G	General Industrial	33	89	4%
I-L	Light Industrial	54	95	4%
R-0	Mixed-Use Residential	297	176	7%
Subtotal		738	601	24%
County				
CC	Community Commercial	1	3	0%
COS	Commercial Oceanside Zone	17	2	0%
M-1	General Industrial	30	1745	71%
NT-C1	Netarts Neighborhood Commercial	63	16	1%
RC	Rural Commercial	34	61	2%
RI	Rural Industrial	6	21	1%
WDD	Water-Dependent Development	5	13	1%
Subtotal		156	1,860	76%
Total		894	2,461	100%

Source: Tillamook County GIS data; analysis by ECONorthwest

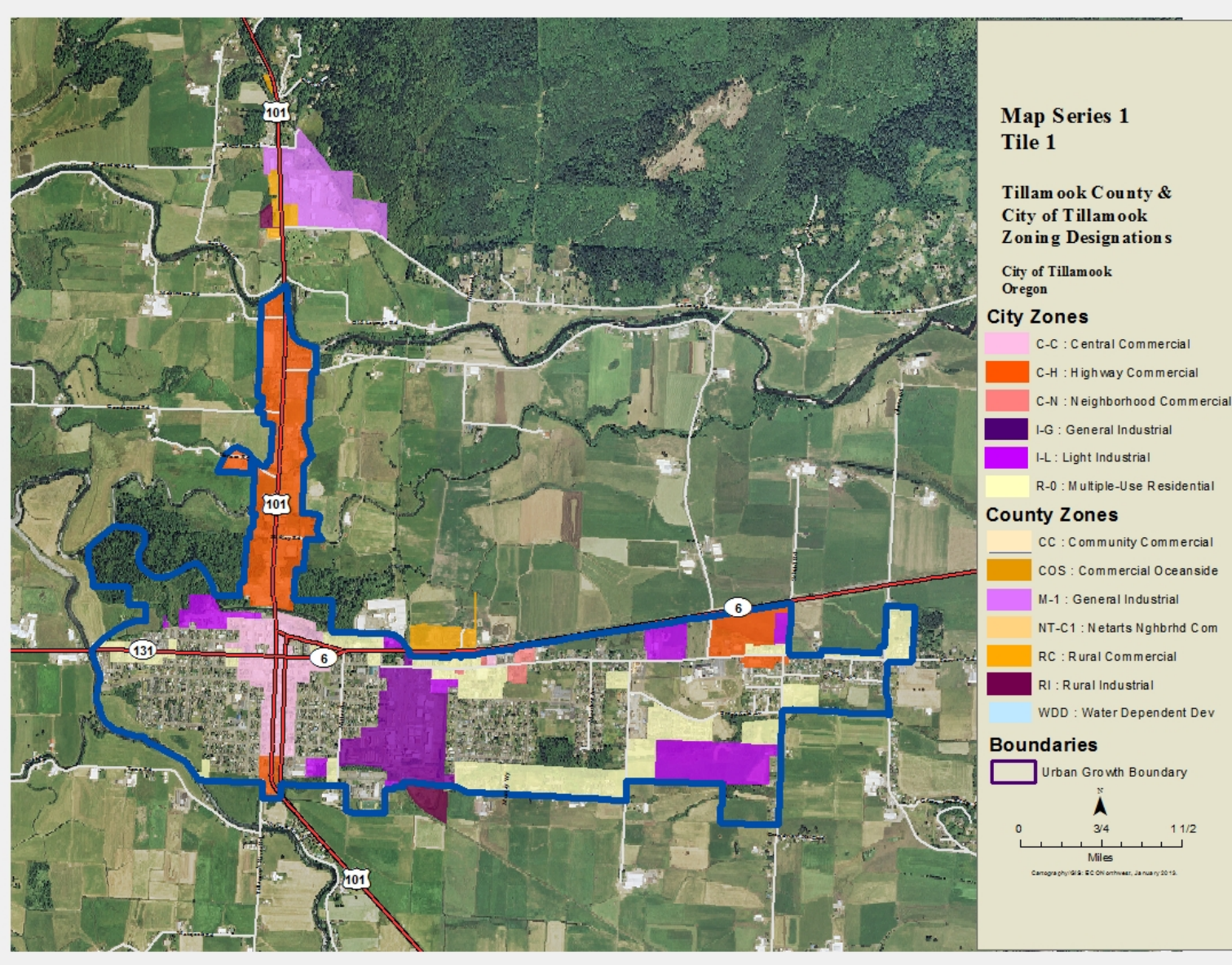
Maps 2-1 through 2-4 show zoning in the Central Tillamook Region (including Oceanside and Netarts) and for the City of Tillamook.

Map 1. Zoning designations, the Central Tillamook Region, 2012



Source: Tillamook County GIS data; analysis by ECONorthwest

Map 2. Zoning designations, City of Tillamook, 2012



Source: Tillamook County GIS data; analysis by ECONorthwest

Map 3. Zoning designations, Oceanside, 2012



Source: Tillamook County GIS data; analysis by ECONorthwest

Map 4. Zoning designations, Netarts, 2012



Source: Tillamook County GIS data; analysis by ECONorthwest

The next step in the inventory was to classify lands into mutually-exclusive categories that relate to their development status. The categories include:

- Developed land
- Vacant land
- Partially vacant land
- Public land
- Semi-public land
- Unsuitable land⁵

Table 2-3 shows all employment land in the Central Tillamook Region by classification. The results show that of the 2,641 acres in the Region, about 1,142 are developed or committed,⁶ 532 are constrained, and 788 are suitable and have development capacity. The largest block of suitable land is at the Port of Tillamook site.

Table 2-3. Employment acres by classification, the Central Tillamook Region, 2012

			Land not suitable for new Employment		Land suitable for Employment
Classification	Tax Lots	Total Ac	Developed Ac	Constrained Ac	Suitable Ac
Land with no development capacity					
Developed	669	428	357	72	0
Public	62	92	62	30	0
Semi-Public	32	33	28	4	0
Unsuitable	20	37	2	34	0
Subtotal	783	590	449	140	0
Land with development capacity					
Partially Vacant	14	104	39	6	60
Partially Vacant - Port	1	1471	653	318	500
Vacant	92	281	0	68	213
Vacant - Port	4	15	0	0	15
Subtotal	111	1,872	692	391	788
Total	894	2,461	1,142	532	788

Source: Tillamook County GIS data; analysis by ECONorthwest

⁵ Note that lands that are considered constrained or “not suitable” may still be developed for employment uses.

⁶ Some lands, such as airport approach zones, may not be physically developed but are committed to a use that will continue throughout the planning period.

Table 2-4 shows employment acres by classification and constraint status for the Central Tillamook Region in 2012. Analysis by status (the table columns) shows that about 1,142 acres are classified as built or committed (e.g., unavailable for development), 532 acres were classified as constrained, and 788 were classified as vacant and suitable for employment uses.

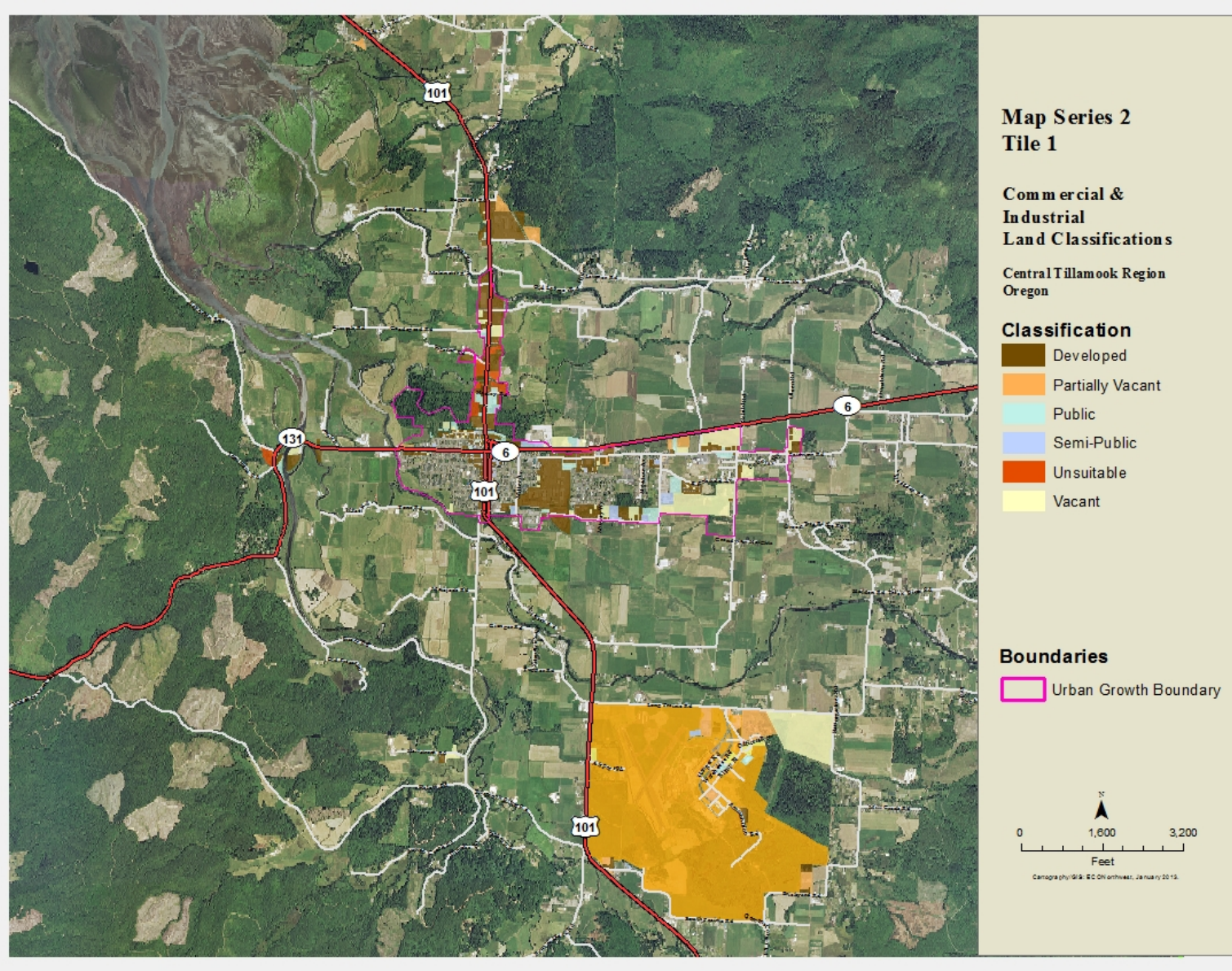
Table 2-4. Employment acres by classification, the Central Tillamook Region, 2012

Jurisdiction	Number of Tax Lots	Acres				
		Total	Developed	Constrained	Suitable	
City						
Vacant	68	146	0	55	91	
Unsuitable	16	29	1	28	0	
Semi-Public	28	29	25	4	0	
Public	47	62	41	21	0	
Partially Vacant	4	14	3	2	9	
Developed	575	322	262	60	0	
Subtotal	738	601	332	170	99	
County						
Vacant - Port	4	15	0	0	15	
Vacant	24	135	0	13	122	
Unsuitable	4	7	1	6	0	
Semi-Public	4	3	3	0	0	
Public	15	31	22	9	0	
Partially Vacant - Port	1	1,471	653	318	500	
Partially Vacant	10	91	36	4	51	
Developed	94	107	95	12	0	
Subtotal	156	1,860	810	361	689	
Total	894	2,461	1,142	532	788	

Source: Tillamook County GIS data; analysis by ECONorthwest

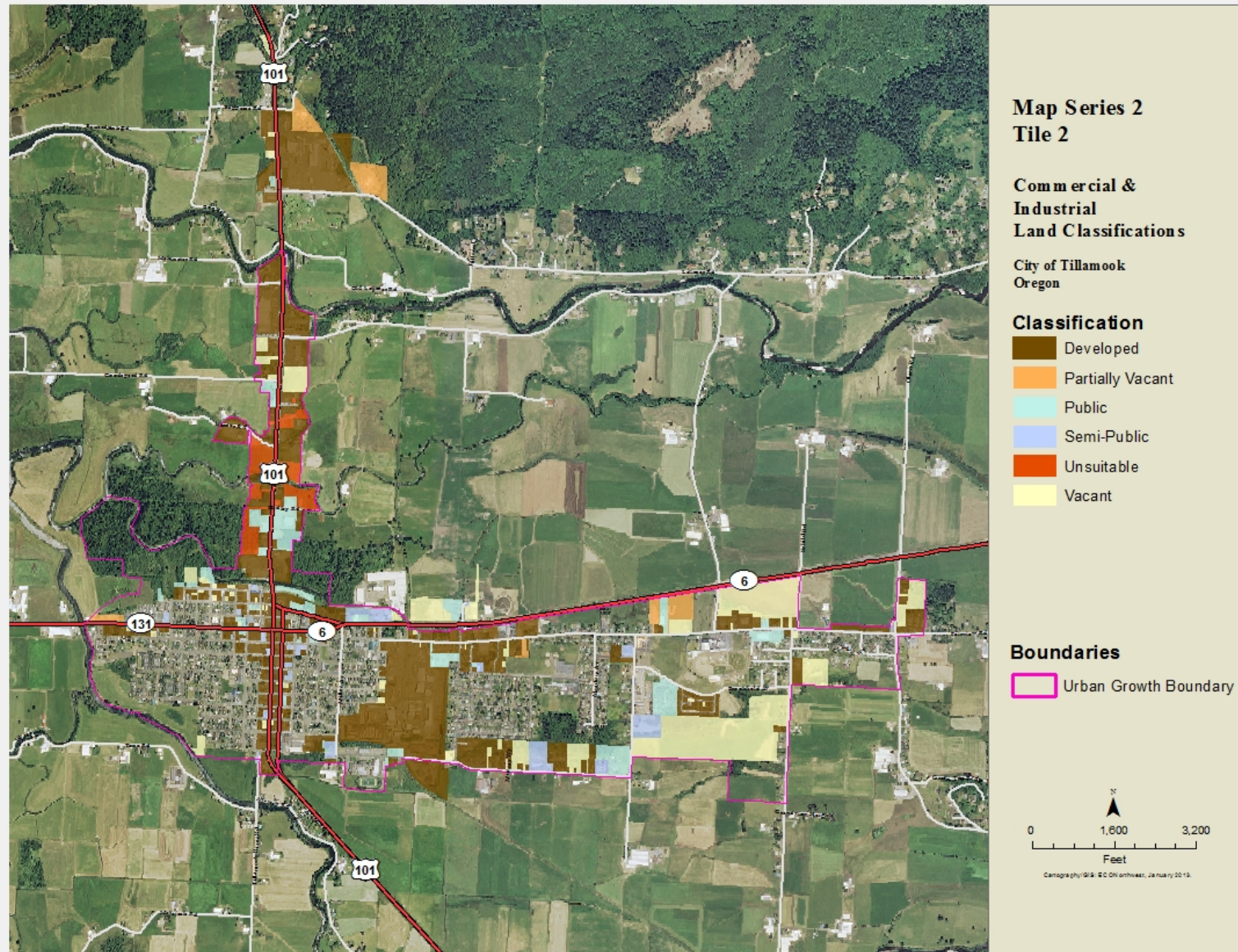
Maps 2-5 through 2-8 show commercial and industrial land by classifications with development constraints in the Central Tillamook Region (including Oceanside and Netarts) and for the City of Tillamook.

Map 2-5. Commercial and Industrial Land by Classification with Constraints, the Central Tillamook Region, 2012



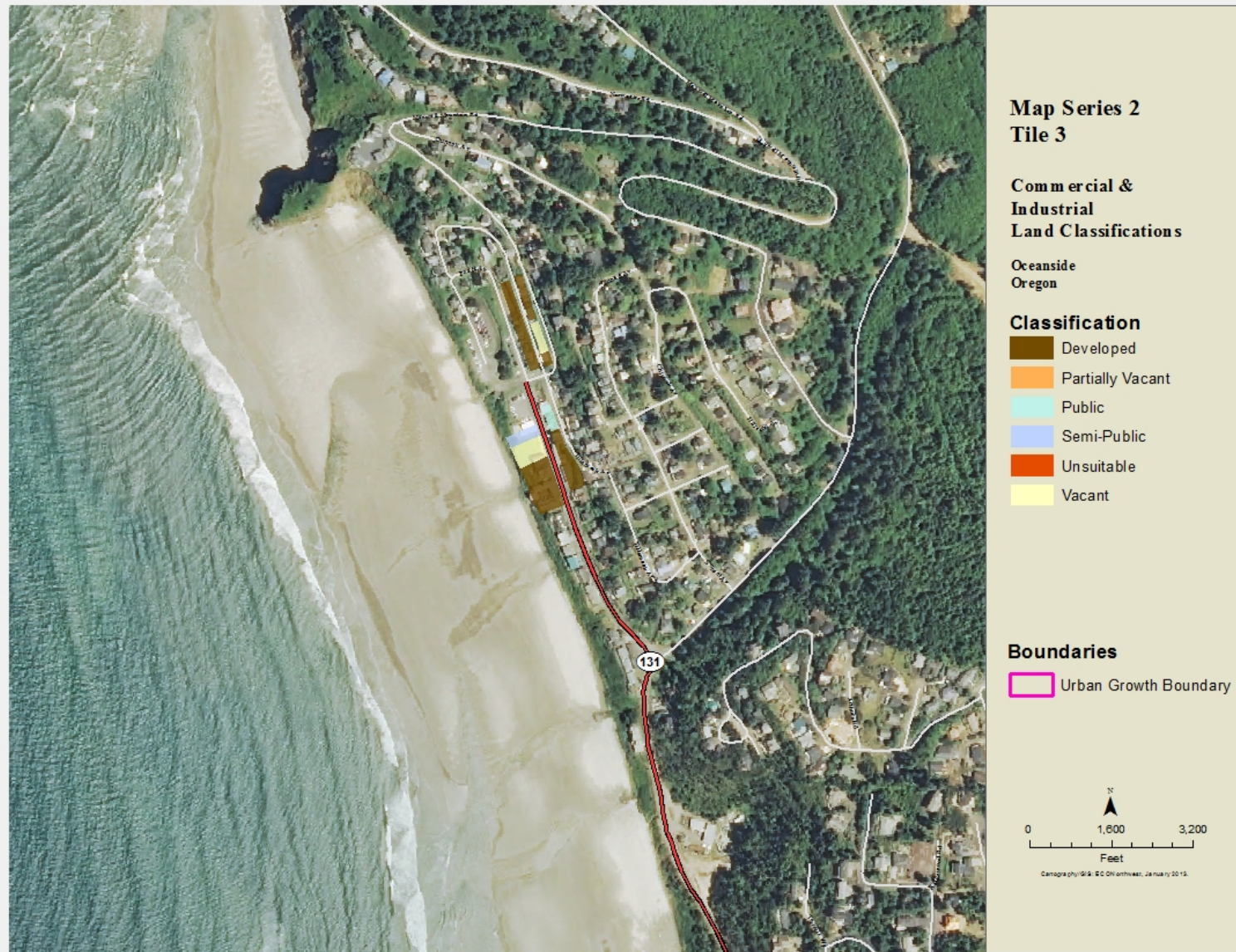
Source: Tillamook County GIS data; analysis by ECONorthwest

Map 2-6. Commercial and Industrial Land by Classification with Constraints, City of Tillamook, 2012



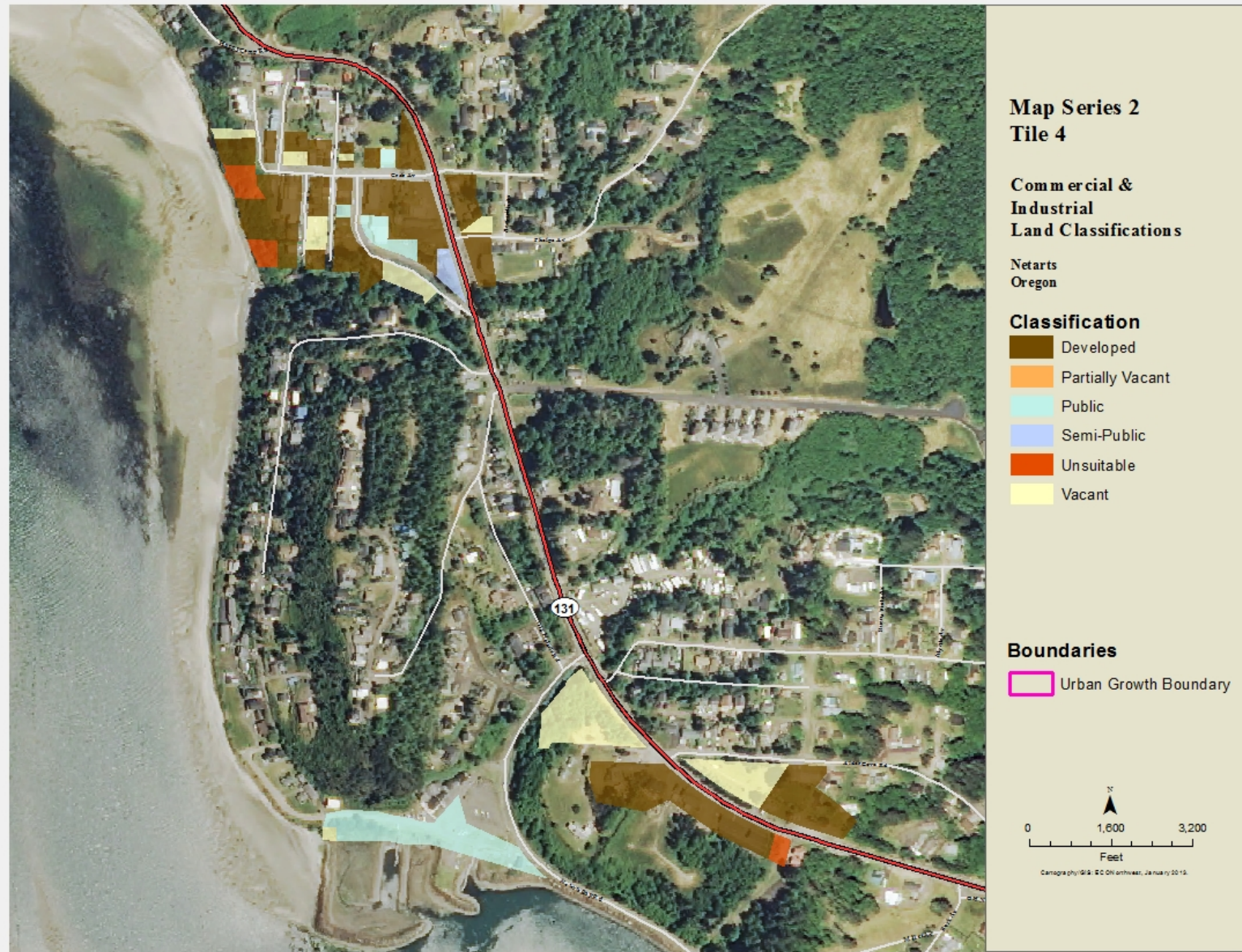
Source: Tillamook County GIS data; analysis by ECONorthwest

Map 2-7. Commercial and Industrial Land by Classification with Constraints, Oceanside, 2012



Source: Tillamook County GIS data; analysis by ECONorthwest

Map 2-8. Commercial and Industrial Land by Classification with Constraints, Netarts, 2012



Source: Tillamook County GIS data; analysis by ECONorthwest

VACANT BUILDABLE LAND

The next step in the commercial and industrial buildable land inventory was to net out portions of vacant tax lots that are unavailable for development. Areas unavailable for development fall into three categories: (1) developed areas of partially vacant tax lots; (2) areas with physical constraints (in this instance areas within wetlands, floodways, or slopes over 15%); or (3) lands that are already committed to a use (public/quasi-public or private open space).

Table 2- 5 shows land with development capacity by constraint status. The results show that:

- About 13% (99 acres) of the suitable land in the region is within the Tillamook UGB.
- About two-thirds of the total suitable acres (67 acres) within the UGB are Industrial zones.
- The City has 26 acres of suitable highway commercial land. The City has an additional seven acres of highway commercial land that is constrained by the floodway, but can still be developed consistent with existing city regulations.
- The City has 48 acres in the residential mixed-use zone. Based on ratios agreed upon by the TAC, the inventory considers three acres will be available for commercial uses. This is an estimate based on the assumption that the majority of the land will be developed in residential uses. The amount of land available for commercial uses could be more, but the R-O zones places significant limitations on the amount of commercial use.
- The largest employment site is controlled by the Port of Tillamook and contains an estimated 500 acres of suitable land. Less than half of that land is serviced at this time.
- Several other significant industrial sites exist in the unincorporated area; many are near the Port site.

Table 2-5. Employment land with development capacity (Vacant, Partially Vacant – Port, and Partially Vacant) by jurisdiction and by constraint status, the Central Tillamook Region, 2012

Classification/Zor Zone Name		Tax	Acres				Percent of Suitable
		Lots	Total	Developed	Constrained	Suitable	
Within Tillamook UGB							
Partially Vacant							
C-N	Neighborhood Commercial	1	1	1	0	1	0%
I-L	Light Industrial	2	10	2	0	8	1%
R-0	Mixed-Use Residential	1	3	1	2	0	0%
Subtotal		4	14	3	2	9	1%
Vacant							
C-C	Central Commercial	13	2	0	0	2	0%
C-H	Commercial-Highway	10	33	0	7	26	3%
I-G	General Industrial	4	2	0	0	2	0%
I-L	Light Industrial	13	63	0	6	57	7%
R-0	Mixed-Use Residential	28	45	0	41	3	0%
Subtotal		68	146	0	55	91	11%
CITY TOTAL		72	159	3	57	99	13%
Outside Tillamook UGB							
Partially Vacant							
CC	Community Commercial	1	3	1	0	2	0%
M-1	General Industrial	7	84	34	3	47	6%
RC	Rural-Commercial	2	3	1	0	2	0%
Subtotal		10	91	36	4	51	6%
Partially Vacant - Port							
M-1	General Industrial	1	1,471	653	318	500	63%
Subtotal		1	1,471	653	318	500	63%
Vacant							
COS	Commercial Oceanside Zone	3	0	0	0	0	0%
M-1	General Industrial	3	109	0	6	102	13%
NT-C1	Commercial Netarts	10	3	0	1	3	0%
RC	Rural-Commercial	7	18	0	5	13	2%
RI	Rural-Industrial	1	5	0	0	4	1%
Subtotal		24	135	0	13	122	16%
Vacant - Port							
M-1	General Industrial	4	15	0	0	15	2%
Subtotal		4	15	0	0	15	2%
UNINCORPORATED TOTAL		39	1,712	689	334	689	87%
TOTAL		111	1,872	692	391	788	100%

Source: Tillamook County GIS data; analysis by ECONorthwest

Note: the City of Tillamook's zoning ordinance restricts commercial development on land zoned Multiple Use Residential (R-0). Commercial retail and service use on R-0 are conditional uses, not exceeding 3,000 square feet per use. Based on discussion with the Technical Advisory Committee and City Staff, ECO assumed the following about commercial capacity on land zoned R-0: (1) 25% of land located along Highway 6 would be available for commercial development and (2) 10% of land located in other parts of the City would be available for commercial development.

Table 2-6 shows the size of lots by plan designations for suitable employment land. The Central Tillamook Region has nearly 80 lots that are smaller than 2 acres (with 27 acres of land). The Region has 25 lots between 2 and 10 acres (82 acres of land), four lots between 10 and 50 acres in size (99 acres of land), and two lots 50 acres and larger (581 acres of land).

Maps 2-9 through 2-12 show vacant and partially vacant commercial and industrial land in the Central Tillamook Region (including Oceanside and Netarts) and for the City of Tillamook.

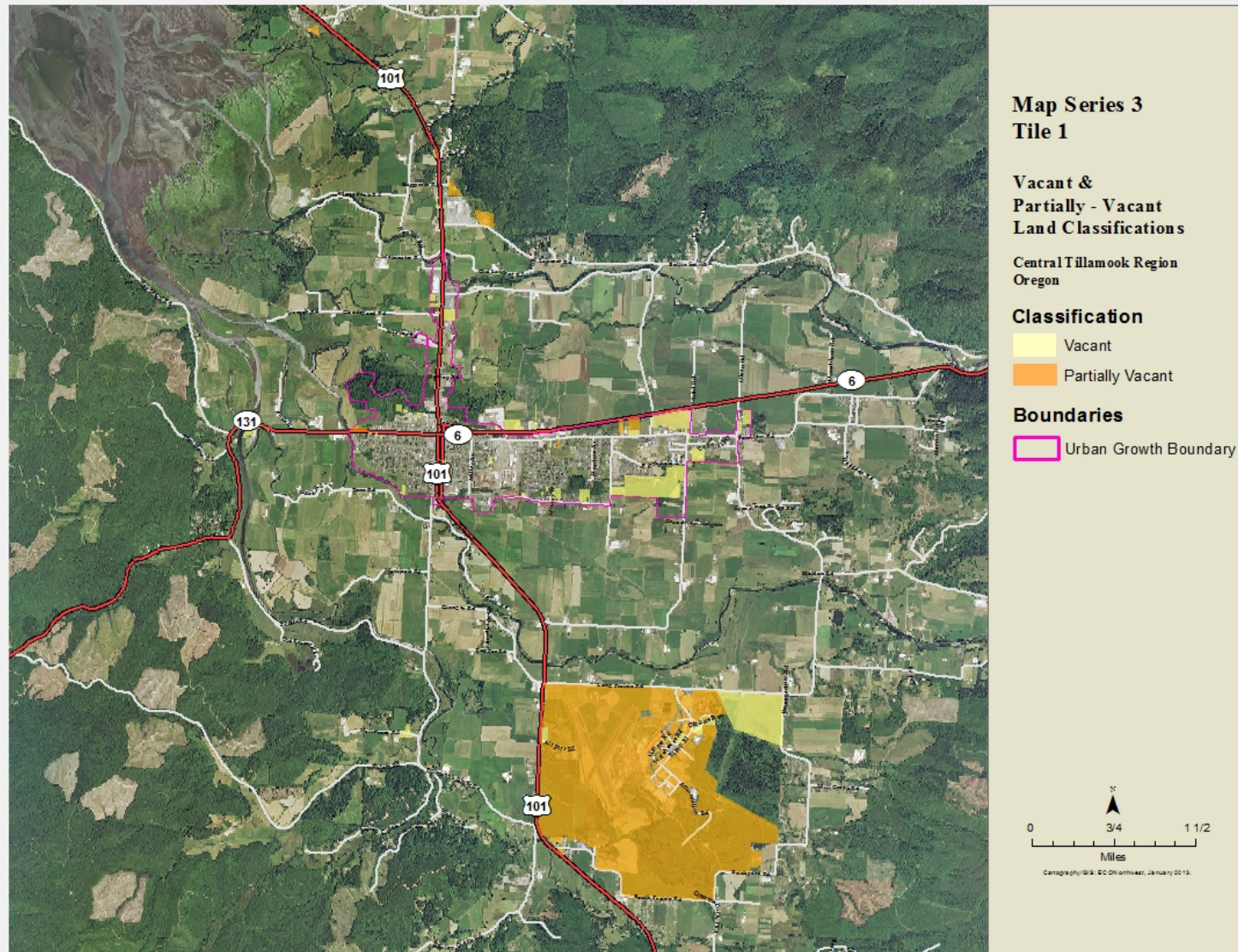
Maps 2-13 through 2-16 show vacant and partially vacant commercial and industrial land with constraints in the Central Tillamook Region (Including Oceanside and Netarts) and for the City of Tillamook.

Table 2-6. Lot size by zoning designation, suitable acres, the Central Tillamook Region, 2012

		Suitable Acres in Tax Lot								Total	
		<0.25	>=0.25 and <0.50	>=0.50 and <1.00	>=1.00 and <2.00	>=2.00 and <5.00	>=5.00 and <10.00	>=10.00 and <20.00	>=20.00 and <50.00		>=50.00
Plan Design	Zone Name										
Acres											
CC	Central Commercial	0	0	0	2	0	0	0	0	0	2
C-C	Community-Commercial	2	0	0	0	0	0	0	0	0	2
C-H	Commercial-Highway	0	2	1	0	6	0	17	0	0	26
C-N	Commercial-Neighborhood	0	0	1	0	0	0	0	0	0	1
COS	Commercial-Oceanside	0	0	0	0	0	0	0	0	0	0
I-G	General Industrial	0	0	2	0	0	0	0	0	0	2
I-L	Light Industrial	0	1	1	3	11	6	0	42	0	65
M-1	Industrial	0	0	0	2	24	18	18	21	581	665
NT-C1	Commercial-Netarts	1	0	1	1	0	0	0	0	0	3
R-0	Mixed Use Residential	0	0	0	0	2	1	0	0	0	4
RC	Rural Commercial	0	1	1	3	3	7	0	0	0	15
RI	Rural Industrial	0	0	0	0	4	0	0	0	0	4
Total		4	5	6	12	50	32	35	64	581	788
Tax Lots											
CC	Central Commercial	0	0	0	1	0	0	0	0	0	1
C-C	Community-Commercial	12	1	0	0	0	0	0	0	0	13
C-H	Commercial-Highway	1	5	1	0	2	0	1	0	0	10
C-N	Commercial-Neighborhood	0	0	1	0	0	0	0	0	0	1
COS	Commercial-Oceanside	3	0	0	0	0	0	0	0	0	3
I-G	General Industrial	1	1	2	0	0	0	0	0	0	4
I-L	Light Industrial	4	3	1	2	3	1	0	1	0	15
M-1	Industrial	1	0	0	1	6	3	1	1	2	15
NT-C1	Commercial-Netarts	8	0	1	1	0	0	0	0	0	10
R-0	Mixed Use Residential	11	5	3	3	6	1	0	0	0	29
RC	Rural Commercial	1	2	2	2	1	1	0	0	0	9
RI	Rural Industrial	0	0	0	0	1	0	0	0	0	1
Total		42	17	11	10	19	6	2	2	2	111

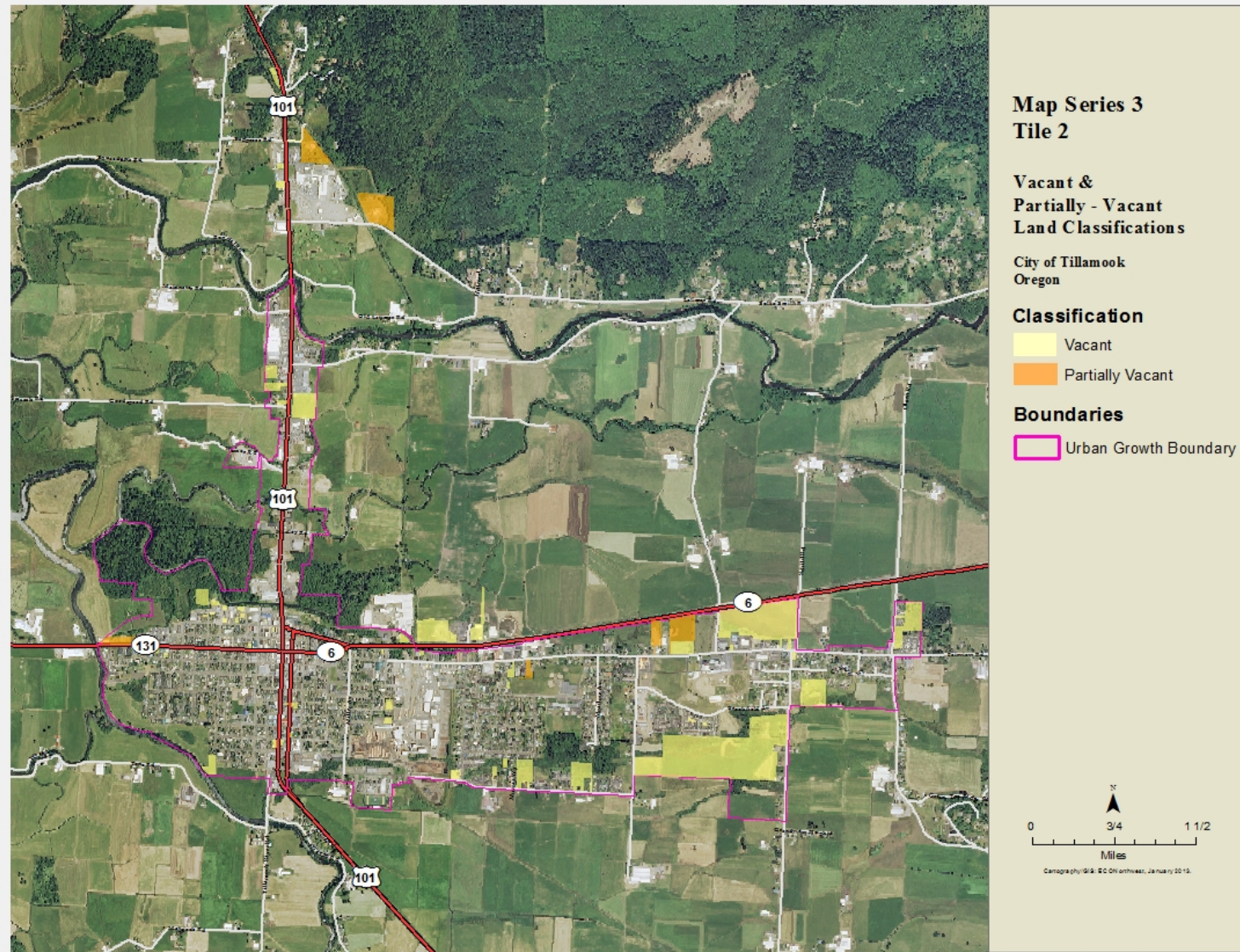
Source: Tillamook County GIS data; analysis by ECONorthwest

Map 2-9. Vacant and Partially Vacant Commercial and Industrial Land, Central Tillamook Region, 2012



Source: Tillamook County GIS data; analysis by ECONorthwest

Map 2-10. Vacant and Partially Vacant Commercial and Industrial Land, City of Tillamook, 2012



Source: Tillamook County GIS data; analysis by ECONorthwest

Map 2-11. Vacant and Partially Vacant Commercial and Industrial Land, Oceanside, 2012



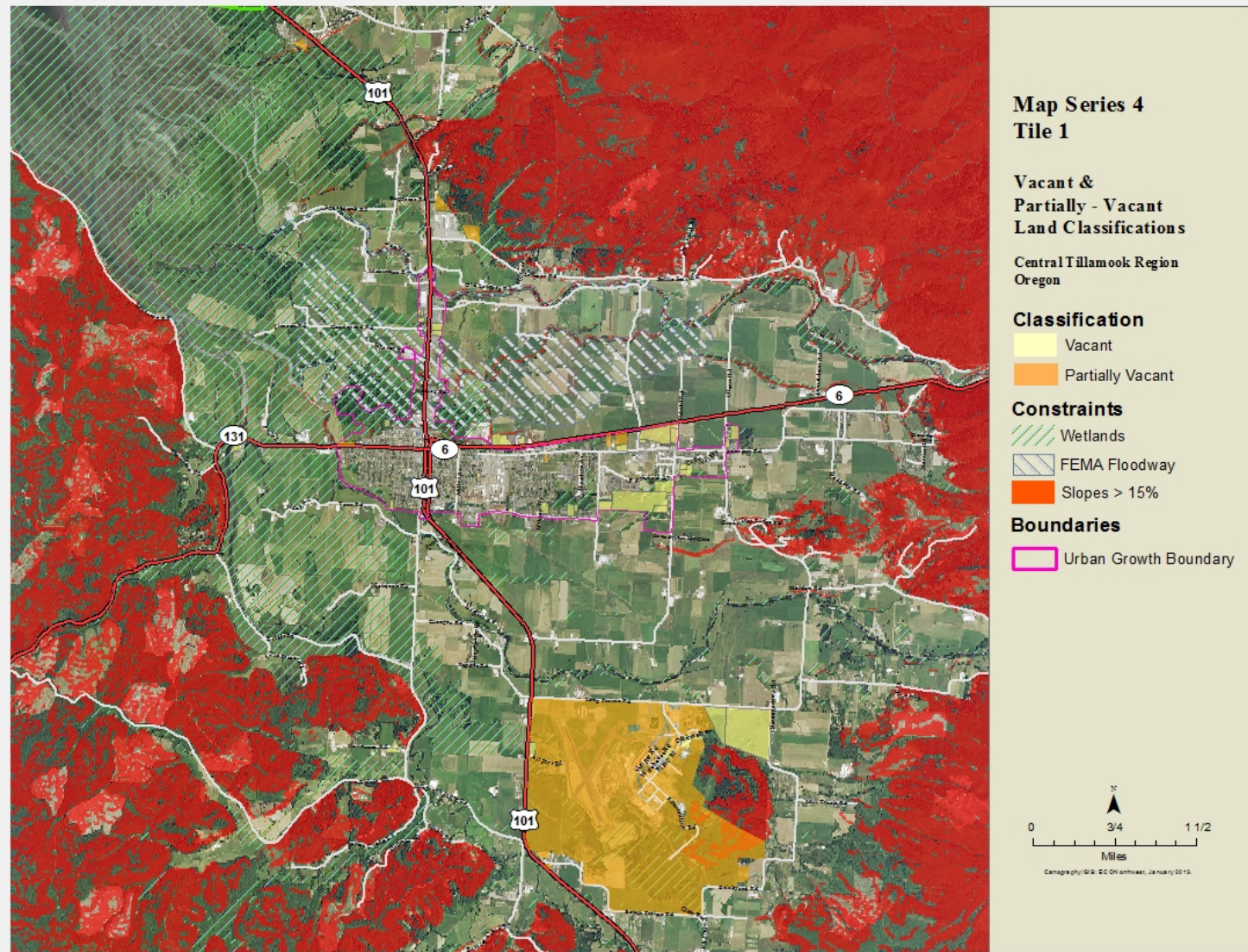
Source: Tillamook County GIS data; analysis by ECONorthwest

Map 2-12. Vacant and Partially Vacant Commercial and Industrial Land, Netarts, 2012



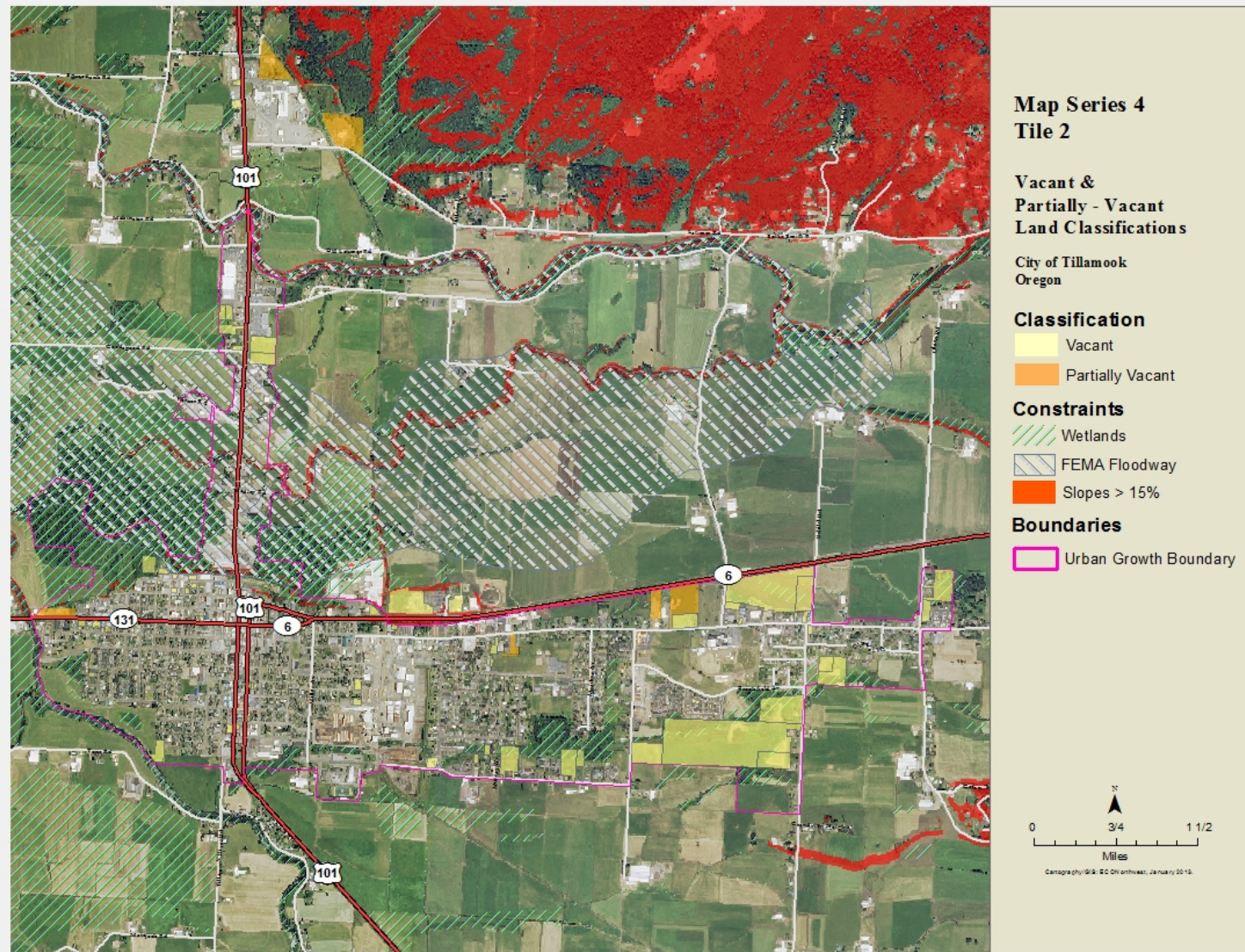
Source: Tillamook County GIS data; analysis by ECONorthwest

Map 2-13. Vacant and Vacant Commercial and Industrial Land with Constraints, Central Tillamook Region, 2012



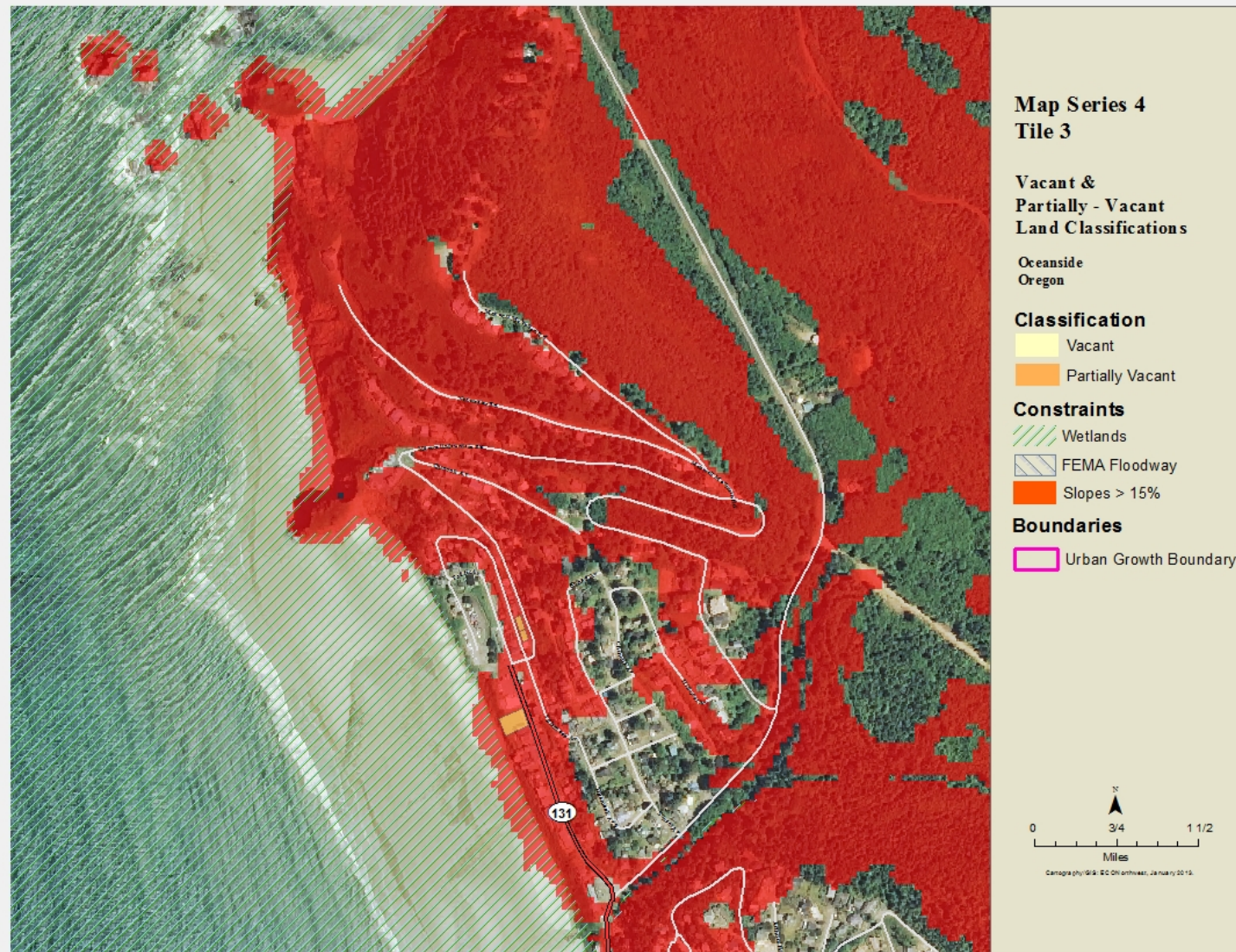
Source: Tillamook County GIS data; analysis by ECONorthwest

Map 2-14. Vacant and Vacant Commercial and Industrial Land with Constraints, City of Tillamook, 2012



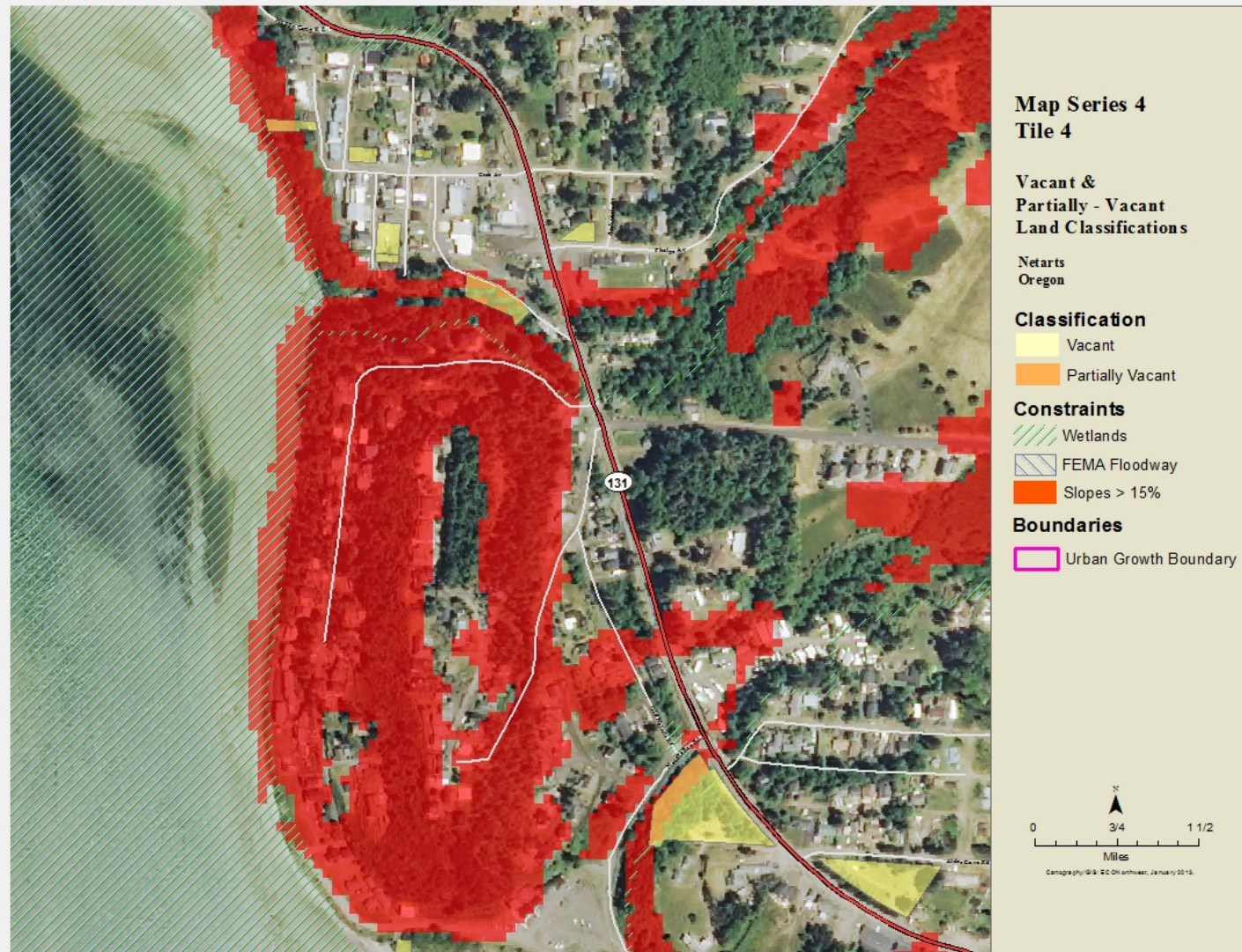
Source: Tillamook County GIS data; analysis by ECONorthwest

Map 2-15. Vacant and Vacant Commercial and Industrial Land with Constraints, Oceanside, 2012



Source: Tillamook County GIS data; analysis by ECONorthwest

Map 2-16. Vacant and Vacant Commercial and Industrial Land with Constraints, Netarts, 2012



Source: Tillamook County GIS data; analysis by ECONorthwest

REDEVELOPMENT POTENTIAL

Redevelopment potential addresses land that is classified as developed that may redevelop during the planning period. While many methods exist to identify redevelopment potential, a common indicator is improvement to land value ratio. Different studies have used different improvement to land value ratio thresholds to identify redevelopment potential.

The Goal 9 administrative rule provides a specific definition of developed (e.g., redevelopable land):

"Developed Land" means non-vacant land that is likely to be redeveloped during the planning period. (OAR 660-009-0005(2))

Based on this definition, any land that has some type of development has "redevelopment potential." The key phrase in the definition is "likely to be redeveloped." The rule does not provide any guidance for how to determine the likelihood of redevelopment. The discussion that follows addresses key elements in that determination.

One of the key issues in preparing an accurate inventory of employment lands in the Central Tillamook Region is how to identify and inventory under-utilized or redevelopable lands. For the purpose of this study, ECO does not make a distinction between under-utilized and redevelopable sites. The inventory consistently uses the term "redevelopable" since it is consistent with the terminology of the statewide land use program.⁷ For the purpose of this study, however, the definition of "redevelopable" land is considered synonymous with "under-utilized" properties.

In the context of the Central Tillamook commercial and industrial buildable lands inventory, redevelopment potential addresses land that was initially classified as developed that may redevelop during the planning period. While many methods exist to identify redevelopment potential, a common indicator is improvement to land value ratio. A threshold used in some studies is an improvement to land value ratio of 1:1. Not all, or even a majority of parcels that meet this criterion for redevelopment potential will be assumed to redevelop during the planning period.

⁷ In this instance, the terminology is a little confusing. OAR 660-009-0005(1) defines redevelopment as follows: "Developed Land" means non-vacant land that is likely to be redeveloped during the planning period. For the purpose of clarity, we use the term developed to mean land committed to existing productive employment uses and redevelopable as lands that have potential for redevelopment during the planning period.

The factors that affect redevelopability are many, but the economics are pretty straightforward. Redevelopment occurs when achievable rents exceed the current return on investment of the land and improvements. The reality, of course, is much more complicated. One way to think about the market for land is “highest and best use” which is a function of:

1. Achievable Pricing – Given the product type and location, what lease rates or sales prices are achievable?
2. Entitlements – What do local regulations allow to be built?
3. Development Cost – What is the cost to build the range of product types allowed (entitled) at that location?
4. Financing – What is the cost of capital, as well as the desired returns necessary to induce development of that form?

In our many conversations with commercial realtors and developers for this and other studies, the conclusion has been consistent: it is very difficult to develop reliable models of redevelopment potential. The factors are complicated and are location and time specific. Moreover, public policy can play a significant role in facilitating redevelopment.

In previous studies, ECO has explored supply side approaches using GIS datasets. The problem with supply side approaches is that the base data available to conduct empirical analyses is quite coarse and as a result, the analyses are limited and the results have varying levels of inaccuracy. The improvement to land value approach has some problems; for example, it does not make distinctions for land intensive employment uses that require minimal built structure investments. Despite this limitation, it has utility in identifying districts that may be worth focusing resources on.

More robust approaches can consider employment densities, floor area ratios, and other factors. Often, however, the quality of the data is a limiting factor and the cost of generating new or cleaning existing data sets is prohibitive. For others studies, we have attempted to use employment density combined with improvement to land value ratios. Our assessment was the results were unreliable and unsuitable as a valid indicator of redevelopment potential.

Thus, this study uses a demand-based approach to estimating how much land will be redeveloped over the 20-year planning period. ECO typically approaches the issue from the demand side by making deductions from total employment growth to account for new employment that will not need any new land (see Chapter 3 and Appendix C).

Table 2-7 shows improvement to land ratios for developed land in the Central Tillamook Region. About 10% of the region's developed sites (319 acres of land) have an improvement to land value ratio of less than 0.50, suggesting that these sites have high redevelopment potential. Another 19% of the region's developed land has an improvement to land ratio of between 0.50 and 1.0 and two-thirds of the region's land has a ratio greater than 1.0, suggesting little redevelopment potential. Higher improvement to land value ratios suggest decreasing probability of redevelopment potential.

Table 2-7. Improvement to land value ratio, land classified as “developed,” Central Tillamook Region, 2012

Plan Designation	Improvement to Land Value Ratio						No Data	Total	
	>0.00 - <0.25	>=0.25 - 0.50	>=0.50 - <0.75	>=0.75 - <1.00	>=1.00 and <2.00	>=2.00 - <3.00			>=3.00
Acres									
Commercial - City	6	8	10	8	39	22	32	15	140
Industrial - City	0	0	29	2	4	4	44	11	94
Mixed Use - City	4	5	6	6	26	16	20	0	84
Commercial - County	1	6	9	8	5	3	2	0	33
Industrial - County	0	11	3	1	7	5	44	1	72
Water Dependent - County	1	0	0	0	0	0	0	0	1
Total									
Acres	11	31	57	25	81	49	142	28	425
Percent of Acres	3%	7%	13%	6%	19%	12%	33%	7%	100%
Tax Lots									
Commercial - City	2	2	2	3	3	3	3	2	20
Industrial - City	1	1	2	2	2	2	2	2	14
Mixed Use - City	1	1	1	1	1	1	1	1	8
Commercial - County	2	3	3	3	3	2	2	1	19
Industrial - County	0	1	1	1	1	2	1	1	8
Water Dependent - County	1	0	0	0	0	0	1	0	2
Total									
Tax Lots	7	8	9	10	10	10	10	7	71
Percent of Acres	10%	11%	13%	14%	14%	14%	14%	10%	100%

Source: Tillamook County GIS data; analysis by ECONorthwest

SHORT-TERM LAND SUPPLY

The Goal 9 Administrative Rule (OAR 660-009) includes provisions that require certain cities to ensure an adequate short-term supply of industrial and other employment lands. Although Tillamook is not required by Goal 9 to identify a short-term supply of land, it is useful for the Region to understand its short-term supply of land.

OAR 660-009-005(10) defines short term supply as follows:

“...means suitable land that is ready for construction within one year of an application for a building permit or request for service extension. Engineering feasibility is sufficient to qualify land for the short-term supply of land. Funding availability is not required. "Competitive Short-term Supply" means the short-term supply of land provides a range of site sizes and locations to accommodate the market needs of a variety of industrial and other employment uses.”

Employment land within the Tillamook UGB and industrial land at the Port of Tillamook Bay account for the bulk of the Region’s employment land supply and are the location of the short-term land supply. The City, County, and Port should

- The vast majority of the Region’s employment land supply is at the Port of Tillamook Bay, with about 500 acres of vacant industrial land.
 - The Port recently built three 18,000 square foot industrial buildings. Most of this space is unoccupied. This industrial space is the Region’s existing short-term supply of industrial space and is likely to provide built space for industrial firms seeking existing built space for a few years.
 - The Port has a few documented service deficiencies, most notably insufficient sewer capacity, insufficient electrical capacity, and a lack of natural gas. Businesses that do not need high capacity wastewater or electrical capacity may choose to build on vacant land at the Port. The Port should work with the City, County, and other stakeholders to upgrade and extend services on vacant lands. Once these services are available, more land within the Port will be available for development for a wider range of businesses.
- Most vacant employment land within the City of Tillamook UGB is part of the short-term supply of land. The exceptions are sites that do not have services and cannot be serviced (at a reasonable cost) within a year.

Economic Opportunities and Land Demand in the Central Tillamook Region

Chapter 3

OAR 660-009 requires cities to maintain a 20-year inventory of sites designated for employment. The City and County need an estimate of the amount of commercial and industrial land that will be needed over the planning period in the Central Tillamook Region. Demand for commercial and industrial land will be driven by development in the target industry clusters, the expansion and relocation of existing businesses, and new businesses locating in the Region. The level of this business expansion activity can be measured by employment growth in the Region.

This chapter summarizes key findings from: (1) Appendix A: National, State, County, and Local Economic Trends, (2) Appendix B: Factors Affecting Future Economic Growth in the Central Tillamook Region, and (3) Appendix C: Employment Forecast and Site Needs for Industrial and other Employment Uses.

IMPLICATIONS OF NATIONAL AND STATE TRENDS ON ECONOMIC DEVELOPMENT WITHIN THE CENTRAL TILLAMOOK REGION

This section presents the implications of national, state, and regional economic trends on economic growth in the Central Tillamook Region. Appendix A presents a detailed analysis of economic and demographic trends. Table 3-1 summarizes the implications of these trends for long-term economic growth in the Central Tillamook Region. The references for information presented in Table 3-1 are documented in Appendix A.

Table 3-1. Implications of national, state, and regional economic and demographic trends on economic growth in the Central Tillamook Region

National, State, and Regional Economic Trends	Implications for economic growth in the Central Tillamook Region
<p>Lingering effects of the national recession</p> <p>The 2007-2009 national recession affected (and continues to affect) businesses and workers alike. Unemployment at the national level was at or above 9% from May 2009 to April 2011, and dropped below 8% in April 2012 for the first time in over three years. Oregon's unemployment rate was at or above 10% from January 2009 to August 2010 and has been over 8% since January 2009.</p> <p>The federal government's economic forecast suggests slow economic growth, with gradual increases of employment over the next few years. Economic growth in Oregon typically lags behind national growth.</p>	<p>The lingering effects of the national recession have resulted in slower than average employment growth in the Region.</p> <p>The higher levels of unemployment and slow employment growth are likely to slow growth in wages over the next two to five years throughout Oregon, including in the Central Tillamook Region.</p>
<p>Growth of service-oriented sectors</p> <p>Increased worker productivity and the international outsourcing of routine tasks led to declines in employment in the major goods-producing industries. Projections from the Bureau of Labor Statistics indicate that U.S. employment growth will continue to be strongest in healthcare and social assistance, professional and business services, and other service industries. Construction employment will grow with the economy but manufacturing employment will decline. These trends are also expected to affect the composition of Oregon's economy.</p>	<p>The changes in employment in Tillamook County have followed similar trends as changes in national and state employment. The sectors with the greatest change in share of employment since 1980 were Services, adding about 2,000 or 78% of new jobs. Industrial sectors added 200 jobs and Government added about 350.</p> <p>Oregon Employment Department forecasts that the sectors in Tillamook, Clatsop, and Columbia Counties likely to have the most employment growth over the 2010 to 2020 period are: Accommodations and Food Services, Education and Health Services, Professional and Business Services, and Retail Trade. These sectors represent employment opportunities for the Central Tillamook Region.</p>
<p>Lack of diversity in Oregon's economy</p> <p>Oregon's economy has diversified since the 1960's but Oregon continues to rank low in economic diversity among states. Oregon is still heavily dependent on a limited number of industries. Relatively low economic diversity increases the risk of economic volatility as measured by changes in output or employment.</p>	<p>Employment in Tillamook County is concentrated in a few sectors: 21% of employment is governmental and about 21% is in retail trade and health care and social assistance, services that primarily serve the local population. Employment in the government and health care sectors tends to be stable, well-paying employment.</p> <p>Manufacturing accounts for 15% of county employment. Other sources of potential traded-sector employment, such as professional services or management of companies, account for a small share of the region's employment.</p> <p>Opportunities for growth of traded-sector employment include: agriculture, food and beverage products; forest products; and specialty manufacturing.</p>

National, State, and Regional Economic Trends	Implications for economic growth in the Central Tillamook Region
<p>Importance of small businesses in Oregon's economy</p> <p>Small business, with 100 or fewer employees, accounted for 51% of private sector employment in Oregon in 2010. Workers of small businesses typically have had lower wages than the state average.</p>	<p>Businesses with 100 or fewer employees account for 66% of private employment in the Region. Businesses with 9 or fewer employees account for 26% of private employment in the Region.</p> <p>Growth of small businesses presents opportunities for economic growth in the metropolitan area.</p>
<p>Availability of trained and skilled labor</p> <p>Businesses in Oregon are generally able to fill jobs, either from available workers living within the State or by attracting skilled workers from outside of the State.</p> <p>Availability of labor depends, in part, on population growth and in-migration. Oregon added more than 1,015,304 new residents and about 362,500 new jobs between 1990 and 2011. The population-employment ratio for the State was around 1.7 residents per job over the 21-year period.</p> <p>Availability of labor also depends on workers' willingness to commute. Workers in Oregon typically have a commute that is 30 minutes or shorter.</p> <p>Availability of skilled workers depends, in part, on education attainment. About 29% of Oregon's workers have a Bachelor's degree or higher.</p>	<p>Employment grew faster than population in Tillamook County between 1990 and 2011. In 1990, there were 3.5 persons per job in the County. By 2011, there were 3.0 people per job. The faster growth in employment suggests that businesses in Tillamook may be: (1) attracting workers who commute from nearby counties, (2) creating more part-time jobs, or (3) both.</p> <p>Workers in the City of Tillamook lived primarily within Tillamook County. Of the thirty percent of the workforce that lived outside of Tillamook County, about half lived in the Willamette Valley.</p> <p>A smaller share of residents in the Central Tillamook Region has a Bachelor's degree or higher (City of Tillamook: 14%, Tillamook County: 20%) than the State average.</p> <p>Stakeholder interviews suggest that some businesses have difficulty attracting dependable employees (e.g., those without a criminal background, able to pass a drug test, and with a good work ethic), both skilled and unskilled. In addition, businesses that locate in the Region may have difficulties attracting executives to live in the region because of the lack of urban amenities found in a city like Portland.</p>
<p>Aging of the population</p> <p>The number of people age 65 and older nationally will more than double between 2010 and 2050, while the number of people under age 65 will grow only 20 percent. The economic effects of this demographic change include a slowing of the growth of the labor force, an increase in the demand for healthcare services, and an increase in the percent of the federal budget dedicated to Social Security and Medicare.</p> <p>People are retiring later than previous generations, continuing to work past 65 years old. This trend is seen both at the national and State levels. Even given this trend, the need for workers to replace retiring baby boomers will outpace job growth. Management occupations and teachers will have the greatest need for replacement workers because these occupations have older-than-average workforce.</p>	<p>The changes in the age structure in the City of Tillamook are similar to the State, with the most growth in people 45 years and older. The City of Tillamook had a larger share of people under 20 years and a smaller share of people over 50 years old than the State average.</p> <p>The State projects the share of the population over the age of 60 in Tillamook County will grow by 80% between 2000 and 2030.</p> <p>Firms in the Central Tillamook Region will need to replace workers as they retire. Demand for replacement workers is likely to outpace job growth in the Region, consistent with State trends.</p>

National, State, and Regional Economic Trends	Implications for economic growth in the Central Tillamook Region
<p>Increases in energy prices</p> <p>Energy prices are forecast to resume to relatively high levels, such as those seen in the 2006 to 2008 period, possibly increasing further over the planning period.</p>	<p>Increased energy prices are likely to affect most businesses through shipping, workers' willingness to commute, and energy-intensive production processes.</p> <p>Shipping goods, especially goods shipped by air or truck, would become more expensive with increases in oil prices. One result of increased energy prices may be a shift in the mode for moving freight, from air and truck to rail and ship.</p> <p>Large increases in energy prices may affect workers' willingness to commute, especially workers living the furthest from the metropolitan area or workers with lower paying jobs. Commuters may choose to purchase a more energy efficient car or carpool.</p> <p>Businesses with energy-intensive production processes would be negatively impacted by large increases in energy prices. In general, the Pacific Northwest has a comparative advantage for energy prices because hydroelectricity is less expensive to produce than most other forms of electricity production. With large increases in energy prices, the low energy prices in the Northwest may become a more important advantage.</p>
<p>Comparatively low wages</p> <p>The income of a region affects the workforce, the types of businesses attracted to the region. Average income affects workers and businesses in different ways. Workers may be attracted to a region with higher average wage or high wage jobs. Businesses, however, may prefer to locate in regions with lower wages, where the cost of doing business may be lower.</p> <p>Since the early 1980's, Oregon's per capita personal income has been consistently lower than the U.S. average. In 2010, Oregon's per capita wage was 91% of the national average.</p>	<p>Per capita income in Tillamook county was lower than the State and national averages (91% of Oregon, 83% of US in 2010).</p> <p>There are three basic reasons that income has been lower in Oregon and Tillamook County than in the U.S.: (1) wages for similar jobs are lower; (2) the occupational mix of employment is weighted towards lower paying occupations; and (3) a higher proportion of the population has transfer payments (e.g. social security payments for retirees), which are typically lower than earnings.</p> <p>The lower wages in the Central Tillamook Region may be attractive to firms that typically pay lower wages, such as firms that outsource professional services such as accounting or technical support.</p>

National, State, and Regional Economic Trends	Implications for economic growth in the Central Tillamook Region
<p>Education as a determinant of wages</p> <p>The majority of the fastest growing occupations will require an academic degree, and on average they will yield higher incomes than occupations that do not require an academic degree. The fastest growing of occupations requiring an academic degree will be: computer software application engineers, elementary school teachers, and accountants and auditors. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home care aides) will grow, accounting for about half of all jobs by 2018. These occupations typically have lower pay than occupations requiring an academic degree.</p>	<p>A smaller share of residents in the City of Tillamook and Tillamook County have a Bachelor's degree or higher (14% and 20%, respectively) than the State average (29%).</p> <p>The relatively low wages in the Central Tillamook Region is the result of the composition of the regional economy, rather than the availability of workers with an academic degree. Increasing the relatively low wages in the region is dependent on changing the composition of the regional economy, through growing or attracting businesses with higher paying occupations. The educational attainment in the region is likely to increase with increases in demand for workers in these occupations.</p>
<p>Importance of high quality natural resources</p> <p>The relationship between natural resources and local economies has changed as the economy has shifted away from resource extraction. Increases in population and in households' incomes, plus changes in tastes and preferences, have dramatically increased demands for outdoor recreation, scenic vistas, clean water, and other resource-related amenities. Such amenities contribute to a region's quality of life and play an important role in attracting both households and firms.</p>	<p>The region's high quality natural resources present economic growth opportunities for the Central Tillamook Region, ranging from agricultural production to food production to logging and timber production to amenities that attract visitors and contribute to the region's high quality of life.</p> <p>Recreational opportunities in the Region include: ocean sports, hiking, fishing, and kayaking.</p>
<p>Projected employment growth</p> <p>The Oregon Employment Department forecasts employment growth by industry over the 2010 to 2020 period for Employment Region 1, which includes Tillamook, Clatsop, and Columbia Counties. The sectors that will lead employment growth in Region 1 for the ten-year period are Education and Health Services (adding 1,110 jobs), Accommodations and Food Services (adding 1,080 jobs), Professional and Business Services (adding 630 jobs), and Retail Trade (adding 540 jobs), Construction (adding 380 jobs), and Manufacturing (adding 380 jobs). Together, these sectors are expected to add 4,120 new jobs or 79% of employment growth in Region 1.</p> <p>The Oregon Employment Department forecast does not consider any major recruitment or large expansion of existing firms. Such an action would add employment beyond the State's forecast for Region 1.</p>	<p>Tillamook is the largest city in Tillamook County and the fifth-largest city in the three-county region. Some of the projected employment growth can be expected to locate in the Central Tillamook Region. About 20% of the existing employment in the six sectors with the largest growth forecast is located in Tillamook County.</p> <p>The OED forecast describes likely growth in existing industries in the region. It does not forecast growth resulting from the location or large expansions of major traded-sector industries, such as the potential growth industries described later in this chapter.</p>

STRENGTH, WEAKNESS, OPPORTUNITIES, AND THREATS

The analysis of the Central Tillamook Region's strengths, weaknesses, opportunities, and threats (SWOT) is based on the analysis in this chapter and other sections of the report, as well as input from stakeholders.

The SWOT analysis is one approach to conducting the "environmental scan" that is typical of strategic plans. The environmental scan includes both an internal assessment (in this instance, characteristics of the region and participating jurisdictions), and an external assessment (in this case the global, national, regional, and state characteristics described in Table 3-1).

Table 3-2 summarizes the results of the regional SWOT analysis.

Table 3-2. Regional SWOT (Strengths, Weaknesses, Opportunities & Threats) Analysis

<p>Strengths</p> <ul style="list-style-type: none"> • Natural resource industries, such as dairy industry, fishing and shellfish industries, and timber (wood products industry / proximity to State Forest), and two Bays; • Comparatively large share of manufacturing employment; • Remote location, but 1.5 hours from the Portland area; • Freight access to Portland and broader markets via Highway 6; • Access to Highway 101 and Oregon Coast tourism; • Port of Tillamook Bay and Tillamook Airport; • High-speed Internet communications via the Lightwave Fiber Optic Ring; • Variety of attractions, including the Tillamook Cheese Factory, Quilt Museum and trail, Tillamook County Water Trail, and Forestry Center; • Moderate climate; • Access to natural areas and related recreational activities (beaches, hiking, kayaking, fishing); • Relatively low cost of living and high quality of life; and • Engaged citizens. 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Vacant commercial and industrial lands in poor locations (e.g., flood-prone areas) or lack urban services; • Lack of infrastructure, such as freight rail service, sewer capacity at the Port, or natural gas; • Traffic impacts from Highway 101 and poorly-maintained local road; • Distance from I-5 • Limited urban amenity retail; • Limited employment opportunities and low wages and income; • Comparatively small share of residents with a Bachelor's degree or higher; • Lack of diversity in the composition of the regional economy; • Lack of focused strategy or cohesive branding; • Insufficient hotels; • Few points of easily accessible ocean front; • Rainy climate and associated flooding; and • Odor from dairy industry;
<p>Opportunities</p> <ul style="list-style-type: none"> • Attract manufacturing; • Potential for growth in alternative energy industries; • Production of specialty agricultural products (e.g., wasabi or truffles) and non-dairy food processing (e.g. microbreweries); • Cohesive branding strategy; • Development of tourism industry; • FEMA funding for Port of Tillamook Bay; • Urban renewal; • Redevelop the retail area; • Increased focus on education and retention of young, educated workers. 	<p>Threats</p> <ul style="list-style-type: none"> • Natural disaster (tsunami); • Dairy closures; • Deferred maintenance of infrastructure; • Competition from other communities; • Marine reserves threaten fishing; • Environmental and land use regulations; • Lack of implementation; • Apathy; and • Slow state-wide recovery from the recession.

THE CENTRAL TILLAMOOK REGION'S COMPETITIVE AND COMPARATIVE ADVANTAGES

Economic development opportunities in the Region will be affected by local conditions as well as the national and state economic conditions described in Appendix A. Economic conditions in the Region relative to these conditions in other coastal communities form the Region's competitive and comparative advantages for economic development. These advantages have implications for the types of firms most likely to locate or expand in the Region.

There is little that the City or County can do to influence national and state conditions that affect economic development. The City and County can, however, influence local factors that affect economic development. The Region's primary advantages are: location in the North Oregon Coast, access to Highways 101 and 6, comparative ease of moving freight from Tillamook to Portland, range of businesses in the Region, access to natural resources for manufacturing, and high quality of life. The Region is likely to attract businesses that prefer to locate near to the ocean or businesses that have a choice of where to locate and prefer the quality of life factors in the Central Tillamook Region.

The local factors that form the Region's competitive and comparative advantages are summarized below.

- **Location.** Tillamook is located in Tillamook County, along Highway 101, in the northern section of Oregon's Coast. Tillamook is the largest coastal community between Seaside and Lincoln City. Parts of the Region have direct access to the Pacific Ocean. The Region has two bays and five rivers, providing economic and recreational opportunities and connection with the Ocean.

Tillamook's relative proximity to the Portland area (about 1.5 hours from Hillsboro) and to the Ocean are advantages.

Tillamook is located in a relatively remote area, relative to cities located along the I-5 corridor. In addition, the City of Tillamook is located several miles from the Ocean. The lack of ocean views and access is a disadvantage for Tillamook, compared to some of Oregon's Coastal cities.

- **Transportation.** Businesses and residents in Tillamook have access to a variety of modes of transportation: automotive (Highways 101 and 6), air (Tillamook Airport), and transit (Tillamook County Transportation District). The lack of a rail

line to Portland is a disadvantage for businesses that need to move bulky freight via rail. The City is working with the State on improvements to the intersection of Highways 101 and 6, which will allow for more and better automotive, truck, and recreational vehicle use of the Highways through Tillamook. More than 5 million vehicles pass through Tillamook on Highway 101 per year.

- **Freight access to Portland.** Highway 6 connects Tillamook to Portland, about a 90-minute drive away, making Tillamook a common 'gateway' to the Oregon Coast. Tillamook's distance from Interstate 5 is a barrier to attracting businesses that need direct access to I-5 or Portland.
- **Infrastructure.** Businesses and residents have access to water and wastewater services (within the City of Tillamook) and access to other utilities (e.g., electricity or high speed Internet) within the Region.

While the Industrial Park at the Port of Tillamook Bay has basic urban services, some services are insufficient for some industrial businesses. For example, some businesses have chosen not to locate at the Port because of insufficient wastewater and electrical services or the lack of natural gas.

- **Natural resources.** Businesses in Tillamook have access to natural resources from the Tillamook State Forest and surrounding rural areas, such as ocean products, wood products, agricultural products, and other resources. The Region's existing key natural resources are dairy production and wood products. Businesses that need access to these resources may locate or grow their existing business in the Region.
- **Specialty agriculture.** A substantial amount of the resource land in the Region is in agricultural production. Tillamook's primary agricultural products are dairy products.

The existing agricultural infrastructure and temperate, damp climate provide opportunities for expansion of agricultural activity, through growth of specialty agricultural products (e.g., wasabi or truffles). These niche products may be grown added to existing agricultural production and may have substantial export value. Business that process these products may locate or grow in the Region.

- **Ocean access.** One of Tillamook's primary advantages is being on the Oregon Coast, with easy access to the Pacific Ocean. The Region has two bays, providing multiple opportunities for sheltered access to the Ocean. The Region may attract businesses that need ocean resources, such manufacturers who use marine resources (e.g., shells or sea salt).
- **Land at the Port of Tillamook Bay.** The Region has a substantial amount of land available for development at the Port of Tillamook Bay. The Port has about 500 acres of developable land, much of it accessible via Highway 101. The Port is planning to grow three types of employment uses on its property:
 - A mixture of retail and commercial uses on land within the Port along Highway 101, for uses such as retail (potentially both small-scale retail and large-format retail), facilities for visitors (e.g., a new museum), and commercial businesses.
 - Manufacturing in the Port's industrial park. The Port has three 18,000 square foot warehouses that the Port completed in 2012, which can support small- to mid-scale manufacturing. The Port also has vacant land, which could accommodate larger-scale manufactures.
 - The Port's Airport Business Park provides opportunities for aviation and aero-space related firms.
- **Facility upgrades at the Port of Tillamook Bay.** The Port was awarded \$45 million from FEMA as a result of storm damage to the railroad line in 2007, as a result of severe storms, flooding, and landslides. The Port is using funds to upgrade infrastructure and develop new facilities. The Port's projects include: building three warehouses in the industrial park (with 18,000 square feet each), building a new airport business park (with 36,000 square feet of space leased to a private aerospace firm), upgrading the manure digester, expanding and upgrading the water distribution system, fencing and drainage projects, repaving County roads, and other maintenance and other projects.
- **Existing draws for visitors.** The existing tourism industry in the Region is an advantage for economic development. Tourism in Tillamook County results in \$185.4 million in direct spending annually, supporting about 2,100 jobs, and resulting in lodging tax revenues of approximately \$1.05 million annually. While

direct spending and lodging tax revenues have grown since 2000, employment in tourism industries has remained relatively flat over the 10-year period.

The Region's tourism infrastructure includes destinations such as the Tillamook Cheese Factory, recreational amenities, overnight accommodations, restaurants, retail, and cultural amenities. The existing tourism industry in the Region offers opportunities to increase tourism and grow employment directly and indirectly related to tourism. The key tourism-related economic opportunity for the Region is building off the existing tourism infrastructure to encourage visitors to stay overnight.

The Region has opportunities to build on the existing tourism trade, such as through expansion of existing facilities, development of new facilities (e.g., extension of the Rails and Trails bicycle route into the Region), and creating a tighter connection between visitors and local products (e.g., a "Made in Tillamook" store or brand).

- **Labor market.** The availability of labor is critical for economic development. Availability of labor depends not only on the number of workers available but the quality, skills, and experience of available workers. Businesses in the Region have access to workers in the Region and from neighboring communities. Businesses need access to reliable skilled workers, both with and without higher education.

Businesses that need skilled workers but that do not require a specialized college degree may find workers within the greater Tillamook area. However, stakeholder interviews suggest that businesses may have difficulty finding dependable workers (e.g., workers without a criminal background, able to pass a drug test, and with a good work ethic). Some businesses may need to attract workers from outside the area, especially if they need workers with specialized skills.

- **Existing businesses.** The existing businesses in the Region provide opportunities for growth, either of the existing business or of related businesses. This is especially true for manufacturing businesses or businesses that provide services to visitors.

The Region's existing economy is largely dependent on the

Tillamook Creamery, which accounts for a substantial amount of manufacturing employment in the Region and attracts nearly one million visitors to the Region annually. Employment in Food Products Manufacturing and Animal Production account for about one-fifth of employment in the region, much of which is directly or indirectly involved with production at the Tillamook Creamery. The high degree of dependence on one company is an economic weakness for the Region.

- **High quality of life.** The factors that make living in the Region attractive are: rural and small town atmosphere, pastoral nature of farmland in the Region, natural beauty, variety of outdoor recreational opportunities (e.g., hiking, fishing, ocean sports, etc.), good schools, Tillamook Bay Community College, the new central public library, and relatively low cost of living.
- **Public policy.** Public policy can impact the amount and type of economic growth in a community. The City and County can impact economic growth through its policies about the provision of land and redevelopment. Success at attracting or retaining firms may depend on the availability of attractive sites for development and public support for redevelopment. In addition, businesses may choose to locate in the Central Tillamook Region (rather than another coastal community) based on: the City's and County's tax policies, development charges (i.e., systems development charges), the availability and cost of public infrastructure (i.e., transportation or sanitary sewer), opportunities for urban renewal in the City's core, and attitudes towards businesses.

Stakeholder interviews indicate that local attitudes about growth may inhibit growth. Some businesses and residents are resistant to change and want the Region to remain as it is or to grow very slowly.

POTENTIAL GROWTH INDUSTRIES

An analysis of growth industries in the Region should address two main questions: (1) Which industries are most likely to be attracted to the Central Tillamook Region? and (2) Which industries best meet the Region's vision for economic development? While the EOA addresses both questions, the answer to the second question may be informed and change as a result of the discussions between the City and County about economic development strategy, which is expected to occur after this project has concluded.

Broadly speaking, the types of industries that the City and County want to attract have the following attributes: high-wage, stable jobs with benefits; jobs requiring skilled and unskilled labor; employers in a range of industries that will contribute to a diverse economy; and industries that are compatible with the Region's community values.

KEY TRENDS AFFECTING EMPLOYMENT GROWTH

Appendix A presents historical growth trends by industry in Tillamook County since 1990 and current employment in the Region. A review of key historical trends in employment in Tillamook County can help identify potential growth industries in the Region. In other words, economic opportunities in the Region are a function of regional historical trends and future economic shifts.

While nearly all sectors of the economy in the Region grew since 1990, some sectors grew faster than others, resulting in a shift in the distribution of employment by sector. Key **historical trends** included in the 1990 to 2011 period include:

- A substantial increase in the share of employment in non-retail services, which increased from 21% to 39% of covered employment in Tillamook County.
- A decrease in the share of employment in Retail Trade, from 24% to 11%. The number of jobs in retail decreased by 38% (550 jobs) over the 21-year period.
- The number of jobs in manufacturing stayed stable over the 21-year period with no growth in manufacturing. The share of covered employment in manufacturing decreased from 20% to 15%. The type of product made in Tillamook changed over the 21-year period, with an increase in food manufacturing and decrease in employment in wood products manufacturing.

- A decline in the share of employment in Government, which decreased from 24% to 21% of covered employment.

TARGET INDUSTRIES

The characteristics of the Central Tillamook Region will affect the types of businesses most likely to locate in the Region. The attributes that may attract firms are the Region's comparative advantages: location in the North Oregon Coast, access to Highways 101 and 6, comparative ease of moving freight from Tillamook to Portland, range of businesses in the Region, access to natural resources for manufacturing, and high quality of life. The Region is likely to attract businesses that prefer to locate near to the ocean or businesses that have a choice of where to locate and prefer the quality of life factors in the Central Tillamook Region. The types of businesses that may be attractive to the Region include:

- **Specialty food production.** The Central Tillamook Region's existing agricultural industry, temperate and damp climate, and freight access to Portland (and broader markets) make the Region attractive to specialty food production. The Region has opportunities to produce specialized agricultural products, such as wild rice, wasabi, horseradish, mushrooms, truffles, oysters, blueberries, artichokes, sea salt, specialty brewing yeast, and specialty flowers. These products might be grown on existing farms, increasing agricultural and economic use of existing farmland.
- **Forest products.** The forests in and around the Central Tillamook Region provide opportunities for forest goods production, such as trees, moss, or wild-grown edibles (e.g., mushrooms).
- **Specialty agricultural and forest production.** If specialty food products are grown or gathered locally, there would be opportunities for local processing of the products, such as roasting wild rice, moss harvesting, shipping oysters, or gourmet meat production. Region also has opportunities for production of specialty beverages, such as beer micro-brewing, including packaging and shipping. Businesses likely to locate in the Region are those with inputs (e.g., crops or forest products) found locally, who sell their product in the Region, or both.
- **Alternative energy production.** The Region's abundance of agricultural resources, especially the dairy industry, may make the Region attractive to firms producing alternative energy. For

example, the Port of Tillamook Bay has a waste digester that processes dairy cow manure into methane gas for electricity production and dry sterilized fiber for soil amendments. The Region may attract other firms with processes that require forest biomass or the agricultural by-products found in the Region.

- **Agricultural services and businesses.** The Region's agricultural activities may make the Region attractive to firms providing agricultural services, such as feed and equipment stores.
- **Specialty manufacturing.** The Region's attributes may attract manufacturing firms, who are attracted to the quality of life or existing mix of businesses in the Region. The types of manufacturing and size of firm may depend on land availability and the community's preferences for non-polluting industries. Larger manufacturers may require large, flat sites, such as land available at the Port of Tillamook Bay. Small-scale manufactures (e.g., firms with fewer than 20 employers) may have greater flexibility in where to locate. The Region, however, is unlikely to attract very large manufacturers (e.g., those with hundreds or more jobs) because of the distance and comparative isolation of the Region.

Examples of manufacturing include avionics and aeronautical equipment, value-added lumber productions, wood products manufacturing, or other specialty manufacturing.

- **Light manufacturing.** The Region may attract or grow light manufacturing firms, especially those that need the natural resource inputs found in the region. Examples include furniture manufacturing, specialty apparel, or recreational equipment.
- **Services for visitors.** The Region's proximity to the Ocean, location along Highway 101 in the North Oregon Coast, and outdoor recreational opportunities are attractive to visitors. The Region already has nearly 1 million visitors per year, most of whom visit Tillamook for the day but do not stay overnight.

Increasing (private and public) revenues related to tourism will require growing services for visitors, such as food services and accommodations, and growing attractions that would keep visitors in the Region overnight. Average expenditures per person for visitors in Oregon are \$46 for a day trip and \$155 for

an overnight stay.⁸

The Region could attract overnight visitors for activities such as recreation (e.g., extended fishing trips or bicycle tours), agricultural-based tourism (e.g., tourism for brewery or wine tasting), river- or ocean-resource-based tourism (e.g., fishing, crabbing, or oysters), ecological tourism, special events, or other attractions.

- **Retail and personal services.** Population growth and changes in tourism will drive development of retail and personal services. Business opportunities in the Region include small specialty retail shops and personal services such as financial institutions or beauty shops. Given the Region's proximity to communities with a substantial amount of large-scale retail (e.g., Astoria, Lincoln City, or Hillsboro), growth of large-scale retail is not likely to occur in the Region until the Region's population grows substantially.
- **Medical services.** Population and demographic changes (e.g., growth of older population) will drive demand for medical services. Growth opportunities are likely to be small-scale, such as new doctor's offices, and may be related to Tillamook County General Hospital.
- **Services for seniors.** The growing population of retirees or near retirees in Tillamook County, may attract or create demand for services for seniors, such as assisted living facilities, retirement centers, or recreational services.
- **Government and Public Services.** The Region will continue to be the location for institutions such as: City of Tillamook offices services, Tillamook County offices, Tillamook School District, or Tillamook Bay Community College.

⁸ Longwoods International, "Oregon 2009 Visitor Report," June 2010.

EMPLOYMENT AND LAND FORECASTS

Goal 9 requires that cities provide for an adequate supply of commercial and industrial sites consistent with plan policies. To meet this requirement, the City and County need an estimate of the amount of commercial and industrial land that will be needed over the planning period in the Region. Appendix C presents the forecast for employment growth in the Central Tillamook Region in detail. This section summarizes the results of the forecast for employment growth and land needs.

Table 3-3 presents a low, medium, and high forecast of employment growth by land use type in the Region from 2013 to 2033. Table 3-1 shows the Region's employment base in 2011, with about 7,882 *total* employees,⁹ and forecast for between 9,069 and 10,645 employees in 2033.

Factors that were considered in forecasting employment growth in the Region include historical growth trends in the County, the State's forecast for employment growth in the region, and the County's expectations for population growth:

- **Long-term growth trends in Tillamook County.** Covered employment in Tillamook County grew from about 6,148 jobs in 1990 to 8,336 jobs in 2011, adding about 2,188 jobs at an average annual growth rate of 1.5%. Non-retail commercial employment more than doubled, government employment increased by about 25%, and industrial employment increased by 10% over the 20-year period. Employment in retail decreased by about 17% over the 20-year period. Over the 2000 to 2011 period, Tillamook County grew at a slower rate, with 0.3% average annual growth (adding 256 jobs).
- **Forecast of employment growth in Region 1.** The Oregon Employment Department's projection of employment growth over the 2010 to 2020 period shows Region 1 (which includes Clatsop, Columbia, and Tillamook Counties) growing at an average annual growth rate of 1.38%, adding more than 5,200 new employees. Tillamook County accounts for 23% of the employment in Region 1. The forecast shows the majority growth in Accommodations and Food Services, Health Care, Professional and Business Services, and Retail Trade. While

⁹ The forecast of employment in the Central Tillamook Region is based on an estimate of *covered* employment in 2011. Covered employment does not include all workers in an economy, most notably excluding sole proprietors. Appendix C describes the approach to converting from covered employment to total employment.

employment in these sectors are likely to grow in the Region, growth of these sectors is likely to be faster in larger cities like Astoria, Warrenton, or Cannon Beach.

- **Tillamook County's population is forecast to grow at about 0.6% annually.** The Oregon Office of Economic Analysis's (OEA) most recent population forecast for Tillamook County shows the County growing at 0.64% annually between 2010 and 2040. Over the 2000 to 2011 period, Tillamook County's population grew by 0.4% annually.

Table 3-3 presents a range of employment growth in the Region for the 2013 to 2033 period based on these considerations.

- The **low** growth scenario shows the Region growing by 969 jobs at an average annual growth rate of 0.64% over the 20-year period. This scenario assumes that the Region's employment grows at the same rate as the OEA forecast for population in Tillamook County (0.64%). This represents a very conservative employment growth estimate.
- The **medium** growth scenario shows the Region growing by 1,710 jobs at an average annual growth rate of 1.00%. This growth scenario assumes that employment in the Region will grow faster than the County forecast of residential growth but slower than the forecast of employment grown in Region 1. This scenario assumes that employment in the Region grows at a rate similar to but lower than historical employment growth in the County between 1990 and 2011.
- The **high** growth scenario shows the Region growing by 2,545 jobs at an average annual growth rate of 1.38%. This scenario assumes that the Region's employment grows at the same rate as the Oregon Employment Department's forecast for employment growth in Region 1 (1.38)%.

Table 3-3. Range of employment growth, the Central Tillamook Region, 2013-2033

Year	Low	Medium	High
2011	7,882	7,882	7,882
2013	7,983	8,040	8,100
2033	9,069	9,810	10,645
Change 2013 to 2033			
Employees	1,086	1,770	2,545
Percent Change	14%	22%	31%
AAGR	0.64%	1.00%	1.38%

Source: ECONorthwest

While Table 3-3 (and subsequent tables) present a range of employment growth projections, Goal 9 requires that the EOA identify needed sites to accommodate expected employment growth. This requires identifying a preferred employment forecast. Working with key technical staff in the region, ECONorthwest identifies the “medium” employment forecast as the most reasonable point forecast. This assessment is based on consideration of a number of factors: (1) the County’s historical employment growth trends, (2) the State’s forecast for population growth for Tillamook County, (3) the State’s forecast of employment growth in Region 1, (4) the existing economy in the Central Tillamook Region, (5) the competitive advantages (and disadvantages) of the Central Tillamook Region, (6) the potential growth industries for the Region, and (7) the City and County’s intention of developing and implementing a coordinated economic development strategy.

The next step in the employment forecast is to allocate future employment to land use types by grouping employment into land use types with similar building and site requirements, based on the North American Industry Classification System (NAICS), which assigns a classification code to every business with employment. The land use types are:

- **Industrial** businesses in the following sectors: Natural Resources and Mining, Construction, Manufacturing, Wholesale Trade, and Transportation, Warehousing, and Utilities. Industrial employment accounted for 29% of the Region’s employment in 2011.
- **Commercial** businesses in the following sectors: Retail trade, Information, Finance and Insurance, Real Estate, Professional and Scientific Services, Management of Companies, Administrative and Support Services, Private Educational Services, Health Care and Social Assistance, Accommodations and Food Services, and Other Services. Commercial employment accounted for 57% of the Region’s employment in 2011.
- **Government** includes employment local, state, and federal agencies, including public educational services. Government employment accounted for 14% of the Region’s employment in 2011.

Table 3-4 shows the forecast of employment growth by land use type in the Region from 2013 to 2033. Table 3-4 forecasts growth in all land-use types and it forecasts shifts in the composition of the Region’s employment:

- The **low** growth scenario shows the about same distribution of employment in 2033 as in 2013. This scenario assumes little change in the amount and structure of employment in the Region.
- The **medium** growth scenario shows little change in the distribution of employment in 2033 as in 2013. This scenario assumes that retail and services employment will lead growth, followed by growth in industrial employment , with government growing at a similar rate the OEA's forecast for population growth.
- The **high** growth scenario shows a greater change in the distribution of employment in 2033 as in 2013. Achieving the growth in the high growth scenario will require growth driven by increases in industrial employment, especially in manufacturing, and increases in retail and services driven by an increase in overnight tourism.

Table 3-4. Forecast of employment growth, the Central Tillamook Region, 2013-2033

Land Use Type	2013 Total	% of Total	2033 Total	% of Total	2013-2033 Growth
Low Forecast					
Industrial	2,320	29%	2,630	29%	310
Retail and Services	4,631	57%	5,206	57%	575
Government	1,149	14%	1,233	14%	84
Low Emp Total	8,100	100%	9,069	100%	969
Medium Forecast					
Industrial	2,320	29%	2,845	29%	525
Retail and Services	4,631	57%	5,690	58%	1,059
Government	1,149	14%	1,275	13%	126
Med. Emp Total	8,100	100%	9,810	100%	1,710
High Forecast					
Industrial	2,320	29%	3,513	33%	1,193
Retail and Services	4,631	57%	5,802	55%	1,171
Government	1,149	14%	1,331	13%	182
High Emp Total	8,100	100%	10,645	100%	2,545

Source: ECONorthwest

Note: Green shading denotes an assumption by ECONorthwest

The estimate of long-term land and sites needs in the Region builds off of the employment forecast for the Region. Table 3-5 shows demand for vacant (including partially vacant) land in the Region over the 20-year period for the low, medium, and high employment forecasts. The assumptions used in Table 3-5 are:

- **Some employment growth will occur on with existing built space.** Some employment will locate in existing buildings, such as buildings with vacant spaces that can accommodate business tenants. In addition, existing businesses may be able to accommodate new employment by making more efficient use of existing office space (e.g., adding a new cubicle) or vacant buildings. ECO assumes that 10% of industrial employment can be accommodated this way and that 15% of retail and services and government employment can be accommodated in existing built space.
- **Employment density.** Table 3-5 assumes the following number of employees per acre (EPA): Industrial will have an average of 10 employees per acre and Commercial and government will have an average of 20 EPA.

These employment densities are consistent with employment densities in Oregon cities of similar size as Tillamook. Some types of employment will have higher employment densities (e.g., a multistory office building) and some will have lower employment densities (e.g., a convenience store with a large parking lot).

- **Conversion from net-to-gross acres.** The data about employment density is in *net* acres, which does not include land for public right-of-way. Future land need for employment should include land in tax lots needed for employment plus land needed for public right-of-way. One way to estimate the amount of land needed for employment including public right-of-way is to convert from *net* to *gross* acres based on assumptions about the amount of land needed for right-of-way.¹⁰ A net to gross conversion is expressed as a percentage of gross acres that are in public right-of-way.

¹⁰ OAR 660-024-0010(6) uses the following definition of net buildable acre. “Net Buildable Acre” consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads. While the administrative rule does not include a definition of a gross buildable acre, using the definition above, a gross buildable acre will include areas used for rights-of-way for streets and roads. Areas used for rights-of-way are considered unbuildable.

Net-to-gross factors generally range from 15% to 20% for cities like Tillamook. Given that Tillamook has an existing well developed street system, ECO uses a net-to-gross conversion factor of 15% for industrial and 20% for commercial and government.

Table 3-5 shows that employment in the Region will require between 58 gross acres and 161 gross acres of land over the 20-year period. The medium forecast shows that the Region will need 102 gross acres: 39 acres of industrial land, 56 acres of land for retail and services, and 7 acres of land for government uses.

Table 3-5. Demand for vacant land to accommodate employment growth, Central Tillamook Region, 2013 to 2033

Land Use Type	Total New Emp.	Emp. On Refill Land	Emp. on New Land	Emp. Per Net Acre	Land Need (Net Acres)	Land Need (Gross Acres)
Low Forecast						
Industrial	310	31	279	15	19	23
Retail and Services	575	86	489	20	24	31
Government	84	13	71	20	4	4
Low Forecast	969	130	839		47	58
Medium Forecast						
Industrial	525	53	473	15	32	39
Retail and Services	1059	159	900	20	45	56
Government	126	19	107	20	5	7
Medium Forecast	1,710	230	1,480		82	102
High Forecast						
Industrial	1,193	119	1,074	15	72	89
Retail and Services	1,171	176	995	20	50	62
Government	182	27	155	20	8	10
High Forecast	2,546	322	2,224		129	161

Source: ECONorthwest

This chapter provides a brief summary of the implications of the economic opportunities needs analysis for the Central Tillamook Region. This study looked at economic trends and land needs from a regional and local perspective. This chapter includes a general comparison of land supply and demand and description of the characteristics of needed sites. The buildable lands analysis is followed by a discussion of the key implications of the EOA for the Central Tillamook Region.

COMPARISON OF LAND CAPACITY AND DEMAND

Table 4-1 compares the supply of land within the Central Tillamook Region (Table 2-6) the forecast of land demand in the Region over the 2013 to 2033 period (Table 3-5). In all three forecast scenarios, the Region has sufficient industrial land to accommodate expected growth, without accounting for the desired site characteristics of the target industries.

- The **low** growth scenario shows a surplus of 708 acres of industrial land and 17 acres of commercial land.¹¹
- The **medium** growth scenario shows a surplus of 692 acres of industrial land and an 11-acre deficit of commercial land. The medium growth scenario is the preferred employment growth scenario and the scenario that represents the point-forecast for employment growth and land needs in the Region.
- The **high** growth scenario shows a surplus of 642 acres of industrial land and a 20-acre deficit of commercial land.

¹¹ Commercial land need is a combination of land for retail and services and government. For example, the low forecast in Table 3-5 shows demand for 31 gross acres of land for retail and services and 4 gross acres for government. Table 4-1 shows demand for 35 gross acres of commercial land (31 plus 4 gross acres).

Table 4-1. Comparison of land supply with land demand, Central Tillamook Region, 2013 to 2033

Land Use Type	Land Supply (Gross Acres)	Land Need (Gross Acres)	Land Surplus or (Deficit)
Low Forecast			
Industrial	731	23	708
Commercial	52	35	17
Low Forecast	784	58	725
Medium Forecast			
Industrial	731	39	692
Commercial	52	63	(11)
Medium Forecast	784	102	681
High Forecast			
Industrial	731	89	642
Commercial	52	72	(20)
High Forecast	784	161	622

Source: ECONorthwest

Note: Commercial land need is a combination of land for retail and services and government.

Note: the City of Tillamook's zoning ordinance restricts commercial development on land zoned Multiple Use Residential (R-0). Commercial retail and service use on R-0 are conditional uses, not exceeding 3,000 square feet per use. Based on discussion with the Technical Advisory Committee and City Staff, ECO assumed the following about commercial capacity on land zoned R-0: (1) 25% of land located along Highway 6 would be available for commercial development and (2) 10% of land located in other parts of the City would be available for commercial development.

While Table 4-1 shows that the Region has enough or nearly enough land to accommodate future growth, it does not tell the full story of employment land sufficiency in the Central Tillamook Region. The analysis in Table 4-1 suggests that there is more than enough industrial land to meet expected demand within the Region, with a potential deficit of commercial land. Even with the relatively modest defect of commercial land in the medium forecast (11 acres), availability of commercial land is an area of concern within the Region. Table 4-2 presents information about the employment land base in the Region, showing vacant and partially vacant land by lot size and zoning designation (from Table 2-6).

Table 4-2. Lot size by zoning designation, suitable acres, the Central Tillamook Region, 2012

		Suitable Acres in Tax Lot					Total
		>=1.00 and <2.00	>=2.00 and <5.00	>=5.00 and <10.00	>10.00		
Zones		<1.00					
ACRES							
City Zones							
C-C, C-H, C-N	Commercial	6	-	6	-	17	29
R-0	Mixed Use Residential	1	0	2	1	-	4
I-G, I-L	Industrial	4	3	11	6	42	67
County Zones							-
CC, RC	Commercial	2	5	3	7	-	17
COS	Commercial-Oceanside	0	-	-	-	-	0
NT-C1	Commercial-Netarts	2	1	-	-	-	3
M-1, RI	Industrial	0	2	29	18	620	669
Total		15	12	50	32	680	788
TAX LOTS							
City Zones							
C-C, C-H, C-N	Commercial	21	-	2	-	1	24
R-0	Mixed Use Residential	19	3	6	1	-	29
I-G, I-L	Industrial	12	2	3	1	1	19
County Zones							
CC, RC	Commercial	5	3	1	1	-	10
COS	Commercial-Oceanside	3	-	-	-	-	3
NT-C1	Commercial-Netarts	9	1	-	-	-	10
M-1, RI	Industrial	1	1	7	3	4	16
Total		70	10	19	6	6	111

Source: Tillamook County GIS data; analysis by ECONorthwest

Note: the City of Tillamook's zoning ordinance restricts commercial development on land zoned Multiple Use Residential (R-0). Commercial retail and service use on R-0 are conditional uses, not exceeding 3,000 square feet per use. Based on discussion with the Technical Advisory Committee and City Staff, ECO assumed the following about commercial capacity on land zoned R-0: (1) 25% of land located along Highway 6 would be available for commercial development and (2) 10% of land located in other parts of the City would be available for commercial development.

The key issue for the Region is whether there is sufficient commercial land with the necessary characteristics to accommodate expected growth. The specific issues are: (1) whether there is enough land that is primarily meant for commercial development in the Region, (2) the location of vacant commercial land, and (3) opportunities for commercial development at the Port.

- **Amount of commercial land.** Commercial land sufficiency is an issue within the Region.
 - **Commercial land within the City of Tillamook.** There are about 29 acres of commercially zoned land within the City, in about 24 sites. Tillamook has one larger commercial site, 17 acres zoned Commercial-Highway. In addition, the City has nearly 4 acres of land zoned for Mixed Use Residential, which conditionally allows commercial retail and services not-to-exceed 3,000 square feet per use.

- **Existing commercial development in flood-prone areas.** A study by Johnson-Reid in 2010 identified need to relocate some commercial uses within the City of Tillamook from flood-prone areas. The City has approximately seven vacant acres in the floodway. These sites were not considered suitable for the purpose of the inventory, but can still be developed consistent with city regulations.
- **Commercial land in the County.** Table 4-2 shows that the County has 17 acres of land zoned for commercial uses. The largest commercially zoned site is 7 acres. In addition, there are 3 acres of land in Netarts, mostly in sites smaller than one acre.
- **Location of commercial land.** Much of the unconstrained vacant commercial land in the City of Tillamook is located outside of the City core, north of the City along Highway 101 or in the east of the City along Highway 6. The location of unconstrained vacant commercial land is not ideal if the City wants to concentrate retail and tourism activity in commercial district in or near downtown.

One of the key economic opportunities and potential growth industries identified in this study is growth of tourism, such as restaurants, hotels, or small shops (e.g., stores selling locally-produced crafts) for visitors. Higher-end hotels are likely to prefer to locate in a place with an ocean view, such as in Netarts or Oceanside. More moderately-priced hotels may prefer to locate along Highway 101. Some businesses for visitors may prefer to locate near hotels or in a location with an ocean view.

There is, however, relatively little vacant commercial land in Netarts and nearly none in Oceanside. The scale of commercial development in these unincorporated communities will be limited by the County's zoning regulations.

Another option, which is articulated in policies presented in the economic element of the City of Tillamook's Comprehensive Plan, is to take steps to encourage redevelopment within the downtown area. This is clearly a priority for the City as described in Policy E-41:

Policy E-41: The City will encourage a downtown development plan with implementation strategy to guide the creation of a viable business

organization, a restructured economic market mix of commerce in the City Center and a design initiative which refreshes and underscores the pedestrian-friendly, livable aspects of the City Center.

- **Opportunities for commercial development at the Port.** The Port of Tillamook Bay has about 500 acres of vacant land, zoned M-1 (General Industrial). While a substantial amount of land at the Port will be used for industrial uses (e.g., the Industrial Park and the Airport Business Park), the Port expects land along Highway 101 to develop with a mixture of commercial and retail uses. While the Port is not planning for large-scale retail development (e.g., a regional mall), this land may develop with some larger commercial uses, such as a new museum. The types of retail uses may vary from small shops that sell local goods (e.g., a hardware store or a craft supply store) to regional commercial that serves locals and visitors (e.g., factory outlet stores), once the Region has sufficient population and overnight tourism to support large-format retail.

If the Port wants land along Highway 101 to develop with commercial uses, the land will need to be redesignated and zoned to allow the desired type of commercial activity. Planning for development of larger-scale retail will require addressing transportation issues for workers and shoppers, both at the Port, transportation connectivity with the Region, and options for alternative transportation.

This land at the Port can be used to support commercial development in the Region, given the relatively tight supply of commercial land. It does not, however, replace demand for commercial land in key areas, such as Netarts, Oceanside, or downtown Tillamook. Commercial uses at the Port should complement, rather than compete with, commercial uses within the City of Tillamook, Netarts, and Oceanside.

It will be important for the key stakeholders (e.g., the City, County, Port and other interested parties) to engage in a dialog and planning process to determine what types of commercial uses are appropriate on the Port site. The key will be to identify uses that do not conflict with the City's policies as described in Chapter 11 of the City of Tillamook Comprehensive Plan.

CHARACTERISTICS OF NEEDED SITES

OAR 660-009-0015(2) requires the EOA identify the number of sites, by type, reasonably expected to be needed for the 20-year planning period. Types of needed sites are based on the site characteristics typical of expected uses. The Goal 9 rule provides flexibility in how jurisdictions conduct and organize this analysis. The Administrative Rule defines site characteristics as follows in OAR 660-009-0005(11):

(11) "Site Characteristics" means the attributes of a site necessary for a particular industrial or other employment use to operate. Site characteristics include, but are not limited to, a minimum acreage or site configuration including shape and topography, visibility, specific types or levels of public facilities, services or energy infrastructure, or proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes.

Friends of Yamhill County v. City of Newberg, 62 Or LUBA 5 (2010), established a two-prong test for establishing relevant "site characteristics" as follows: (1) that the attribute be "typical of the industrial or employment use" and (2) that it have "some meaningful connection with the operation of the industrial or employment use." The first of those prongs, that the attributes be "typical," appears expressly in OAR 660-009-0015(2), which refers to "site characteristics typical of expected uses." In upholding LUBA's two prong test, the Court of Appeals agreed, "[t]hat 'necessary' site characteristics are those attributes that are reasonably necessary to the successful operation of particular industrial or employment uses, in the sense that they bear some important relationship to that operation." *Friends of Yamhill County v. City of Newberg*, 240 Or App 738, 747 (2011).

This section presents a high-level discussion of the characteristics of land needed to accommodate the targeted industries, based on the identified need for: 54 gross acres of industrial land and 53 gross acres of commercial land. The following discussion summarizes the site characteristics and provides an overview of the two-prong test established for site characteristics under *Friends of Yamhill County v. City of Newberg*.

This section presents characteristics of needed sites for: manufacturing and tourism.

Manufacturing

Manufacturing includes a wide-range of businesses, from small-scale specialty manufacturing (e.g., agricultural processors) to wood-products manufacturing to alternative energy producers to large-scale manufactures. This section describes site needs for manufactures in general but some businesses may have special site needs (e.g., rail access or access to high-capacity) that will need to be addressed on a case-by-case basis.

- **Location within the Region.** Manufacturers will need to locate on land that allows manufacturing, such as land zoned industrial. A key option for manufacturers is locating at the Port of Tillamook Bay's Industrial Park.

- Attribute is "typical of the industrial or employment use":

OAR 660-009-0005(11) specifically cites the “proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes” as a site characteristic. The Region has an ample supply of industrial land at the Port of Tillamook Bay.

- Attribute has "some meaningful connection with the operation of the industrial or employment use": Vacant land and buildings at the Port of Tillamook Bay have access to sewer, water, and other services.
- **Size of sites.** The size of sites required by businesses in this cluster will vary.
 - Attribute is "typical of the industrial or employment use" - OAR 660-009-0005(11) specifically cites “a minimum acreage” as a site characteristic. The size of the site will depend on the type of business. Some businesses may require relatively small locations at an existing farm or in the Port of Tillamook Bay's Industrial Park, such as a Hoop house or a space in an existing building. Specialty manufacturers may require a relatively small site (e.g., 1- to 2-acres) for small-scale businesses or may require a large site (e.g., 10- or more acres) for large-scale operations. Small businesses may prefer to locate in existing buildings (if available).
 - Attribute has "some meaningful connection with the operation of the industrial or employment use":

The ability of the firm to do business on a particular site will require an appropriately sized site. The site should be large enough to accommodate the following (not every business will need all of these attributes): the built space needed by the business, employee parking, maintenance or storage yards, room for expansion of the business, and other attributes that affect the size of the site.

- **Constraints and topography.** The buildable lands inventory identifies development constraints to include: wetlands, floodways, or slopes over 15%. However, businesses in this cluster will need relatively flat sites.

- Attribute is "typical of the industrial or employment use":

OAR 660-009-0005(11) specifically cites "site configuration including shape and topography" as a site characteristic. Reasonably level and well-drained land outside the floodway is typical of employment areas. Areas not meeting these requirements are constrained and, as a result, may be unsuitable for development. OAR 660-009-0005(2) says: "Development Constraints" means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas.

- Attribute has "some meaningful connection with the operation of the industrial or employment use":

Development within constrained areas (e.g., wetlands floodways) or sites within constrained areas or with slopes of 15% or more will be unsuitable for manufacturing.

- **Transportation access.** Transportation access includes include automotive and shipping access.

- Attribute is "typical of the industrial or employment use":

OAR 660-009-0005(11) specifically cites the "proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes" as a site characteristic. All businesses will need automotive

access. Business in this cluster will need direct access to Highway 6 and to Highway 101. Businesses in this cluster may require access to shipping from the Tillamook Airport or via rail (if available).

- Attribute has "some meaningful connection with the operation of the industrial or employment use":

All businesses in this industry require automotive access to function, for delivery of freight or access by customers and employees.

Tourism

Tourism includes a wide-range of businesses, from hotels and motels to restaurants to shops to large-scale attractions (e.g., the Tillamook Cheese factory or the Forestry Center). This section describes site needs for businesses that provide services to visitors in general but some businesses may have special site needs (e.g., a large site for an attraction) that will need to be addressed on a case-by-case basis.

- **Location within the Region.** Businesses involved in tourism are likely to locate in areas that visitors frequent.
- Attribute is "typical of the industrial or employment use":

OAR 660-009-0005(11) specifically cites the "proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes" as a site characteristic.

Tourism businesses will require a location in areas where visitors frequent, such as along Highway 101 in Tillamook, in Netarts, or in Oceanside. Some businesses may prefer a location with an ocean (or bay) view, such as restaurants or overnight-accommodations.

- Attribute has "some meaningful connection with the operation of the industrial or employment use":

Tourism businesses must locate in areas frequented by visitors.

- **Size of sites.** Businesses providing services to visitors will require a variety of site sizes.

- Attribute is "typical of the industrial or employment use" - OAR 660-009-0005(11) specifically cites "a minimum acreage" as a site characteristic. Some businesses, such as a retail store or small restaurant, in this cluster can locate on a small site (1-acre or less) and in an existing building. Some businesses, such as restaurants or overnight-accommodations, may need larger sites (2- to 5-acres) and may prefer to build new facilities. Need for sites larger than 5-acres will be restricted to large businesses, generally those building new facilities.
- Attribute has "some meaningful connection with the operation of the industrial or employment use":

The ability of the firm to do business on a particular site will require an appropriately sized site. The site should be large enough to accommodate the following (not every business will need all of these attributes): the built space needed by the business, employee and customer parking, maintenance or storage yards, room for expansion of the business, and other attributes that affect the size of the site.

- **Constraints and topography.** The buildable lands inventory identifies development constraints to include: wetlands, floodways, or slopes over 15%. However, businesses in this cluster can locate on sites with somewhat steeper slopes.

- Attribute is "typical of the industrial or employment use":

OAR 660-009-0005(11) specifically cites "site configuration including shape and topography" as a site characteristic. Reasonably level and well-drained land outside the floodway is typical of employment areas. Areas not meeting these requirements are constrained and, as a result, may be unsuitable for development. OAR 660-009-0005(2) says: "Development Constraints" means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas.

- Attribute has "some meaningful connection with the operation of the industrial or employment use":

Businesses providing tourism services require sites where constraints do not prohibit building. Development within constrained areas (e.g., floodways) will be unsuitable for businesses in this cluster. Some businesses in this cluster can locate on sites with slopes of up to 15%, consistent with slopes considered buildable for residential uses.

- **Transportation access.** Businesses providing services to visitors will need access to local streets, with space for parking.
- Attribute is "typical of the industrial or employment use":

OAR 660-009-0005(11) specifically cites the “proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes” as a site characteristic. All businesses will need automotive access. Some will require access to Highway 101 or Highway 6 and some may prefer to locate in an area with access to local streets.

- Attribute has "some meaningful connection with the operation of the industrial or employment use":

Access to public streets with capacity to accommodate traffic volumes is necessary to accommodate necessary freight movement to support commercial development, as well as to provide safe and convenient access for customers and employees.

- **Visibility.** Businesses in this cluster generally requires a site with high visibility, either along Highway 101, Highway 6, or downtown Tillamook.

- Attribute is "typical of the industrial or employment use":

OAR 660-009-0005(11) specifically cites “visibility” as a site characteristic.

- Attribute has "some meaningful connection with the operation of the industrial or employment use":

Many of the desired commercial businesses require from exposure to traffic and storefront view to the road to attract passing motorists and other customers.

IMPLICATIONS FOR ECONOMIC DEVELOPMENT

The conclusion of the economic opportunities analysis is that the City and County has enough industrial land to accommodate the forecast for employment growth within the Central Tillamook Region over the next 20-years. The Region has a deficit of commercial land (11 acres) to accommodate commercial growth over the next 20-years.

The challenge for the City and County is developing approaches to strategically position the land base and infrastructure to capitalize on the region's comparative advantages and identifying strategic public investments that retain existing businesses and attract new businesses.

- **Consider local preferences for growth.** Interviews with stakeholders and discussions with staff suggest that there is a strong preference to maintain the rural character of the community, while reinvigorating the economy to raise incomes while maintaining the rural, small-town atmosphere. The general preference for economic growth is for growth that fits with the existing character of the Region and for modest amounts of growth. This suggests an economic development strategy that focuses as much (or more) on business retention and expansion than on recruitment.

As the City, County and Port continue work on economic development planning, decisionmakers should keep these preferences in mind. The local governments can plan for growth in employment and increases in income, while retaining the unique and desirable characteristics of the community. Economic development policies and strategies, however, will need to be crafted to provide opportunities for types of growth that are consistent with community values, as well as the comparative advantages of the Region. Moreover, it will be important for the three local government agencies as well as the Tillamook Economic Development Corporation to ensure that strategies and actions align and are coordinated.

- **Build from the Region's strengths.** The Region is most likely to successfully retain, grow, or attract businesses that require the qualities found in the Central Tillamook Region. The Region's strengths include: transportation access to Highways 101 and 6, freight and automotive proximity to Portland, high quality natural resources and agricultural products, ocean and bay access, developable and serviced land at the Port of Tillamook Bay, the large base of tourists who pass through Tillamook already (nearly 1

million visitors annually), access to labor from the Northern Oregon Coastal region, and high quality of life.

Many businesses have a choice of where to locate, whether it is in Tillamook, another part of Oregon, or somewhere else in the nation (or world). Businesses may be attracted to the Region because they need to locate near natural or agricultural resources or because business management likes the quality of life in Tillamook. These are the types of businesses that the City and County should work to grow, attract, or retain.

- **Capitalize on opportunities to grow manufacturing.** The Region's opportunities for growing manufacturing are in production of value-added, niche agricultural products, wood products, and specialty manufacturers who locate in Tillamook because of the Region's attributes (e.g., availability of serviced industrial land or quality of life). Much of the manufacturing growth in the Region is likely to be at relatively small businesses and involve growth of a few jobs (e.g., one to nine jobs per firm). However, a larger manufacturer (e.g., one with 50 or more employees) might be attracted to the Region because the Port of Tillamook Bay's serviced land and the relative ease of transporting freight by truck to Portland.

The primary manufacturing opportunities for the Region build from the existing types of businesses in the Region. For example, expanding the array of specialty agricultural products grown and processed in the Region builds from the Region's existing businesses and provides opportunities to grow jobs in the Region and increase wealth coming into the Region. The City and County should work with key stakeholders, such as the Port or the Tillamook County Economic Development Council, to ensure that businesses have the infrastructure and inputs (e.g., available built space) they need to succeed.

- **Address service deficiencies on industrial land.** The majority of industrial land in the Region is at the Port. Land at the Port has well-documented service deficiencies, most notably deficiencies in wastewater service and transportation limitations. The City and County should work with the Port to resolve these deficiencies and make land at the Port available for development.

The first step in this process is complete. The City and County modified the Urban Growth Management Agreement (UGMA) in 2011 to allow the city to extend wastewater infrastructure to the

Port site. While this step is pre-requisite to providing services, identifying funding sources will likely be the biggest challenge.

In addition, some industrial lands within the City are unserved because of the prohibitive cost or complexity of providing services to the industrial sites. The City should consider options for servicing these sites or using the land for other purposes that do not require urban-level services. In addition, the City may want to consider removing unserviceable industrial sites from the UGB. The City could work with the County to bring the Rural Industrial site south of the UGB into the City, allowing more intense usage of this site for industrial uses.

- **Work together to create a coordinated framework for regional implementation of economic development strategies.** The primary purpose of the EOA is to provide a factual basis to support development of economic development policies and implementation strategies for the City of Tillamook and Tillamook County. It is important to acknowledge that the City, County, and Port already have policies and strategies that relate to economic development. A review of these strategies suggests a strong foundation exists on which to build from. ECO's evaluation is that appropriate policies already exist; the issue is the lack of a coordinated implementation framework.

Input received at the May 23rd Stakeholder meeting, suggests that an opportunity exists to engage in a regional dialog about how to best align strategies among the three government entities and the Economic Development Council of Tillamook County.

The next step is for the City and County to develop a plan to guide implementation of economic development within the Region. We recommend that the City and County work together with other local and regional partners (including the Port) to develop an economic development action plan to prioritize the implementation of existing the policies and goals.

The strategy should be explicit about the actions that will result from the strategy, including: (1) the rationale for the action, (2) who is responsible for the action, (3) how the action will be funded, (4) when it will begin and end, and (5) how to measure progress on the action.

Economic development strategies commonly include goals and actions to address the following topics:

- *Encouraging growth of businesses and employment in target industries.* The strategy should describe what actions the local governments and other partners are willing to take (if any) to encourage growth in key industries, such as manufacturing or tourism.
- *Managing the supply of commercial and industrial land in the Region.* The strategy should describe what policies and actions the local governments will implement to use employment land efficiently and ensure that there is a future supply of serviced employment land. The strategy should address:
 - Redesignation of land at the Port of Tillamook Bay to allow for a mixture of commercial uses. This will require that the Port work with the County to identify specific land for commercial uses, the types of commercial that should be allowed, and appropriate development standards for the land.
 - Ideas for addressing the issue of existing businesses located in flood-prone areas, building from the 2010 EOA by Johnson-Reid.
- *Ensuring that employment land has necessary services.* The strategy should describe the policies and actions the municipalities will implement to provide services to existing employment land with insufficient services (e.g., addressing sewer capacity issues for land at the Port of Tillamook Bay). The strategy should include plans for coordinating public investments to providing new or upgraded services as needed to commercial or industrial lands. Coordinating the public investments will be especially important for upgrading services to land at the Port.
- *Supporting workforce development.* The City and County are not the primary agencies responsible for workforce development. However, the municipalities can have a role as a facilitator among stakeholders to assist the school district and Community College in workforce development.

Several approaches exist to addressing this recommendation. Based on ECO's review of the plans and input received through interviews and the Stakeholder meeting, we suggest that the regional organizations (city, county, port, and EDCTC) engage in

one or more joint meetings to identify specific short term actions that are consistent with the existing plans and policies and address specific opportunities outlined in this report. We recommend that the meetings be organized and facilitated by an outside individual or group.

- **Concentrate manufacturing growth at key sites.** Manufacturing businesses may benefit from locating near to other manufactures (i.e., clustering), especially the businesses have common inputs (e.g., natural resources) or common labor requirements. The City and County could also benefit from manufactures that cluster together because it may be less costly and easier to provide infrastructure to one larger area, rather than many smaller sites around the Region. The obvious opportunity for clustering manufacturing businesses and making strategic infrastructure investments is at the Port of Tillamook Bay's, both in the Industrial and Airport Business Parks. In addition, the Port site may provide opportunities for a mixture of commercial and retail development, some of which might complement the manufacturing (e.g., selling locally manufactured or processed products).
- **Identify opportunities for commercial land infill and redevelopment.** This study concludes that the Region has a modest deficit of commercial land (11 acres) to accommodate commercial growth. The study identifies three key issues with the commercial land supply in the region are: (1) limited amount of commercial land in the Region, (2) few large sites (over five acres) for commercial development in the Region, and (3) very little vacant commercial land in Netarts or Oceanside. In addition, the 2010 Johnson-Reid study identified land needed for businesses to move out of flood-prone areas.

The City and County should work together to identify opportunities for commercial infill and redevelopment. The City should consider infill or redevelopment opportunities in the areas identified in the 2010 Johnson-Reid study, most notably at Highway 6 and Wilson River Loop, in Downtown, and possibly at the junction of Highways 101 and 6 (depending on ODOT's plans for upgrading that interchange).

While the Johnson-Reid study identified the Highway 6 and Wilson River Loop as the preferred site for relocating businesses outside of flood-prone areas, there may be broader benefits to locating these businesses in Downtown Tillamook, outside of the flood plain. In

making decisions about encouraging businesses in flood-prone areas to relocate, the City should evaluate the community development goals that can be met through increasing development in Downtown, rather than at the edges of the City.

In addition, there may be opportunities for other policy changes to allow for commercial development. For example, the City or County could redesignate land designated for other uses to allow commercial development. These opportunities are already addressed in policies in Chapter 11 of the City's Comprehensive Plan (Policy E-37). In addition, the Port may allow commercial uses at specific areas within the Port, such as along Highway 101.

- **Grow overnight tourism.** Nearly 1 million people visit the Tillamook Cheese Factory per year and Highway 101 has more than 5 million trips per year. The Region already has a lot of visitors and people who pass through the City.
 - *Develop a regional tourism marketing strategy.* Growing tourism is also going to require developing a regional marketing strategy to increase overnight tourism in the Region. The strategy might provide a way to tie together on-going tourism development efforts, such as the Chamber's expansion of the "Explore Tillamook" wayfinding signage, promotion of the Tillamook National Recreational Water Trail, ideas for development of marina facilities, expansion of the Bicycle Oregon Rails and Trails project to Tillamook, plans for the Oregon Coast Scenic Railroad, and other projects.

The strategy should: (1) identify and involve stakeholders involved in developing tourism, (2) assess current and needed tourism infrastructure, (3) assess opportunities for growing tourism and increasing overnight stays in the Region, and (4) a concise action plan that identifies a few goals related to growing tourism and concrete actions to implement the goals. While the strategy should identify a long-term vision for growing tourism, we strongly recommend that the strategy focus on goals and actions that are achievable over the next one to three years and possibly as long as five years.

- *Increase overnight tourism.* Average per person expenditures for overnight visitors to Oregon in 2009 was \$155, compared with \$46 for leisure visitors on a day trip. The Region

provides most of the opportunities for the most common activities and experiences that overnight visitors to Oregon engage in: walking along the beach or waterfront, visiting a national or state park, visiting landmark historic site, hiking and backpacking, and camping.¹² The Region lacks a substantial number of opportunities for shopping or fine dining but these activities could be grown in the Region.

- *Develop tourism infrastructure.* Increasing revenue from tourism (both for businesses and local taxes) will require building infrastructure to support tourism (e.g., hotels and restaurants) and activities to keep people in Tillamook for multiple days (e.g., outdoor recreation like fishing, attractions, or events).

Supporting tourism infrastructure (e.g., shops, restaurants, or hotels) should be located in areas with amenities that are attractive to visitors and near visitor destinations.

One of the Region's challenges is a limited commercial land supply in Netarts and Oceanside, which have natural amenities that are attractive to Coastal visitors, most notably ocean and bay views. If growing tourism infrastructure in these areas is a priority, it will require identifying commercial infill and redevelopment opportunities.

- **The City, County and Port of Tillamook Bay should follow the recommended implications for Economic Development as described in this section. Specifically:**
 - Considering local preferences for growth
 - Building from the region's strengths
 - Capitalizing on opportunities to grow manufacturing
 - Addressing service deficiencies on industrial land
 - Working together to create a framework for regional implementation of economic development strategies
 - Concentrating manufacturing growth at key sites
 - Identifying opportunities for commercial land infill and redevelopment
 - Growing overnight tourism

¹² Longwoods International, "Oregon 2009 Visitor Report," June 2010.

- Engage in a regional dialog about
 - Economic development vision and strategy
 - Land use within the UGB and at the Port
- Develop an action plan to prioritize the many implementation steps in the comprehensive plan
- Adopt regional EOA as part of the comprehensive plan fact base
- Make comprehensive plan fact base and policy amendments as appropriate

National, State, County, and Local Trends

This appendix summarizes national, state, county, and local trends affecting the Region. It presents a demographic and socioeconomic profile of the City of Tillamook (relative to Tillamook County and Oregon) and describes trends that will influence the potential for economic growth in the Region. This appendix covers recent and current economic conditions in the City, and forecasts from the State Employment Department for employment growth in Tillamook County. This appendix meets the intent of OAR 660-009-0015(1).

NATIONAL, STATE, AND REGIONAL TRENDS

NATIONAL TRENDS

Economic development in the Region over the next twenty years will occur in the context of long-run national trends. The most important of these trends include:

- **The aging of the baby boom generation, accompanied by increases in life expectancy.** The number of people age 65 and older will more than double by 2050, while the number of working age people under age 65 will grow only 19 percent. The economic effects of this demographic change include a slowing of the growth of the labor force, an increase in the demand for healthcare services, and an increase in the percent of the federal budget dedicated to Social Security and Medicare.¹³

Baby boomers are expecting to work longer than previous generations. An increasing proportion of people in their early to mid-50s expect to work full-time after age 65. In 2004, about 40% of these workers expect to work full-time after age 65, compared with about 30% in 1992.¹⁴ This trend can be seen in Oregon, where the share of workers 65 years and older grew from 2.9% of the

¹³ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2011, *The 2011 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, May 13, 2011.

¹⁴ "The Health and Retirement Study," 2007, National Institute of Aging, National Institutes of Health, U.S. Department of Health and Human Services.

workforce in 2000 to 4.1% of the workforce in 2010, an increase of 41%. Over the same ten-year period, workers 45 to 64 years increased by 15%.¹⁵

- **Need for replacement workers.** The need for workers to replace retiring baby boomers will outpace job growth. According to the Bureau of Labor Statistics, net replacement needs will be 33.7 million job openings over the 2010-2020 period, compared with growth in employment of 21.1 million jobs. The occupations with the greatest need for replacement workers includes: retail sales, food service, registered nurses, office workers and teachers.¹⁶
- **Increases in labor productivity.** Productivity, as measured by output per hour, increased over the 1995 to 2005 period. The largest increases in productivity occurred over the 1995 to 2000 period, led by industries that produced, sold, or intensively used information technology products. Productivity increased over the 2000 to 2005 period but at a slower rate than during the later half of the 1990's. The sectors that experienced the largest productivity increases over the 2000 to 2005 period were: Information, Manufacturing, Retail Trade, and Wholesale Trade. Productivity in mining decreased over the five-year period.¹⁷
- **Continued shift of employment from manufacturing and resource-intensive industries to the service-oriented sectors of the economy.** Increased worker productivity and the international outsourcing of routine tasks led to declines in employment in the major goods-producing industries. Projections from the Bureau of Labor Statistics indicate that U.S. employment growth will continue to be strongest in healthcare and social assistance, professional and business services, and other service industries. Construction employment will also grow but manufacturing employment will decline.¹⁸

¹⁵ Analysis of 2000 Decennial Census data and 2010 U.S. Census American Community Survey, 1-Year Estimates for the table Sex by Age by Employment Status for the Population 16 Years and Over

¹⁶ "Occupational Employment Projections to 2010-2020," Bureau of Labor Statistics, February 2012.

¹⁷ Corey Holman, Bobbie Joyeaux, and Christopher Kask, "Labor Productivity trends since 2000, by sector and industry," Bureau of Labor Statistics *Monthly Labor Review*, February 2008.

¹⁸ "Occupational Employment Projections to 2010-2020," Bureau of Labor Statistics, February 2012.

- **The importance of high-quality natural resources.** The relationship between natural resources and local economies has changed as the economy has shifted away from resource extraction. High-quality natural resources continue to be important in some states, especially in the Western U.S. Increases in the population and in households' incomes, plus changes in tastes and preferences, have dramatically increased demands for outdoor recreation, scenic vistas, clean water, and other resource-related amenities. Such amenities contribute to a region's quality of life and play an important role in attracting both households and firms.¹⁹
- **The growing importance of education as a determinant of wages and household income.** According to the Bureau of Labor Statistics, a majority of the fastest growing occupations will require an academic degree, and on average they will yield higher incomes than occupations that do not require an academic degree. The fastest growing of occupations requiring an academic degree will be: health care service, computer programing, management and business services, college teachers, and architectural and engineering services. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home care aides) will grow, accounting for more than two-thirds of all new jobs by 2020. These occupations typically have lower pay than occupations requiring an academic degree.²⁰

The national median income in 2010 was about \$40,700. Workers without a high school diploma earned \$17,600 less than the median income and workers with a high school diploma earned \$8,100 less than median income. Workers with some college earned slightly less than median and workers with a bachelor's degree earned \$13,300 more than median. Workers in Oregon experience the same patterns as the nation but pay is generally lower in Oregon than the national average.²¹

¹⁹ For a more thorough discussion of relevant research, see, for example, Power, T.M. and R.N. Barrett. 2001. *Post-Cowboy Economics: Pay and Prosperity in the New American West*. Island Press, and Kim, K.-K., D.W. Marcouiller, and S.C. Deller. 2005. "Natural Amenities and Rural Development: Understanding Spatial and Distributional Attributes." *Growth and Change* 36 (2): 273-297.

²⁰ "Occupational Employment Projections to 2010-2020," Bureau of Labor Statistics, February 2012.

²¹ Bureau of Labor Statistics, Employment Projections, May 2011. http://www.bls.gov/emp/ep_chart_001.htm

- **Continued increase in demand for energy.** Energy prices are forecast to remain at relatively high levels, with continued, gradual increased prices over the planning period. Output from the most energy-intensive industries is expected to decline, but growth in the population and in the economy is expected to increase the total amount of energy demanded. Energy sources are expected to diversify and the energy efficiency of automobiles, appliances, and production processes are projected to increase. Despite increases in energy efficiency and decreases in demand for energy by some industries, demand for energy is expected to increase over the 2012 to 2035 period because of increases in population and economic activity. Growth will remain slow early in the planning period, as the economy continues a gradual recovery from the recent recession.²²
- **Impact of rising energy prices on commuting patterns.** Energy prices may continue to be high (relative to historic energy prices) or continue to rise over the planning period.²³ The increases in energy prices may impact willingness to commute long distances.
- **Possible effect of rising transportation and fuel prices on globalization.** Increases in globalization are related to the cost of transportation: When transportation is less expensive, companies move production to areas with lower labor costs. Oregon has benefited from this trend, with domestic outsourcing of call centers and other back office functions. In other cases, businesses in Oregon (and the nation) have “off-shored” employment to other countries, most frequently manufacturing jobs.

Increases in either transportation or labor costs may impact globalization. When the wage gap between two areas is larger than the additional costs of transporting goods, companies are likely to shift operations to an area with lower labor costs. Conversely, when transportation costs increase, companies may have incentive to relocate to be closer to suppliers or consumers.

²² Energy Information Administration, 2012, *Annual Energy Outlook 2012 with Projections to 2035*, U.S. Department of Energy, DOE/EIA-0383(2012), April.

²³ Energy Information Administration, 2012, *Annual Energy Outlook 2012 with Projections to 2035*, U.S. Department of Energy, DOE/EIA-0383(2012), April

This effect occurs incrementally over time and it is difficult to measure the impact in the short-term. If fuel prices and transportation costs decrease over the planning period, businesses may not make the decision to relocate (based on transportation costs) because the benefits of being closer to suppliers and markets may not exceed the costs of relocation.

- **Potential impacts of global climate change.** There is growing support for, but not a political consensus about whether global climate change is occurring as a result of greenhouse gas emissions. There is a lot of uncertainty surrounding global climate change, including the pace of climate change and the ecological and economic impacts of climate changes. Climate change may result in the following changes in the Pacific Northwest: (1) increase in average temperatures, (2) shift in the type of precipitation, with more winter precipitation falling as rain, (3) decrease in mountain snow-pack and earlier spring thaw, (4) increases in carbon dioxide in the air, and (5) increases in sea-level.²⁴ Assuming that global climate change is occurring and will continue to occur over the next 20-years, a few broad, potential economic impacts for the nation and Pacific Northwest include:²⁵
- *Potential impact on agriculture and forestry.* Climate change may impact Oregon's agriculture through changes in: growing season, temperature ranges, and water availability.²⁶ Climate change may impact Oregon's forestry through increase in wildfires, decrease in the rate of tree growth, change in mix of tree species, and increases in disease and pests that damage trees.²⁷
- *Potential impact on tourism and recreation.* Impacts on tourism and recreation may range from: (1) decreases in snow-based recreation if snow-pack in the Cascades decreases, (2)

²⁴ "Economic Impacts of Climate Change on Forest Resources in Oregon: A Preliminary Analysis," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, May 2007.

²⁵ The issue of global climate change is complex and there is a substantial amount of uncertainty about climate change. This discussion is not intended to describe all potential impacts of climate change but to present a few ways that climate change may impact the economy of cities in Oregon and the Pacific Northwest.

²⁶ "The Economic Impacts of Climate Change in Oregon: A preliminary Assessment," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

²⁷ "Economic Impacts of Climate Change on Forest Resources in Oregon: A Preliminary Analysis," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, May 2007.

negative impacts to tourism along the Oregon Coast as a result of damage and beach erosion from rising sea levels,²⁸ (3) negative impacts on availability of water summer river recreation (e.g., river rafting or sports fishing) as a result of lower summer river flows, and (4) negative impacts on the availability of water for domestic and business uses.

- *Potential changes in government policies.* There is currently no substantial national public policy response to global climate change. States and regional associations of states are in the process of formulating policy responses to address climate change including: increasing renewable energy generation, selling agricultural carbon sequestration credits, and encouraging energy efficiency.²⁹ Without clear indications of the government policies that may be adopted, it is not possible to assess the impact of government policies on the economy.

Global climate change may offer economic opportunities. The search for alternative energy sources may result in increased investment and employment in “green” energy sources, such as wind, solar, and biofuels. Firms in the Northwest are well positioned to lead efforts on climate change mitigation, which may result in export products, such as renewable technologies or green manufacturing.³⁰

Short-term national trends will also affect economic growth in the region, but these trends are difficult to predict. At times these trends may run counter to the long-term trends described above. A recent example is the downturn in economic activity in 2007 following declines in the housing market and the mortgage banking crisis. The result of the economic downturn has been a decrease in employment related to the housing market, such as construction and real estate. Employment in these industries will recover as the housing market recovers and will continue to play a significant role in the national, state, and local economy over the long run. This report takes a long-run perspective on economic conditions (as the Goal 9 requirements intend) and does not attempt to predict the

²⁸ “The Economic Impacts of Climate Change in Oregon: A preliminary Assessment,” Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

²⁹ Pew Center on Global Climate Change website: http://www.pewclimate.org/what_s_being_done/in_the_states/

³⁰ “The Economic Impacts of Climate Change in Oregon: A preliminary Assessment,” Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

impacts of short-run national business cycles on employment or economic activity.

STATE TRENDS

State and regional trends will also affect economic development in the Region over the next twenty years. The most important of these trends includes: continued in-migration from other states, distribution of population and employment across the State.

- **Continued in-migration from other states.** Oregon will continue to experience in-migration from other states, especially California and Washington. According to a U.S. Census study, Oregon had net interstate in-migration (more people moved *to* Oregon than moved *from* Oregon) during the period 1990-2010. Oregon had an annual average of 26,290 more in-migrants than out-migrants during the period 1990-2000. The annual average dropped to 9,800 during the period 2000-2010.³¹ Most in-migrants come from California, Washington, and other western states.³²
- **Concentration of population and employment in the Willamette Valley.** Nearly 70% of Oregon's population lives in the Willamette Valley. About 10% of Oregon's population lives in Southern Oregon, 9% lives in Central Oregon, and 6% live in Coastal counties. The Oregon Office of Economic Analysis (OEA) forecasts that population will continue to be concentrated in the Willamette Valley through 2040, increasing slightly to 71% of Oregon's population.

Employment growth generally follows the same trend as population growth. Employment growth varies between regions even more, however, as employment reacts more quickly to changing economic conditions. Total employment increased in each of the state's regions over the period 1970-2006 but over 70% of Oregon's employment was located in the Willamette Valley.

- **Change in the type of the industries in Oregon.** As Oregon has transitioned away from natural resource-based industries, the composition of Oregon's employment has shifted from natural resource based manufacturing and other industries to service industries. The share of Oregon's total employment in Service

³¹ Portland State University Population Research Center, Population Report, Components of Population Change for 1990-2000 and 2000-2010. <http://pdx.edu/prc/annual-oregon-population-report>

³² Oregon Department of Motor Vehicles collects data about state-of-origin for drivers licenses surrendered by people applying for an Oregon drivers license from out-of-state. Between 2000 and 2007, about one-third of licenses surrendered were from California, 15% to 18% were surrendered from Washington, and about 17% to 19% were from the following states: Arizona, Idaho, Nevada, Colorado, and Texas.

industries increased from its 1970s average of 19% to 45% in 2011, while employment in Manufacturing declined from an average of 18% in the 1970s to an average of 10% in 2011.

- **Shift in manufacturing from natural resource-based to high-tech and other manufacturing industries.** Since 1970, Oregon started to transition away from reliance on traditional resource-extraction industries. A significant indicator of this transition is the shift within Oregon's manufacturing sector, with a decline in the level of employment in the Lumber & Wood Products industry and concurrent growth of employment in other manufacturing industries, such as high-technology manufacturing (Industrial Machinery, Electronic Equipment, and Instruments), Transportation Equipment manufacturing, and Printing and Publishing.³³
- **Continued importance of manufacturing to Oregon's economy.** Oregon's exports totaled \$19.4 billion in 2008, nearly doubling since 2000. Oregon's largest export industries were computer and electronic products and agricultural products, account for nearly 60% of Oregon's exports. Manufacturing employment is concentrated in five counties in the Willamette Valley or Portland area: Washington, Multnomah, Lane, Clackamas, and Marion Counties.³⁴
- **Small businesses continue to account for over 50% of employment in Oregon.** Small business, with 100 or fewer employees, account for 51% of private sector employment in Oregon in 2009, up from about 50.2% of private employment in 2000 and down from 52.5% in 1996. Workers of small businesses typically had lower wages than the state average, with average wages of \$33,977 compared to the statewide average of for large businesses about \$45,814 in 2009.³⁵

The changing composition of employment has not affected all regions of Oregon evenly. Growth in high-tech and Services employment has been concentrated in urban areas of the Willamette Valley and Southern Oregon. The brunt of the decline in Lumber & Wood Products

³³ Although Oregon's economy has diversified since the 1970's, natural resource-based manufacturing accounts for more than nearly 40% of employment in manufacturing in Oregon in 2010, with the most employment in Wood Product and Food manufacturing.

³⁴ Business Oregon, "Economic Data Packet"

³⁵ Business Oregon, "Economic Data Packet"

employment was felt in rural Oregon, where these jobs represented a larger share of total employment and an even larger share of high-paying jobs than in urban areas.

ECONOMIC TRENDS IN TILLAMOOK COUNTY AND THE CITY OF TILLAMOOK

Future economic growth in the Region will be affected in part by demographic and economic trends in the city and surrounding region. A review of historical demographic and economic trends provides a context for establishing a reasonable expectation of future growth in the Region. In addition, the relationship between demographic and economic indicators such as population and employment can help assess the local influence of future trends and resulting economic conditions. This section addresses the following trends in the Region:

- Population and demographics
- Household and personal income
- Employment
- Business activity
- Outlook for growth in the Region

POPULATION AND DEMOGRAPHIC CHARACTERISTICS

Population growth in Oregon tends to follow economic cycles. Historically, Oregon's economy is more cyclical than the nation's, growing faster than the national economy during expansions, and contracting more rapidly than the nation during recessions. Oregon grew more rapidly than the U.S. in the 1990s (which was generally an expansionary period) but lagged behind the U.S. in the 1980s. Oregon's slow growth in the 1980s was primarily due to the nationwide recession early in the decade. As the nation's economic growth has slowed during 2007, Oregon's population growth began to slow.

Oregon's population grew from 2.8 million people in 1990 to over 3.8 million people in 2011, an increase of more than 1 million people at an average annual rate of 1.5%. Oregon's growth rate slowed to 1.1% annual growth between 2000 and 2011.

Tillamook County and the City of Tillamook grew slower than the State average between 1990 and 2010, growing at 0.8% and 1.0% annually respectively. Tillamook County added 3,685 residents and the City of

Tillamook added 899. Nineteen percent of the County's population lived in the City of Tillamook in 2011.

Table A-1. Population in the U.S., Oregon, Tillamook County, and Tillamook, 1990-2011

Area	Population			Change 1990 to 2011		
	1990	2000	2011	Number	Percent	AAGR
U.S.	248,709,873	281,421,906	311,591,917	62,882,044	22%	1.1%
Oregon	2,842,321	3,421,399	3,857,625	1,015,304	30%	1.5%
Tillamook County	21,570	24,262	25,255	3,685	15%	0.8%
Tillamook	4,006	4,352	4,905	899	21%	1.0%

Source: U.S. Census, 2000, 2010 DP-1. Portland State University Population Research Center, 2011.

Migration is the largest component of population growth in Oregon. Between 2000 and 2010, in-migration accounted for 61% of Oregon's population growth. Over the same period, in-migration accounted for 122% of the of population growth in Tillamook County, adding 1,210 residents over the ten-year period.

The average age of residents of the City of Tillamook (33.7 years) is younger than the County (47.5 years) or State (38.4 years) average. The average age of residents of the City increased by 0.4 years between 2000 and 2010 (from 33.3 years old to 33.7 years old), compared with an increase 4 years for the County and 1.9 years for the State.

Table A-2 shows the change in age distribution for Tillamook between 2000 and 2010. Population increased in all age groups except for 5-17 year olds. The age group that increased the most was people aged 45 to 64, which grew by 287 people (an increase of more than 30%). This age group's proportion of the total population increased from 20% to 23% during this time period.

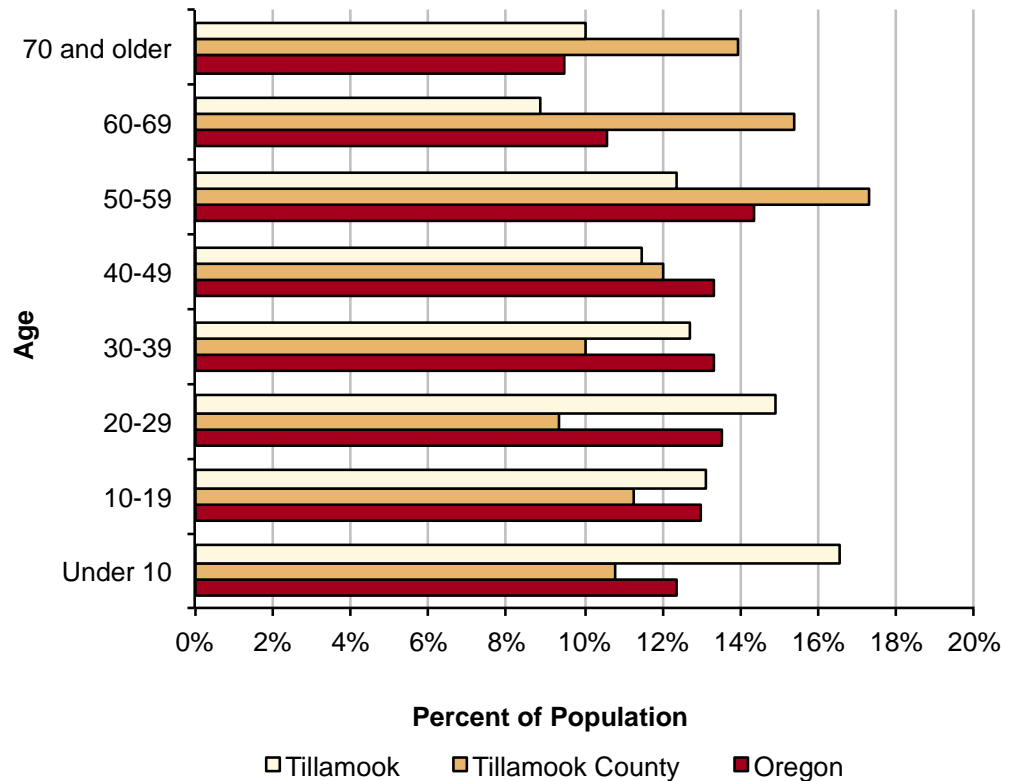
Table A-2. Change in age distribution, City of Tillamook, 2000-2010

Age Group	2000		2010		Change 2000 to 2010		
	Number	Percent	Number	Percent	Number	Percent	Share
Under 5	333	8%	437	9%	104	31%	1%
5-17	939	22%	894	18%	-45	-5%	-3%
18-24	409	9%	484	10%	75	18%	0%
25-44	1,223	28%	1,289	26%	66	5%	-2%
45-64	854	20%	1,141	23%	287	34%	3%
65 and over	594	14%	690	14%	96	16%	0%
Total	4,352	100%	4,935	100%	583	13%	0%

Source: U.S. Census Bureau, 2000 & 2010, SF1 P12

Figure A-1 shows the age structure for Oregon, Tillamook County, and the City of Tillamook in 2010. Tillamook County had a much larger share of people over 50 years old (47%) than Oregon (34%) or the City of Tillamook (31%). The City of Tillamook had a larger share of people under 20 years old (30%) than the State (25%) or County (22%).

Figure A-1. Population by age, Oregon, Tillamook County, and the City of Tillamook, 2010



Source: U.S. Census Bureau, 2010, SF1 P12

The Office of Economic Analysis forecasts that Tillamook County's share of people 65 years and older will increase from 20% in 2000 to 30% in 2030, compared to Oregon's increase from 13% to 19% of the population.³⁶

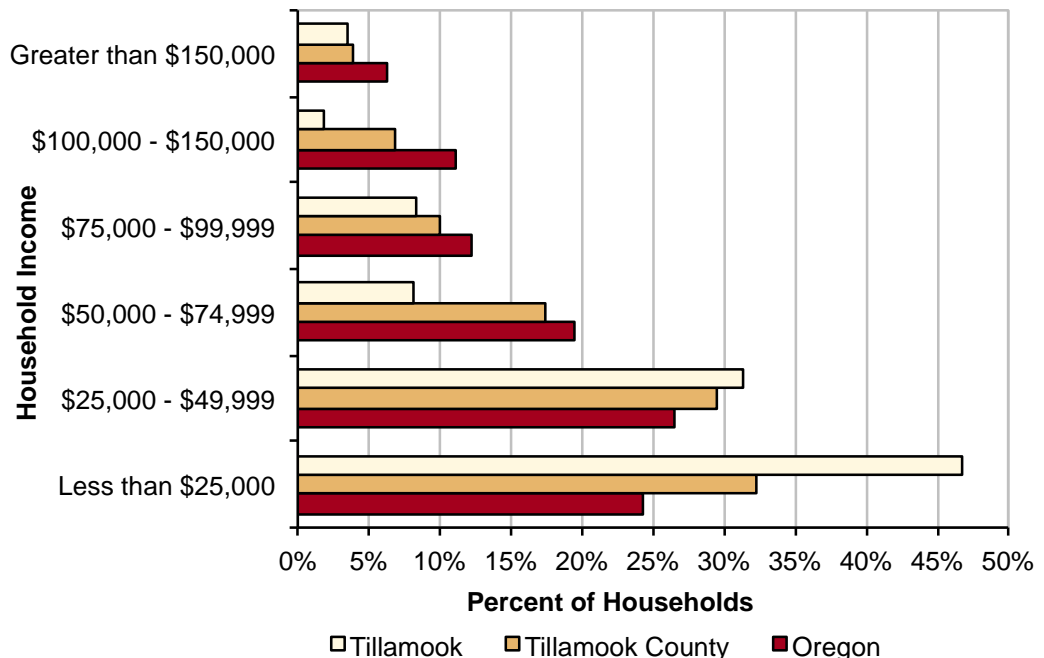
³⁶ Oregon Office of Economic Analysis, Long Term County Forecast, State and County Population Forecasts by Age and Sex, 2000 to 2040

HOUSEHOLD INCOME

Income for residents of the City of Tillamook is lower on average than the County and the State. In 2010, Tillamook's median household income was \$27,093, compared with the County median of \$39,412 or the State median of \$49,260.

Figure A-2 shows the distribution of household income in Oregon, Tillamook County, and Tillamook for the period between 2006 and 2010.³⁷ Figure A-2 shows that a larger share of households in the City of Tillamook (47%) had an income under \$25,000, compared to Tillamook County (32%) or the State (24%). The City and Tillamook County had a lower share of households with income above \$100,000 (5% and 11%), compared to the State (18%).

Figure A-2. Distribution of household income of Oregon, Tillamook County, and Tillamook, 2006-2010 (in 2010 dollars)



Source: American Community Survey 2006-2010 B19001

³⁷ Data from the U.S. Census Bureau is used throughout this report. One type of Census data used is Decennial Census data, from 2000 and 2010, which predominantly provides information about population characteristics (e.g., number of people, age, or ethnicity) and some types of housing data (e.g., number of dwelling units or household tenure). The other type of Census data used is American Community Survey (ACS) data, which provides details such as household income, household income by age of householder, size of household, or age of housing stock. The most recent ACS data available for Harrisburg was collected over the 2006 to 2010 period. For more information about the ACS, see: http://www.census.gov/acs/www/data_documentation/data_main/.

TILLAMOOK COUNTY EMPLOYMENT TRENDS

Tables A-4 and A-5 present data from the Oregon Employment Department that show changes in covered employment³⁸ for Tillamook County between 1980 and 2011. The changes in sectors and industries are shown in two tables: (1) between 1980 and 2000 and (2) between 2001 and 2011. The analysis is divided in this way because of changes in industry and sector classification system that made it difficult to compare information about employment collected after 2001 with information collected prior to 2000.³⁹

Employment data in this section is summarized by *sector*, each of which includes several individual *industries*. For example, the Retail Trade sector includes General Merchandise Stores, Motor Vehicle and Parts Dealers, Food and Beverage Stores, and other retail industries.

Table A-4 shows the changes in covered employment by sector in Tillamook County between 1980 and 2000. Covered employment in the County grew from 5,805 to 8,092, an increase of 39% or 2,287 jobs. Most sectors added jobs during this period, except for Manufacturing, which declined by 135 jobs and reduced from 27% of total employment in 1980 to 18% in 2000. The sectors with the greatest positive change in employment were Services and Retail Trade, adding a total of 1,486 jobs or about 65% of all new jobs.

Average pay per employee increased from about \$12,034 in 1980 to \$23,927 in 2000. The sectors that grew the fastest generally paid less than average, with Services paying between 61% to 84% of average and Retail Trade paying about 60% to 62% of average. Manufacturing jobs generally paid more than the average, varying between 136% of average in 1980 to 132% of average by 2000.

³⁸ Covered employment refers to jobs covered by unemployment insurance, which includes most wage and salary jobs but does not include sole proprietors, seasonal farm workers, and other classes of employees.

³⁹ Prior to 2001, data were organized by Standard Industrial Classification (SIC) codes. That system was completely revamped and replaced with the North American Industrial Classification System (NAICS) in 2001.

Table A-4. Covered employment in Tillamook County, 1980-2000

Sector	1980	1990	2000	Change 1980 to 2000		
				Difference	Percent	AAGR
Agriculture, Forestry & Fishing	101	239	383	282	279%	6.9%
Construction	189	182	339	150	79%	3.0%
Manufacturing	1,576	1,102	1,441	-135	-9%	-0.4%
Trans., Comm., & Utilities	192	215	255	63	33%	1.4%
Wholesale Trade	169	190	171	2	1%	0.1%
Retail Trade	1,152	1,453	1,660	508	44%	1.8%
Finance, Insurance & Real Estate	173	157	265	92	53%	2.2%
Services	812	1,147	1,790	978	120%	4.0%
Nonclassifiable/all others	7	12	7	0	0%	0.0%
Government	1,434	1,451	1,781	347	24%	1.1%
Total	5,805	6,148	8,092	2,287	39%	1.7%

Source: Oregon Employment Department, Oregon Labor Market Information System, Covered Employment & Wages. <http://www.qualityinfo.org/olmisi/CEP> Accessed 9/26/12. Summary by industry and percentages calculated by ECONorthwest.

Table A-5 shows the change in covered employment by sector for Tillamook County between 2001 and 2011. Employment increased by 256 jobs or 3% during this period. There were modest fluctuations across all sectors with regard to share of total employment. The sector with the largest increase in number of employees was Accommodations & Food Services, which grew by 1.5% annually and increased its share of total employment by 1.5%. The sectors that lost the greatest number of employees during this period were Retail and Construction.

Table A-5. Covered employment in Tillamook County, 2001-2011

Sector	2001	2011	Change 2001 to 2011		
			Difference	Percent	AAGR
Natural Resources and Mining	570	643	73	13%	1.2%
Construction	343	261	-82	-24%	-2.7%
Manufacturing	1,290	1,226	-64	-5%	-0.5%
Wholesale	114	113	-1	-1%	-0.1%
Retail	980	900	-80	-8%	-0.8%
Transportation & Warehousing	159	183	24	15%	1.4%
Information	107	59	-48	-45%	-5.8%
Finance & Insurance	143	150	7	5%	0.5%
Real Estate Rental & Leasing	109	108	-1	-1%	-0.1%
Prof., Scientific & Tech. Svcs and Mgmt of Companies	104	163	59	57%	4.6%
Admin. Support & Cleaning Srv.	248	236	-12	-5%	-0.5%
Education	48	43	-5	-10%	-1.1%
Health & Social Assistance	713	822	109	15%	1.4%
Arts, Entertainment & Recreation	54	81	27	50%	4.1%
Accommodations & Food Services	1,020	1,178	158	15%	1.5%
Other Services (except Public Admin.)	322	384	62	19%	1.8%
Government	1,756	1,786	30	2%	0.2%
Total	8,080	8,336	256	3%	0.3%

Source: Oregon Employment Department, Oregon Labor Market Information System, Covered Employment & Wages. Summary by industry and percentages calculated by ECONorthwest
Note: (c) denotes confidential data

EMPLOYMENT IN THE CENTRAL TILLAMOOK REGION

Table A-6 shows a summary of employment data for the Central Tillamook Region in 2011. The Region had 5,357 jobs at 474 establishments in 2011, with an average firm size of 11.3 employees. The sectors with the greatest employees were: Government (20%), Manufacturing (16%), Retail Trade (12%), Health Care and Social Assistance (12%), and Agriculture, Forestry, and Fishing (10%). These sectors accounted for 3,752 jobs or 70% of the Region's jobs.

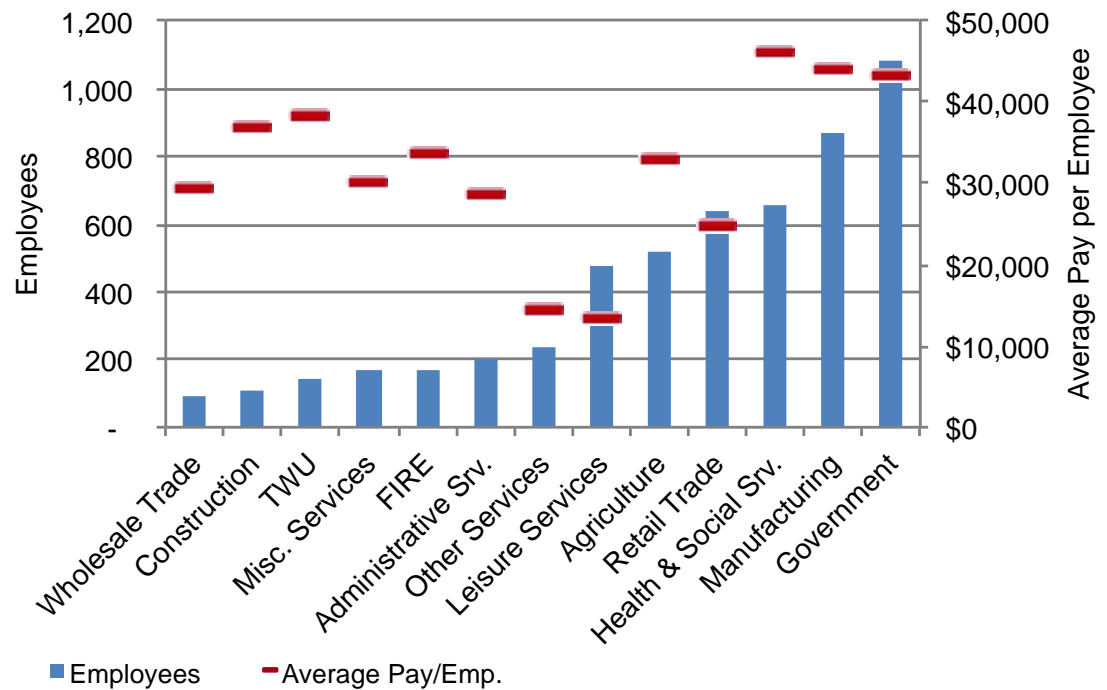
Table A-6. Covered employment in the Central Tillamook Region, 2011

Sector / Industry	Establishments	Employees		Payroll	
		Number	% of Total	Total	Average Pay/Emp.
Agriculture, Forestry, Fishing, and Hunting	43	515	10%	\$17,065,216	\$33,136
Animal Production	31	306	6%	\$8,766,985	\$28,650
Other Agriculture and Forestry	12	209	4%	\$8,298,231	\$39,704
Construction	39	112	2%	\$4,133,135	\$36,903
Manufacturing	15	870	16%	\$38,234,845	\$43,948
Food Manufacturing	3	573	11%	\$24,095,549	\$42,052
Wood Product Manufacturing	3	218	4%	\$11,362,321	\$52,121
Machinery Manufacturing	3	40	1%	\$1,794,393	\$44,860
Other Manufacturing	6	39	1%	\$982,582	\$97,272
Wholesale Trade	17	92	2%	\$2,721,185	\$29,578
Retail Trade	50	636	12%	\$15,796,531	\$24,837
Food and Beverage Stores	7	147	3%	\$3,173,289	\$21,587
Motor Vehicle and Parts Dealers	6	72	1%	\$2,392,230	\$33,225
Building Material & Garden Equipment & Supplies	5	63	1%	\$1,539,785	\$24,441
Other Retail	32	354	7%	\$8,691,227	\$24,551
Transportation, Warehousing, and Utilities	19	147	3%	\$5,645,081	\$38,402
Truck Transportation	11	118	2%	\$4,441,591	\$37,641
Other Transportation, Warehousing, and Utilities	8	29	1%	\$1,203,490	\$192,277
Information	7	46	1%	\$1,152,160	\$25,047
Finance and Insurance	18	128	2%	\$4,790,218	\$37,424
Real Estate	15	42	1%	\$948,387	\$22,581
Professional, Scientific, and Technical Services	23	82	2%	\$2,454,045	\$29,927
Management of Companies and Enterprises	4	23	0%	\$1,020,496	\$44,369
Administrative and Support Services	15	207	4%	\$5,942,787	\$28,709
Private Education Services	3	17	0%	\$424,787	\$24,987
Health Care and Social Services	41	652	12%	\$30,215,030	\$46,342
Arts, Entertainment, and Recreation	7	61	1%	\$1,032,968	\$16,934
Accommodation and Food Service	45	412	8%	\$5,246,505	\$12,734
Accommodation	13	81	2%	\$1,019,001	\$12,580
Food Services and Drinking Places	32	331	6%	\$4,227,504	\$12,772
Other Services	67	236	4%	\$3,385,364	\$14,345
Government	46	1,079	20%	\$46,816,130	\$43,388
Federal	4	51	1%	\$2,890,824	\$56,683
State	14	214	4%	\$9,267,197	\$43,305
Local	28	814	15%	\$34,658,109	\$42,578
Total	474	5,357	100%	\$187,024,870	\$34,912

Source: Oregon Employment Department Quarterly Census of Employment and Wages (QCEW). Summary by industry and percentages calculated by ECONorthwest

Figure A-3 shows covered employment and average wage by sector in the Central Tillamook Region in 2011. The average wage for all covered employment in the Region was nearly \$35,000 in 2011. The sectors with at least 10% of the Region's employment and above average wages were Government, Manufacturing, and Health Care and Social Assistance. The sectors with at least 10% of the Region's employment and below average wages were Retail Trade and Agriculture, Forestry, and Fishing.

Figure A-3. Covered employment and average wage per sector in the Central Tillamook Region, 2011



Source: Oregon Employment Department Quarterly Census of Employment and Wages (QCEW). Summary by ECONorthwest

ACTIVITY IN KEY INDUSTRIES

This section presents additional information about activity in key industries in Tillamook County: natural resources manufacturing, agriculture, and tourism.

Natural resource manufacturing

Manufacturing of natural resources is an important to Tillamook's economy. The County's manufacturing industry produces goods using local natural resource inputs, specifically dairy products and wood products. The majority of the County's jobs in these industries are located in the Central Tillamook Region.

- **Natural resource industries.** Covered employment in Natural Resource industries accounts for 8% (643 jobs) of jobs in Tillamook County in 2011, with 386 jobs in animal production and 211 jobs in forestry and logging.

The majority of those jobs are located in the Central Tillamook Region, with 306 jobs in animal production and 209 in forestry and logging in the Region. Average pay for jobs in animal producing are about \$6,000 below the Regional average and forestry jobs have higher than average pay.

Tillamook's wood products industry is comparatively sustainable because the timber trees grown in Tillamook are faster growing than in many other timbers regions in the Northwest. In addition, Tillamook County has three active lumber mills, located in Garibaldi, Tillamook, and south of Tillamook.

- **Manufacturing.** Manufacturing accounted for 15% of employment (1,225 jobs) in the County in 2011, with 827 food manufacturing jobs and 308 jobs in wood product manufacturing. The number of jobs in food product manufacturing increased by two-thirds since 1990, adding 332 new jobs. The number of jobs in wood product manufacturing decreased by 187 jobs since 1990.

The majority of food manufacturing jobs (573 jobs) and wood product manufacturing (218 jobs) are in the Central Tillamook Region. These jobs have an average pay that is at about \$10,000 or more above the Regional average.

Agriculture

Agriculture production is an important industry in Tillamook County. Table A-7 shows that the County's key agriculture product is milk and other dairy products, accounting for 88% of the value of agricultural sales in 2007, \$97.6 million. The average sales value per farm for milk and dairy products was nearly \$800,000.

Other agricultural products with sales more than one million in 2007 were: cattle and calves (\$7.4 million), aquaculture (\$4.4 million), and nursery, greenhouse, floriculture, and sod (\$1.0 million). These products were the County's top agricultural products in 2002, as well as in 2007.

Table A-7. Sales value of agricultural products, Tillamook County, 2007 and 2002

Item	Value of Sales	Percent of Sales	Farms	Average Value of Sales per Farm
2007 Total Sales	\$110,856,000		302	\$ 367,072
Milk and other dairy products from cows	\$ 97,610,000	88%	123	\$ 793,577
Cattle and calves	\$ 7,488,000	7%	167	\$ 44,838
Aquaculture	\$ 4,382,000	4%	15	\$ 292,133
Nursery, greenhouse, floriculture, and sod	\$ 1,022,000	1%	18	\$ 56,778
2002 Total Sales	\$ 88,948,000		333	\$ 267,110
Milk and other dairy products from cows	\$ 79,238,000	89%	147	\$ 539,034
Cattle and calves	\$ 5,147,000	6%	214	\$ 24,051
Aquaculture	\$ 3,541,000	4%	17	\$ 208,294
Nursery, greenhouse, floriculture, and sod	\$ 565,000	1%	15	\$ 37,667

Source: U.S.D.A Census of Agriculture.

The Tillamook Region's temperate and damp climate is ideal for cultivation of specialized agricultural products, such as wild rice, wasabi, horseradish, mushrooms, truffles, oysters, blueberries, artichokes, sea salt, and specialty flowers. These products grow in relatively few climates, are in high demand, and have potential for relatively high sales prices. For example, Tillamook's climate is suitable for growing specialty brewing yeast that grow in few regions of the world, making Tillamook an exceptional place for specialty beer production.

If these products are produced locally, there would be opportunities for local processing of the products, such as roasting wild rice. Processing and growing these products would require relatively small amounts of land and could be accommodated on existing lands in the Region, such as existing farms or at the Port. Production and processing of these products would improve efficient use of existing lands and bring more income into the Region.

In addition, agricultural activities in the Region are providing opportunities for other economic activity. In 2003, the Port of Tillamook Bay constructed a waste digester to process manure from the County's

dairy cows. The digester converts the resulting methane gas into electricity, which may be used by businesses at the Port. A compost facility adjacent to the digester is used to dry sterilized fiber from the digester, for use as soil amendments or other agricultural uses.

Tourism

Tourism plays an important role in Tillamook's economy. In 2011, about 26% of covered employment in Tillamook County was in the sectors most directly related to tourism: accommodation and food service, arts and recreation, and retail trade. The strengths of Tillamook's tourism cluster include:

- Destinations, such as the Tillamook Cheese Factory, the Quilt Museum and Trail, the Forestry Center, and the Three Capes Scenic Drive
- Recreational amenities, such as sightseeing tours, fishing charters, kayaking, or hiking trails
- Overnight accommodations, such as bed and breakfast inns, hotels, motels, RV parks and campgrounds, and private vacation rentals
- A wide range of restaurants
- Arts and cultural opportunities, such as museums

Table A-8 shows direct travel spending in Tillamook County over the 2001 to 2011 period. In 2011, direct travel spending in Tillamook County was \$185.4 million. Over the ten-year period, travel spending in Tillamook County grew by about \$67 million, growth of about 4.6% per year.

Table A-8 also shows employment and earnings generated by travel spending in Tillamook County over the 2001 to 2011 period. In 2011, travel spending in Tillamook County generated 2,120 jobs and \$56.7 million in earnings. Table A-8 shows that earnings grew at over twice the rate of employment over the 10-year period.

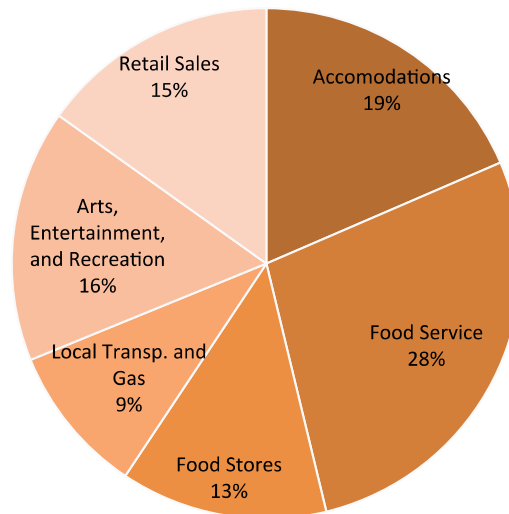
Table A-7. Direct travel spending and employment and earnings generated by travel spending, Tillamook County, 2001 to 2011

Year	Direct Travel Spending (\$millions)	Employment	Earnings (\$millions)
2001	\$118.4	1,630	\$33.0
2002	\$124.8	1,710	\$35.0
2003	\$128.9	1,720	\$36.1
2004	\$133.2	1,700	\$37.0
2005	\$138.1	1,680	\$38.1
2006	\$180.5	2,160	\$51.5
2007	\$178.9	2,110	\$53.4
2008	\$185.8	2,260	\$56.5
2009	\$178.6	2,190	\$56.3
2010	\$186.3	2,150	\$56.4
2011	\$185.4	2,120	\$56.7
Change 2001-2011			
Amount	\$67.0	490	\$23.7
% Change	57%	30%	72%
AAGR	4.6%	2.7%	5.6%

Source: "Oregon Travel Impacts 1991-2011p," May 2012, Dean Runyan Associates. http://www.deanrunyan.com/doc_library/ORImp.pdf

Table A-4 shows travel spending by type of commodity in 2011 in Tillamook County. Of the \$181.2 million spent in Tillamook County in 2011, nearly half of spending was on accommodations or food and beverages. Remaining spending was for retail sales, arts and entertainment, food stores, and transportation.

Table A-4. Visitor Travel Spending by Type of Commodity Purchased, Tillamook County, 2011



Source: "Oregon Travel Impacts, 1991-2011p," May 2012, Dean Runyan Associates

Table A-9 shows lodging tax receipts for Tillamook County and the City of Tillamook between 2001 and 2011. Tillamook collected about \$313,000 in lodging tax receipts in 2011, an increase of about \$146,000 since 2001. Tillamook's lodging tax receipts accounted for about thirty percent of lodging taxes collected in the County over the 10-year period.

Table A-9. Lodging tax receipts, Tillamook County and Tillamook, FY 2001 to 2011

Year	Tillamook County	City of Tillamook	Tillamook's % of County
2001	\$547,000	\$167,000	31%
2002	\$659,000	\$166,000	25%
2003	\$717,000	\$189,000	26%
2004	\$719,000	\$195,000	27%
2005	\$767,000	\$202,000	26%
2006	\$826,000	\$223,000	27%
2007	\$968,000	\$316,000	33%
2008	\$1,059,000	\$344,000	32%
2009	\$1,005,000	\$292,000	29%
2010	\$959,000	\$276,000	29%
2011	\$1,049,000	\$313,000	30%
Change 2001-2011			
Amount	\$502,000	\$146,000	
% Change	92%	87%	
AAGR	6.7%	6.5%	

Source: "Oregon Travel Impacts 1991-2011p," May 2012, Dean Runyan Associates. http://www.deanrunyan.com/doc_library/ORImp.pdf

Interviews with stakeholders suggest that the majority of visitors to Tillamook are day visitors and do not stay overnight. The Oregon Tourism Commission (OTC) provides research and marketing support to the Oregon tourism industry. The OTC commissioned a survey of Oregon travelers in 2009 by Longwood International. Following are some of the key findings from the Longwood study:

- Travel in the US generated 1.3 billion overnight stays in 2009. Of these, 45% were marketable pleasure trips
- Oregon generated 27.5 million overnight stays in 2009. Of these, 47% were marketable pleasure trips
- Overnight stays in Oregon grew by more than 40% (8.4 million stays) between 2004 and 2009
- Average per person expenditures for overnight leisure visitors was \$155, compared with \$46 for leisure visitors on a day trip

- 87% of overnight stays in Oregon are from Pacific states; 55% of overnight stays originate in Oregon (40% in Portland), 20% from Washington, and 11% from California
- The mode of transportation for 84% of overnight visits in Oregon was the visitor's own automotive vehicle, compared with the national average of 76%
- The most common activities and experiences for overnight visitors in Oregon were: beach/waterfront (38%), shopping (36%), national/state park (27%), fine dining (23%), landmark/historic site (22%), hiking/backpacking (21%), and camping (21%)
- The demographics of overnight visitors were:
 - The average age for overnight visitors was 47.7 years old
 - Two-thirds of households had no children over 18 years old
 - Half of visitors had income of \$25,000 to \$75,000 and one-third had income between \$75,000 and \$150,000

OUTLOOK FOR GROWTH IN TILLAMOOK

Table A-10 shows the population forecast developed by the Office of Economic Analysis for Oregon and Tillamook County for 2000 through 2040. Tillamook County is forecast to grow at a slower rate than Oregon from 2010 to 2040. The forecast shows Tillamook County's population will grow by about over 5,500 people over the 30-year period – a 21% increase. Over the same period, Oregon is forecast to grow by more than 1.5 million people, or 41%.

**Table A-10. State population forecast,
Oregon and Tillamook County, 2000 to 2040**

Year	Oregon	Tillamook County
2000	3,436,750	24,300
2005	3,618,200	25,401
2010	3,843,900	26,589
2015	4,095,708	27,897
2020	4,359,258	29,097
2025	4,626,015	30,094
2030	4,891,225	30,887
2035	5,154,793	31,538
2040	5,425,408	32,146
Change 2010 to 2040		
Amount	1,581,508	5,557
% Change	41%	21%
AAGR	1.2%	0.6%

Source: OEA 2004 population forecast
<http://www.oregon.gov/DAS/OEA/demographic.shtml>

Table A-11 shows the Oregon Employment Department's forecast for employment growth by industry for Clatsop, Columbia, and Tillamook Counties over the 2010 to 2020 period. The sectors that will lead employment growth in the region for the ten-year period are Leisure & Hospitality (adding 1,150 jobs), Education & Health Services (adding 1,110 jobs), Trade, Transportation & Utilities (adding 750 jobs), and Professional & Business Services (adding 630 jobs). Together, these sectors are expected to add 3,640 new jobs or 70% of employment growth in the 3-county region.

Table A-11. Nonfarm employment forecast by industry in Tillamook, Clatsop, and Columbia Counties, 2010-2020

Sector / Industry	2010	2020	Change 2010-2020	
			Amount	% Change
Natural resources and mining	1,670	1,980	310	19%
Mining and logging	640	750	110	17%
Construction	1,460	1,840	380	26%
Manufacturing	4,460	4,840	380	9%
Durable goods	1,680	1,970	290	17%
Wood products manufacturing	770	850	80	10%
Nondurable goods	2,780	2,870	90	3%
Food manufacturing	1,420	1,580	160	11%
Paper manufacturing	1,080	930	-150	-14%
Trade, transportation, and utilities	6,070	6,820	750	12%
Wholesale trade	390	430	40	10%
Retail trade	4,710	5,250	540	11%
Transportation, warehousing, and utilities	970	1,140	170	18%
Information	310	300	-10	-3%
Financial activities	1,510	1,660	150	10%
Professional and business services	1,660	2,290	630	38%
Professional and technical services	660	940	280	42%
Educational and health services	4,040	5,150	1,110	27%
Hospitals	1,140	1,540	400	35%
Leisure and hospitality	6,030	7,180	1,150	19%
Accommodations and food services	5,620	6,700	1,080	19%
Accommodation	1,550	1,780	230	15%
Food services and drinking places	4,070	4,920	850	21%
Other services	1,400	1,610	210	15%
Government	6,980	7,130	150	2%
Federal government	470	430	-40	-9%
State government	1,110	1,180	70	6%
Local government	5,400	5,520	120	2%
Local education	2,960	2,980	20	1%
Total nonfarm employment	35,590	40,800	5,210	15%

*Note: Region 1 is Clatsop, Columbia, and Tillamook Counties

Source: OR Employment Department. Employment Projections by Industry 2010-2020

<http://www.qualityinfo.org/pubs/projections/r1.pdf>

Factors Affecting Future Economic Growth in Tillamook

Appendix B

This appendix presents a detailed analysis consistent with the requirements of OAR 660-009-0015(4) of Tillamook's competitive advantage relative to the County, the Oregon Coast, and Oregon. The information presented in this appendix is summarized in Chapter 3.

Each economic region has different combinations of productive factors: land (and natural resources), labor (including technological expertise), and capital (investments in infrastructure, technology, and public services). While all areas have these factors to some degree, the mix and condition of these factors vary. The mix and condition of productive factors may allow firms in a region to produce goods and services more cheaply, or to generate more revenue, than firms in other regions.

By affecting the cost of production and marketing, competitive advantages affect the pattern of economic development in a region relative to other regions. Goal 9 and OAR 660-009-0015(4) recognizes this by requiring plans to include an analysis of the relative supply and cost of factors of production.⁴⁰ An analysis of competitive advantage depends on the geographic areas being compared. In general, economic conditions in Tillamook will be largely shaped by national and regional economic conditions affecting Coastal communities. Chapter 3 and Appendix A present trends and forecasts of conditions in Oregon and Tillamook to help establish the context for economic development in Tillamook. Local economic factors will help determine the amount and type of development in Tillamook relative to other communities in Oregon.

This appendix focuses on the competitive advantages of Tillamook relative to the northern Oregon Coast and the rest of Oregon. The implications of the factors that contribute to Tillamook's competitive advantage are discussed at the end of this chapter.

⁴⁰ OAR 660-009-0015(4) requires assessment of the "community economic development potential." This assessment must consider economic advantages and disadvantages – or what Goal 9 broadly considers "competitive advantages."

LOCATION

Tillamook is a city with a population of approximately 4,905 people in 2011, located on the North Oregon Coast, adjacent to Tillamook Bay. The City is located along Highway 101, at the intersection of Highway 101 and Highway 6. Tillamook's location will continue to impact its future economic development.

- The North Coast is composed mostly of smaller cities with fewer than 10,000 people, of which Astoria (population 9,495 in 2011) is the largest. Seaside and Warrenton are the next largest nearby cities in the region, with populations of 6,490 and 5,050 respectively. Tillamook is the fourth largest city in the North Coast region and the largest city in Tillamook County.
- Tillamook is located approximately equidistant from the large population centers of Astoria, Lincoln City, and Hillsboro. These cities have substantial retail centers, including concentrations of big-box retail.
- Tillamook has direct access to the State's highway system, as well as other options for passenger transportation. Highway 101 is the main north-south route along the Oregon Coast and runs through Tillamook. Highway 6 links Tillamook to the Portland metropolitan area, about 70 miles or 1.5 hours away.
- The Pacific Ocean is a major tourism draw to Tillamook and the Northern Oregon Coast. Tourists from all over the world come to the Tillamook region to visit attractions such as the Cape Meares Lighthouse, the Tillamook Cheese Factory, or for recreational activities like fishing, kayaking, or whale watching. The region is home to the Three Capes Scenic Loop, a 40-mile drive with spectacular views of the ocean, forest lands, and other scenic areas. The City of Tillamook benefits from coastal tourism despite its lack of waterfront frontage. The City of Tillamook is located approximately 2 miles from Tillamook Bay and approximately 7 miles from the Pacific Ocean.
- Tillamook County provides excellent conditions for dairy farming. The Tillamook County Creamery Association, a dairy co-operative with over 100 farmers, manufactures cheese, ice cream, yogurt, and butter for national distribution. The Tillamook Cheese Factory, located on Highway 101 north of downtown Tillamook, attracts nearly one million visitors a year.
- The Tillamook State Forest is about 364,000 acres, in Tillamook, Clatsop, Yamhill, and Washington Counties. The State Forest

provides economic opportunities, from timber sales and forest product harvesting. In addition, it provides opportunities for recreation (e.g., camping, fishing, and backpacking).

- Residents of Tillamook have access to shopping, cultural activities, indoor and outdoor recreational activities, and other amenities in Lincoln City, Garibaldi, and in other communities along the North Coast. The City of Tillamook has a variety of cultural amenities, including the Latimer Quilt Center and the Tillamook County Pioneer Museum.
- Tillamook residents have opportunities for post-secondary education. The Tillamook Bay Community College is located in Tillamook and offers associate degrees, GEDs, non-credit classes and credits toward the first two years of a bachelor's degree.

Tillamook's distance from Portland and arterials and access to the Pacific Ocean and Highway 101 will affect the types of businesses that locate in Tillamook. Tillamook is likely to attract businesses that need to locate near the ocean, Highway 101, with relatively direct access to Portland, or other coastal communities.

AVAILABILITY OF TRANSPORTATION FACILITIES

Businesses and residents in Tillamook have access to a variety of modes of transportation: automotive (Highway 101, Highway 6, Highway 131, and local roads); rail (Amtrak in Portland or Portland & Western Railroad in Banks); transit (Tillamook County Transportation District); shipping (Port of Garibaldi); and air (Port of Tillamook Bay Airport and other regional airports).

Tillamook has automotive access for commuting and freight movement along Highway 101 and Highway 6. Tillamook is located about 70 miles from Portland and Interstate 5, the primary north-south transportation corridor on the West Coast, linking Tillamook to domestic markets in the United States and international markets via West Coast ports.

Highway 101 is the north-south highway running from the California border to Washington State border. Highway 101 runs through the middle of the Central Tillamook Region. The average daily number of cars on Highway 101 passing the Port of Tillamook Bay was about 7,000 vehicles in 2011. About 14,500 vehicles traveled on Highway 101 at the southern border of the City of Tillamook and around 17,000 traveled on Highway

101 at the northern edge of the City. There were between 5 and 6 million vehicle trips on Highway 101 through Tillamook in 2011.⁴¹

Highway 6 is a multi-lane state highway that connects Tillamook to the Portland metropolitan area. Highway 6 connects to Highways 26 and 8 on the east side of the Coastal Mountain range. The mountain passes on Highway 6 through the Coastal Mountains are comparatively low, at about 1,500 feet elevation. The proximity to Portland and relatively low mountain passes make Highway 6 a frequently used truck route, allowing businesses in Tillamook more direct access for moving freight than many other Coastal communities. In 2011, about 11,000 vehicles traveled on Highway 6 through Tillamook (at the junction with Highway 101) per day.⁴²

The City of Tillamook is working with the Oregon Department of Transportation (ODOT) on a realignment of the intersections of Highways 101 and 6. The purpose of the realignment is to accommodate expected growth in the volume of vehicles, widen streets to better accommodate truck and recreational vehicle traffic, and improve automotive and pedestrian use of the intersection. The \$27 million project is expected to begin in 2015.

Other transportation options in Tillamook are:

- **Transit.** The Tillamook County Transportation District provides limited transit service to and from Tillamook, Oceanside, Netarts, Manzanita, Cannon Beach, Neskowin, Lincoln City, and Portland. Most routes have 2 to 3 morning and afternoon/evening departure times. The route from Tillamook to Portland runs twice daily, in the morning and early afternoon. The Tillamook Town loop serves the Tillamook Cheese Factory, the hospital, the Department of Health and Human Services, and the high school, and makes approximately 12 trips a day.
- **Air.** The Port of Tillamook Bay Airport offers aviation service for small, privately owned planes. The Portland International Airport, Oregon's largest airport, is about 85 miles from Tillamook.

⁴¹ Oregon Department of Transportation Traffic Counting Program, "Traffic Volumes on State Highways," 2011.

⁴² Oregon Department of Transportation Traffic Counting Program, "Traffic Volumes on State Highways," 2011.

- **Water.** The Port of Garibaldi is the closest seaport to the City of Tillamook. The Port of Garibaldi is home to a number of commercial fishing and shellfish operations, charter fishing businesses, a lumber mill, and the Tillamook Bay Coast Guard Station.
- **Rail.** Until 2008, the Port of Tillamook Bay operated a 95-mile rail line connecting Tillamook to the Portland area. In December 2007, storms severely damaged the railroad, and the Port of Tillamook Bay elected not to rebuild.

The distance to major arteries and urban centers will affect the types of businesses that locate in Tillamook and overall employment growth for the Region. Tillamook's transportation access provides the City with competitive advantages for attracting some businesses, such as businesses that prefer to locate on Highway 101 and need to move freight to the Portland area. In addition, Tillamook's location along Highway 101 gives the City access to workers along the Coast and heavy seasonal tourist traffic.

Tillamook's distance from I-5 is a competitive disadvantage for businesses that depend on direct access to the Interstate, such as large-scale regional warehousing and distribution firms.

PUBLIC FACILITIES AND SERVICES

Provision of public facilities and services can impact a firm's decision on location within a region but ECONorthwest's past research has shown that businesses make locational decisions primarily based on factors that are similar with a region. These factors are: the availability and cost of labor, transportation, raw materials, and capital. The availability and cost of these production factors are usually similar within a region.

Once a business has chosen to locate within a region, they consider the factors that local governments can most directly affect: tax rates, the cost and quality of public services, and regulatory policies. Economists generally agree that these factors do affect economic development, but the effects on economic development are modest. Thus, most of the strategies available to local governments have only a modest affect on the level and type of economic development in the community.

TAX POLICY

The tax policy of a jurisdiction is a consideration in economic development policy. In Fiscal Year 2011 to 2012, property tax rates in

Tillamook for the City was \$1.80 per \$1,000 of assessed value. Tillamook's property tax rate was greater than Nehalem (\$1.46) and Cannon Beach (\$1.24) and lower than most other coast cities, including Bay City (\$2.51), Garibaldi (\$3.39), Lincoln City (\$5.25), Newport (\$7.13), and Astoria (\$8.66). The range of tax rates of cities at the Coast is comparable to tax rates of cities in the Willamette Valley, which generally range between \$5 and \$8 per \$1,000 of assessed value.

WATER

The City of Tillamook gets its drinking water from Killam Creek and Fawcett Creek. The City currently uses 1.5 million gallons of water per day. Their water treatment plant's capacity is for 2 million gallons of water per day. Upgrading the filters at the water treatment plant would give the City 3 million gallons of water per day.⁴³

The City has wells that can produce nearly 2 million gallons of water per day. The wells are designed to pump water to the City's reservoirs. The wells provide emergency backups to the water treatment plant, in case of an emergency such as forest fire.

The City is in the process of updating its Water System Master Plan, a process that should be completed at the end of 2012 or in early 2013. Once the Water System Master Plan is updated, the City will be in the position to plan for necessary upgrades to the water system, such as adding filters to the water treatment plant or adding reservoir capacity.

The City is in the process of negotiating an intergovernmental agreement (IGA) with the Port of Tillamook Bay to provide water to the Port. The Port currently has an eight inch water pipe that connects to the City's water system. The Port is allowed to "turn on" the pipe in the event of an emergency but does not use it as a source of potable water. The IGA may give the Port access to about 87,000 gallons of water per day.

The City has sufficient access to and capacity to treat water to accommodate expected growth.

WASTEWATER

The City of Tillamook currently has about 0.5 million gallons of wastewater per day in the summer. During the rainy winter months, the

⁴³ Information in this section is based on a conversation with Tim Lyda, Assistant City Public Works Director and Arley Sullivan City Public Works Director.

City's wastewater increases to 3 million gallons per day, mostly as result of infiltration. Their wastewater treatment plant's capacity is for 5.5 million gallons of wastewater per day.⁴⁴

The City's wastewater plant was completed in 2009. While the City does not anticipate upgrades to the treatment plant in the foreseeable future, the City is upgrading the sewer line collection system. The City has a \$2 million grant for sewer line repairs on the east side of Tillamook. The City anticipates receiving an additional \$2 million grant for sewer line repairs on the west side of the City. Once these repairs are completed, the City expects wastewater flows to average about 0.5 million gallons per day all year.

The City has sufficient access to and capacity to treat wastewater to accommodate expected growth.

LABOR MARKET FACTORS

The availability of labor is critical for economic development. Availability of labor depends not only on the number of workers available, but the quality, skills, and experience of available workers as well. This section examines the availability of workers for Tillamook.

The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both the employed and unemployed. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force.

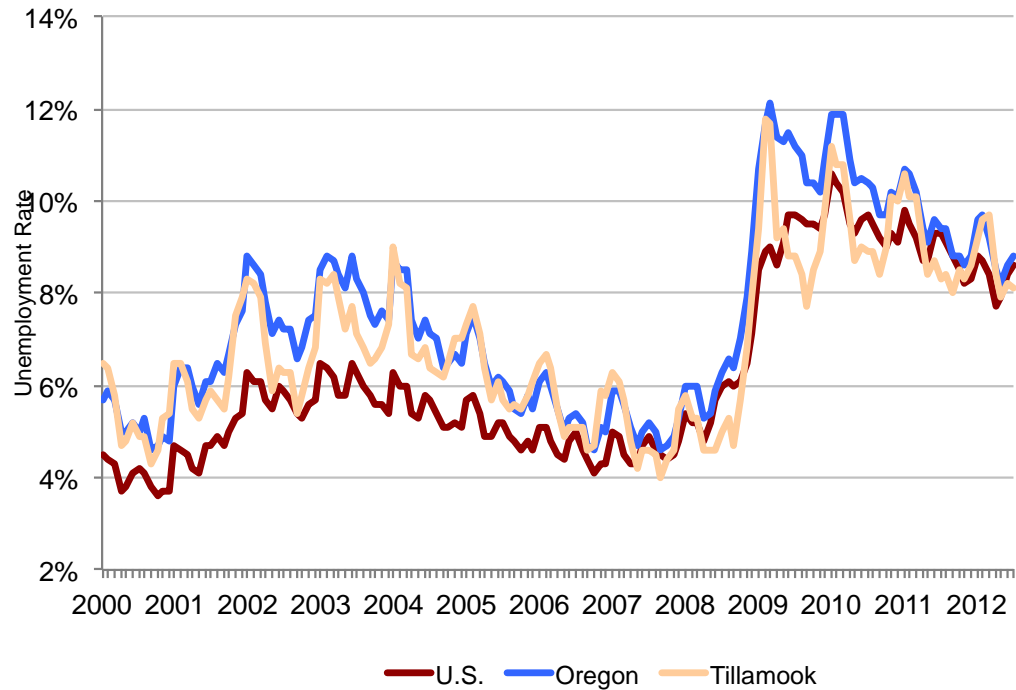
Tillamook's labor force participation rate (percent of adult population who are employed or actively seeking work) was about 64% in 2010. In comparison, Tillamook County's labor force participation rate was 58%, compared with the State average of 64%. The lower labor force participation rate in Tillamook County is a result, in part, of the older population in the county, many of whom are retired.

The unemployment rate is one indicator of the relative number of workers who are actively seeking employment. Labor force data from the Oregon Employment Department shows that unemployment in Tillamook County 8.1% in July 2012 was lower than the State average of 8.8%. Figure B-1 shows the unemployment rate for Tillamook County, Oregon, and the

⁴⁴ Information in this section is based on a conversation with Tim Lyda, Assistant City Public Works Director and Arley Sullivan City Public Works Director.

United States for 2000-2012. During this period, Tillamook County's unemployment has been similar or below the statewide unemployment rate. The State unemployment rate has been consistently higher than the national average, but the difference has decreased in recent years. Tillamook County has larger seasonal swings in unemployment than the State or the County.

Figure B-1. Unemployment rates for Tillamook County, Oregon, and the U.S., January 2000 through July 2012

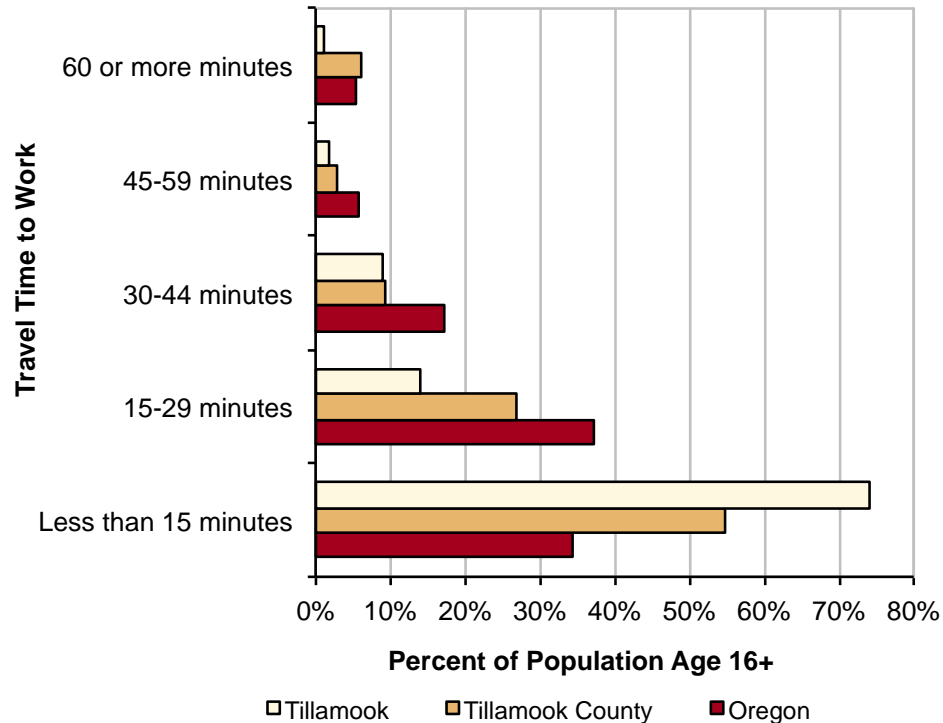


Source: Bureau of Labor Statistics

Note: unemployment data is not seasonally adjusted

Another important factor in the labor force is the distance that workers are willing to commute. Figure B-2 shows a comparison of the commute time to work for residents 16 years and older for Oregon, Tillamook County, and the City of Tillamook for 2006-2010. Commute times for Tillamook residents are below County and State averages. The majority of Tillamook residents (74%) have a commute time of fewer than 15 minutes; eighty-eight percent have a commute time of 29 minutes or less.

Figure B-2. Commuting time to work in minutes for residents 16 years and older, Oregon, Tillamook County, and Tillamook, 2006-2010



Source: American Community Survey 5-Year Estimates 2006-2010. B08303.

Table B-3 show where residents of Tillamook worked in 2010. In 2010, 61% of residents of the City of Tillamook were employed in Tillamook County, with 30% working in the City of Tillamook. Multnomah County had the next highest percentage of workers living in Tillamook at just over 7%; Washington County also had about 7%.

Table B-3. Places that residents of City of Tillamook were employed, 2010

Location	Number	Percent
Tillamook County	1,309	61%
Tillamook	645	30%
Bay City	105	5%
Rockaway Beach	28	1%
Multnomah County	157	7%
Portland	137	6%
Washington County	148	7%
Hillsboro	28	1%
Marion County	109	5%
Clackamas County	82	4%
Clatsop County	50	2%
Lincoln County	40	2%
Yamhill County	39	2%
Linn County	29	1%
Lane County	27	1%
All Other Locations	157	7%
Total	2,147	100%

Source: U.S. Census Bureau: LED on the Map Work Destination Report - Where Workers are Employed Who Live in the Selection Area - by Places (Cities, CDPs, etc.), 2010

Table B-4 shows where employees of firms located in Tillamook lived in 2010. In 2010, 70% of Tillamook's workers lived in Tillamook County with 21% living in Tillamook. The 30% of workers commuting from other counties are mostly divided between Washington, Clatsop, Multnomah, Lincoln, Marion, Yamhill, and Lane Counties.

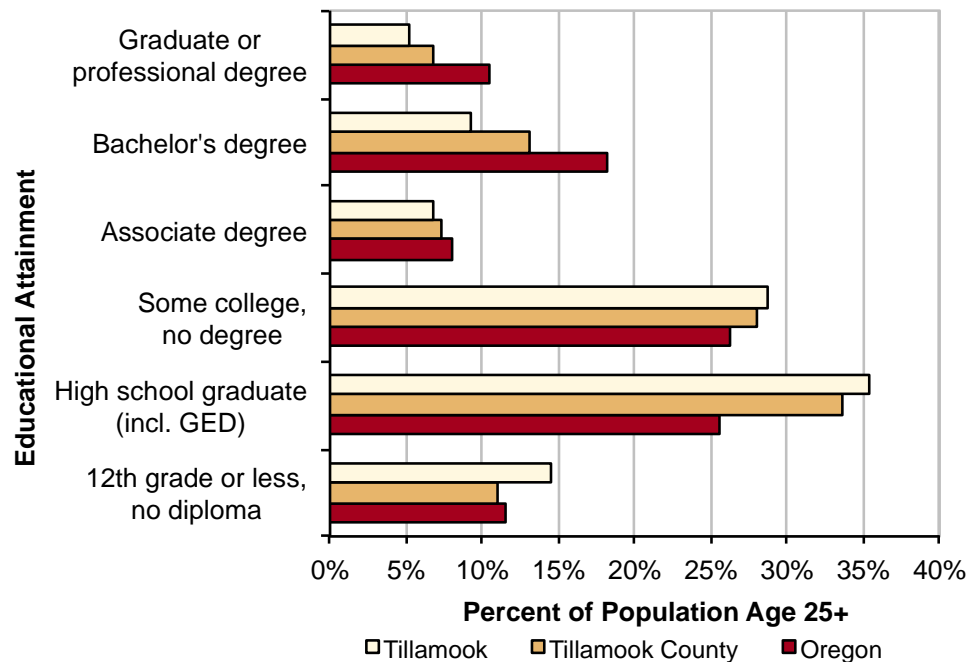
Table B-4. Places where workers in Tillamook lived, 2010

Location	Number	Percent
Tillamook County	2,211	70%
Tillamook	645	21%
Bay City	108	3%
Netarts	62	2%
Oceanside	40	1%
Pacific City	38	1%
Washington County	134	4%
Clatsop County	99	3%
Multnomah County	84	3%
Portland	66	2%
Lincoln County	75	2%
Marion County	73	2%
Yamhill County	64	2%
Lane County	55	2%
Clackamas County	47	1%
Linn County	47	1%
All Other Locations	249	8%
Total	3,138	100%

Source: U.S. Census Bureau: LED on the Map Home Destination Report - Where Workers Live Who are Employed in the Selection Area - by Places (Cities, CDPs, etc.)

Educational attainment is an important labor force factor because firms need to be able to find educated workers. Figure B-5 shows the share of population by education level completed in Oregon, Tillamook County, and the City of Tillamook in 2010. About 21% of Tillamook's residents had an associate's degree or higher, compared with 27% of Tillamook County residents and 37% of Oregonians.

Figure B-5. Educational attainment for the population 25 years and over, Oregon, Tillamook County, and Tillamook, 2010



Source: U.S. Census Bureau B15002 Sex By Educational Attainment for Population 25 Years and Over

Opportunities for workforce training and post-secondary education for residents of Tillamook is primarily through the Tillamook Bay Community College. Tillamook residents also have access to post-secondary institutions elsewhere on the Oregon Coast (Oregon Coast Community College in Newport; Clatsop Community College in Astoria) or in the Portland area.

Interviews with stakeholders suggest that availability of dependable workers is a problem in the Region. Some employers have a difficult time finding enough dependable workers with appropriate qualifications (e.g., workers without a criminal background, able to pass a drug test, and with a good work ethic). The relatively small pool of workers in the Region and difficulty finding dependable workers may limit economic growth, through limiting growth of existing companies or discouraging new companies from moving to the Region.

COMPETITIVE AND COMPARATIVE ADVANTAGES OF THE CENTRAL TILLAMOOK REGION

Economic development opportunities in Tillamook will be affected by local conditions as well as the national and state economic conditions described in Appendix A. Economic conditions in Tillamook relative to these conditions in other coastal communities form Tillamook's competitive and comparative advantages for economic development. These advantages have implications for the types of firms most likely to locate or expand in Tillamook.

There is little that Tillamook can do to influence national and state conditions that affect economic development. Tillamook can, however, influence local factors that affect economic development. Tillamook's primary advantages are: location in the North Oregon Coast, access to Highways 101 and 6, comparative ease of moving freight from Tillamook to Portland, range of businesses in the Region, access to natural resources for manufacturing, and high quality of life. The Region is likely to attract businesses that prefer to locate near to the ocean or businesses that have a choice of where to locate and prefer the quality of life factors in the Central Tillamook Region.

The local factors that form Tillamook's competitive and comparative advantages are summarized below.

- **Location.** Tillamook is located in Tillamook County, along Highway 101, in the northern section of Oregon's Coast. Tillamook is the largest coastal community between Seaside and Lincoln City. Parts of the Region have direct access to the Pacific Ocean. The Region has two bays and five rivers, providing economic and recreational opportunities and connection with the Ocean.

Tillamook's relative proximity to the Portland area (about 1.5 hours from Hillsboro) and to the Ocean are advantages.

Tillamook is located in a relatively remote area, relative to cities located along the I-5 corridor. In addition, the City of Tillamook is located several miles from the Ocean. The lack of ocean views and access is a disadvantage for Tillamook, compared to some of Oregon's Coastal cities.

- **Transportation.** Businesses and residents in Tillamook have access to a variety of modes of transportation: automotive (Highways 101 and 6), air (Tillamook Airport), and transit (Tillamook County Transportation District). The lack of a rail

line to Portland is a disadvantage for businesses that need to move bulky freight via rail. The City is working with the State on improvements to the intersection of Highways 101 and 6, which will allow for more and better automotive, truck, and recreational vehicle use of the Highways through Tillamook. More than 5 million vehicles pass through Tillamook on Highway 101 per year.

- **Freight access to Portland.** Highway 6 connects Tillamook to Portland, about a 90-minute drive away, making Tillamook a common 'gateway' to the Oregon Coast. Tillamook's distance from Interstate 5 is a barrier to attracting businesses that need direct access to I-5 or Portland.
- **Infrastructure.** Businesses and residents have access to water and wastewater services (within the City of Tillamook) and access to other utilities (e.g., electricity or high speed Internet) within the Region.

While the Industrial Park at the Port of Tillamook Bay has basic urban services, some services are insufficient for some industrial businesses. For example, some businesses have chosen not to locate at the Port because of insufficient wastewater and electrical services or the lack of natural gas.

- **Natural resources.** Businesses in Tillamook have access to natural resources from the Tillamook State Forest and surrounding rural areas, such as ocean products, wood products, agricultural products, and other resources. The Region's existing key natural resources are dairy production and wood products. Businesses that need access to these resources may locate or grow their existing business in the Region.
- **Specialty agriculture.** A substantial amount of the resource land in the Region is in agricultural production. Tillamook's primary agricultural products are dairy products.

The existing agricultural infrastructure and temperate, damp climate provide opportunities for expansion of agricultural activity, through growth of specialty agricultural products (e.g., wasabi or truffles). These niche products may be grown added to existing agricultural production and may have substantial export value. Business that process these products may locate or grow in the Region.

- **Ocean access.** One of Tillamook’s primary advantages is being on the Oregon Coast, with easy access to the Pacific Ocean. The Region has two bays, providing multiple opportunities for sheltered access to the Ocean. The Region may attract businesses that need ocean resources, such manufacturers who use marine resources (e.g., shells or sea salt).
- **Land at the Port of Tillamook Bay.** The Region has a substantial amount of land available for development at the Port of Tillamook Bay. The Port has about 500 acres of developable land, much of it accessible via Highway 101. The Port is planning to grow three types of employment uses on its property:
 - A mixture of retail and commercial uses on land within the Port along Highway 101, for uses such as retail (potentially both small-scale retail and large-format retail), facilities for visitors (e.g., a new museum), and commercial businesses.
 - Manufacturing in the Port’s industrial park. The Port has three 18,000 square foot warehouses that the Port completed in 2012, which can support small- to mid-scale manufacturing. The Port also has vacant land, which could accommodate larger-scale manufactures.
 - The Port’s Airport Business Park provides opportunities for aviation and aero-space related firms.
- **Facility upgrades at the Port of Tillamook Bay.** The Port was awarded \$45 million from FEMA as a result of storm damage to the railroad line in 2007, as a result of severe storms, flooding, and landslides. The Port is using funds to upgrade infrastructure and develop new facilities. The Port’s projects include: building three warehouses in the industrial park (with 18,000 square feet each), building a new airport business park (with 36,000 square feet of space leased to a private aerospace firm), upgrading the manure digester, expanding and upgrading the water distribution system, fencing and drainage projects, repaving County roads, and other maintenance and other projects.
- **Existing draws for visitors.** The existing tourism industry in the Region is an advantage for economic development. Tourism in Tillamook County results in \$185.4 million in direct spending annually, supporting about 2,100 jobs, and resulting in lodging tax revenues of approximately \$1.05 million annually. While

direct spending and lodging tax revenues have grown since 2000, employment in tourism industries has remained relatively flat over the 10-year period.

The Region's tourism infrastructure includes destinations such as the Tillamook Cheese Factory and the Forestry Center, recreational amenities, overnight accommodations, restaurants, retail, and cultural amenities. The existing tourism industry in the Region offers opportunities to increase tourism and grow employment directly and indirectly related to tourism. The key tourism-related economic opportunity for the Region is building off the existing tourism infrastructure to encourage visitors to stay overnight.

The Region has opportunities to build on the existing tourism trade, such as through expansion of existing facilities, development of new facilities (e.g., extension of the Rails and Trails bicycle route into the Region), and creating a tighter connection between visitors and local products (e.g., a "Made in Tillamook" store or brand).

- **Labor market.** The availability of labor is critical for economic development. Availability of labor depends not only on the number of workers available but the quality, skills, and experience of available workers. Businesses in the Region have access to workers in the Region and from neighboring communities. Businesses need access to reliable skilled workers, both with and without higher education.

Businesses that need skilled workers but that do not require a specialized college degree may find workers within the greater Tillamook area. However, stakeholder interviews suggest that businesses may have difficulty finding dependable workers (e.g., workers without a criminal background, able to pass a drug test, and with a good work ethic). Some businesses may need to attract workers from outside the area, especially if they need workers with specialized skills.

- **Existing businesses.** The existing businesses in the Region provide opportunities for growth, either of the existing business or of related businesses. This is especially true for manufacturing businesses or businesses that provide services to visitors.

The Region's existing economy is largely dependent on the

Tillamook Creamery, which accounts for a substantial amount of manufacturing employment in the Region and attracts nearly one million visitors to the Region annually. Employment in Food Products Manufacturing and Animal Production account for about one-fifth of employment in the region, much of which is directly or indirectly involved with production at the Tillamook Creamery. The high degree of dependence on one company is an economic weakness for the Region.

- **High quality of life.** The factors that make living in the Region attractive are: rural and small town atmosphere, pastoral nature of farmland in the Region, natural beauty, variety of outdoor recreational opportunities (e.g., hiking, fishing, ocean sports, etc.), good schools, Tillamook Bay Community College, the new central public library, and relatively low cost of living.
- **Public policy.** Public policy can impact the amount and type of economic growth in a community. The City and County can impact economic growth through its policies about the provision of land and redevelopment. Success at attracting or retaining firms may depend on the availability of attractive sites for development and public support for redevelopment. In addition, businesses may choose to locate in the Central Tillamook Region (rather than another coastal community) based on: the City's and County's tax policies, development charges (i.e., systems development charges), the availability and cost of public infrastructure (i.e., transportation or sanitary sewer), opportunities for urban renewal in the City's core, and attitudes towards businesses.

Stakeholder interviews indicate that local attitudes about growth may inhibit growth. Some businesses and residents are resistant to change and want the Region to remain as it is or to grow very slowly.

Employment Forecast and Site Needs for Industrial and other Employment Uses

Appendix C

This appendix presents a detailed analysis of the Central Tillamook Region's site needs consistent with the requirements of OAR 660-009-0015(2) and of OAR 660-009-0025(1). This appendix includes an employment forecast and an analysis of site needs to accommodate industrial and other employment uses in the Region for the 2013 to 2033 period. The information presented in this appendix is summarized in Chapter 3.

EMPLOYMENT FORECAST

To provide for an adequate supply of commercial and industrial sites consistent with plan policies, the City of Tillamook and Tillamook County need an estimate of the amount of commercial and industrial land that will be needed over the planning period. Goal 9 requires cities identify "the number of sites by type reasonably expected to be needed to accommodate the expected employment growth based on the site characteristics typical of expected uses." The number of needed sites is dependent on the site requirements of employers. The estimate of land need is presented in the site needs analysis in the next section.

Demand for commercial and industrial land will be driven by the expansion and relocation of existing businesses and new businesses locating in the Region. The level of this business expansion activity can be measured by employment growth in the Region. This section presents a projection of future employment levels in the Region for the purpose of estimating demand for commercial and industrial land.

The projection of employment has three major steps:

1. **Establish base employment for the projection.** We start with the estimate of covered employment in the Region presented in Appendix A. Covered employment does not include all workers, so we adjust covered employment to reflect total employment in the Region.
2. **Project total employment.** The projection of total employment is presented in a range of employment, from a low growth rate to a high growth rate.

3. **Allocate employment.** This step involves allocating employment to different land use types.

EMPLOYMENT BASE FOR PROJECTION

To forecast employment growth in the Region, we must start with a base of employment growth on which to forecast. Table A-6 presents an estimate of covered employment in the Region in 2011. Covered employment, however, does not include all workers in an economy. Most notably, covered employment does not include sole proprietors. Table C-1 shows a comparison of **covered** employment (from the Oregon Employment Department) with **total** employment (from the U.S. Department of Commerce Bureau of Economic Analysis) for Tillamook County.

Analysis of data shows that covered employment Tillamook County is only about 68% of total employment. We made this comparison by sector for Tillamook County and used the resulting ratios to convert covered employment to total employment in the Region.

Table C-1. Estimated total employment in Tillamook County by sector, 2011

Sector	Covered	Total	Covered % of Total
Natural Resources and Mining	643	652	99%
Construction	261	707	37%
Manufacturing	1,226	1,400	88%
Wholesale	113	(D)	68%
Retail	900	1,286	70%
Transportation & Warehousing & Utilities	183	380	48%
Information	59	81	73%
Finance & Insurance	150	310	48%
Real Estate Rental & Leasing	108	824	13%
Prof., Scientific & Tech. Svcs	113	435	26%
Mgmt of Companies	50	52	96%
Admin. Support & Cleaning Srv.	236	579	41%
Education	43	108	40%
Health & Social Assistance	822	1,130	73%
Arts, Entertainment & Recreation	81	279	29%
Accommodations & Food Services	1,178	1,369	86%
Other Services (except Public Admin.)	384	770	50%
Government	1,786	1,850	97%
Total	8,336	12,212	68%

Source: 2011 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department. Covered employment as a percent of total employment calculated by ECONorthwest using data for Tillamook County employment from the U.S. Department of Commerce, Bureau of Economic Analysis (total) and the Oregon Employment Department (covered).

Note: The estimate of the percent of covered to total employment was not available for the Wholesale sector because confidential employment data could not be disclosed for these sectors by either the Oregon

Employment Department or the Bureau of Economic Analysis. The green shading indicates that ECO assumed a covered to total employment ratio of 68%, the County average, for Wholesale.

Table C-2 shows ECO's estimate of total employment in the Region in 2011. To develop the figures, ECO started with estimated covered employment in the Region from confidential QCEW (Quarterly Census of Employment and Wages) data provided by the Oregon Employment Department (presented in Table A-6). ECO applied the ratios of covered-to-total employment (Table C-1) to each sector in the Region. The results show that the Region has 7,822 total employees.

Table C-2. Estimated total employment in the Central Tillamook Region by category of sectors, 2011

	Covered Employment		Total Employment	
	Amount	Percent	Amount	Percent
Industrial	1,736	32%	2,258	29%
Retail and Services	2,542	47%	4,506	57%
Government	1,079	20%	1,118	14%
All Employment	5,357	100%	7,882	100%

Source: Analysis by ECONorthwest based on Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department and total employment data. Covered employment as a percent of total employment calculated by ECONorthwest using data for Tillamook County employment from the U.S. Department of Commerce, Bureau of Economic Analysis (total) and the Oregon Employment Department (covered).

EMPLOYMENT PROJECTION

Table C-2 presents an estimate of total employment in the Region in 2011, 7,882 employees. Forecasting employment growth in the Region requires making assumptions about future economic conditions in the Region and Tillamook County over the next 20-years. Some factors that we considered in forecasting employment growth in the Region are: historical growth trends in the County, the State's forecast for employment growth in the region, and the County's expectations for population growth:

- **Long-term growth trends in Tillamook County.** Covered employment in Tillamook County grew from about 6,148 jobs in 1990 to 8,336 jobs in 2011, adding about 2,188 jobs at an average annual growth rate of 1.5%. Non-retail commercial employment more than doubled, government employment increased by about 25%, and industrial employment increased by 10% over the 20-year period. Employment in retail decreased by about 17% over the 20-year period. Over the 2000 to 2011 period, Tillamook County grew at a slower rate, with 0.3% average annual growth (adding 256 jobs).
- **Forecast of employment growth in Region 1.** The Oregon Employment Department's projection of employment growth over the 2010 to 2020 period shows Region 1 (which includes

Clatsop, Columbia, and Tillamook Counties) growing at an average annual growth rate of 1.38%, adding more than 5,200 new employees. Tillamook County accounts for 23% of the employment in Region 1. The forecast shows the majority growth in Accommodations and Food Services, Health Care, Professional and Business Services, and Retail Trade. While employment in these sectors are likely to grow in the Region, growth of these sectors is likely to be faster in larger cities like Astoria, Warrenton, or Cannon Beach.

- **Tillamook County's population is forecast to grow at about 0.6% annually.** The Oregon Office of Economic Analysis's (OEA) most recent population forecast for Tillamook County shows the County growing at 0.64% annually between 2010 and 2040. Over the 2000 to 2011 period, Tillamook County's population grew by 0.4% annually.

Table C-3 presents a range of employment growth in the Region for the 2013 to 2033 period based on these considerations.

- The **low** growth scenario shows the Region growing by 969 jobs at an average annual growth rate of 0.64% over the 20-year period. This scenario assumes that the Region's employment grows at the same rate as the OEA forecast for population in Tillamook County (0.64%).
- The **medium** growth scenario shows the Region growing by 1,710 jobs at an average annual growth rate of 1.00%. This growth scenario assumes that employment in the Region will grow faster than the County forecast of residential growth but slower than the forecast of employment grown in Region 1. This scenario assumes that employment in the Region grows at a rate similar to but lower than historical employment growth in the County between 1990 and 2011.
- The **high** growth scenario shows the Region growing by 2,545 jobs at an average annual growth rate of 1.38%. This scenario assumes that the Region's employment grows at the same rate as the Oregon Employment Department's forecast for employment growth in Region 1 (1.38%).

Table C-3. Range of employment growth, the Central Tillamook Region, 2013-2033

Year	Low	Medium	High
2011	7,882	7,882	7,882
2013	7,983	8,040	8,100
2033	9,069	9,810	10,645
Change 2013 to 2033			
Employees	1,086	1,770	2,545
Percent Change	14%	22%	31%
AAGR	0.64%	1.00%	1.38%

Source: ECONorthwest

ALLOCATE EMPLOYMENT TO DIFFERENT LAND USE TYPES

The next step in the employment forecast is to allocate future employment to land use types by grouping employment into land use types with similar building and site requirements, based on the North American Industry Classification System (NAICS), which assigns a classification code to every business with employment. The land use types are:

- **Industrial** businesses in the following sectors: Natural Resources and Mining, Construction, Manufacturing, Wholesale Trade, and Transportation, Warehousing, and Utilities. Industrial employment accounted for 29% of the Region's employment in 2011.
- **Commercial** businesses in the following sectors: Retail trade, Information, Finance and Insurance, Real Estate, Professional and Scientific Services, Management of Companies, Administrative and Support Services, Private Educational Services, Health Care and Social Assistance, Accommodations and Food Services, and Other Services. Commercial employment accounted for 57% of the Region's employment in 2011.
- **Government** includes employment local, state, and federal agencies, including public educational services. Government employment accounted for 14% of the Region's employment in 2011.

Table C-4 shows the forecast of employment growth by land use type in the Region from 2013 to 2033. Table C-4 forecasts growth in all land-use types and it forecasts shifts in the composition of the Region's employment:

- The **low** growth scenario shows the about same distribution of employment in 2033 as in 2013. This scenario assumes little

change in the amount and structure of employment in the Region.

- The **medium** growth scenario shows modest change in the distribution of employment in 2033 as in 2013. This scenario assumes that industrial employment growth will lead growth, followed by growth in retail and services, with government growing at a similar rate the OEA's forecast for population growth.
- The **high** growth scenario shows a greater change in the distribution of employment in 2033 as in 2013. Achieving the growth in the high growth scenario will require growth driven by increases in industrial employment, especially in manufacturing, and increases in retail and services driven by an increase in overnight tourism.

Table C-4. Forecast of employment growth, the Central Tillamook Region, 2013-2033

Land Use Type	2013 Total	% of Total	2033 Total	% of Total	2013-2033 Growth
Low Forecast					
Industrial	2,320	29%	2,630	29%	310
Retail and Services	4,631	57%	5,206	57%	575
Government	1,149	14%	1,233	14%	84
Low Emp Total	8,100	100%	9,069	100%	969
Medium Forecast					
Industrial	2,320	29%	3,041	31%	721
Retail and Services	4,631	57%	5,494	56%	863
Government	1,149	14%	1,275	13%	126
Med. Emp Total	8,100	100%	9,810	100%	1,710
High Forecast					
Industrial	2,320	29%	3,513	33%	1,193
Retail and Services	4,631	57%	5,802	55%	1,171
Government	1,149	14%	1,331	13%	182
High Emp Total	8,100	100%	10,645	100%	2,545

Source: ECONorthwest

Note: Green shading denotes an assumption by ECONorthwest

LAND AND SITE NEEDS

OAR 660-009-0015(2) requires the EOA identify the number of sites, by type, reasonably expected to be needed for the 20-year planning period. Types of needed sites are based on the site characteristics typical of expected uses. The Goal 9 rule provides flexibility in how jurisdictions conduct and organize this analysis. For example, site types can be described by plan designation (i.e., heavy or light industrial), they can be by general size categories that are defined locally (i.e., small, medium, or large sites), or it can be industry or use-based (i.e., manufacturing sites or distribution sites).

Firms wanting to expand or locate in the Region will be looking for a variety of site and building characteristics, depending on the industry and specific circumstances. Previous research conducted by ECO has found that while there are always specific criteria that are industry-dependent and firm-specific, many firms share at least a few common site criteria. In general, all firms need sites that are relatively flat, free of natural or regulatory constraints on development, with good transportation access and adequate public services. The exact amount, quality, and relative importance of these factors vary among different types of firms. This section discusses the site requirements for firms in industries with growth potential in the Region, as identified in the analysis of target industries.

LAND NEEDED ACCOMMODATE EMPLOYMENT GROWTH

Table C-4, presented earlier in this appendix, discusses a range of growth forecasts for the Region. The analysis of long-term land and sites needs in the Region builds off of the employment forecast for the Region.

Table C-5 shows demand for vacant (including partially vacant) land in the Region over the 20-year period for the low, medium, and high employment forecasts. The assumptions used in Table C-5 are:

- **Some employment growth will occur on with existing built space.** Some employment will locate in existing buildings, such as buildings with vacant spaces that can accommodate business tenants. In addition, existing businesses may be able to accommodate new employment by making more efficient use of existing office space (e.g., adding a new cubicle) or vacant buildings. ECO assumes that 10% of industrial employment can be accommodated this way and that 15% of retail and services and government employment can be accommodated in existing built space.

- **Employment density.** Table C-5 assumes the following number of employees per acre (EPA): Industrial will have an average of 10 employees per acre and Commercial and government will have an average of 20 EPA.

These employment densities are consistent with employment densities in Oregon cities of similar size as Tillamook. Some types of employment will have higher employment densities (e.g., a multistory office building) and some will have lower employment densities (e.g., a convenience store with a large parking lot).

- **Conversion from net-to-gross acres.** The data about employment density is in *net* acres, which does not include land for public right-of-way. Future land need for employment should include land in tax lots needed for employment plus land needed for public right-of-way. One way to estimate the amount of land needed for employment including public right-of-way is to convert from *net* to *gross* acres based on assumptions about the amount of land needed for right-of-way.⁴⁵ A net to gross conversion is expressed as a percentage of gross acres that are in public right-of-way.

Net-to-gross factors generally range from 15% to 20% for cities like Tillamook. Given that Tillamook has an existing well developed street system, ECO uses a net-to-gross conversion factor of 15% for industrial and 20% for commercial and government.

⁴⁵ OAR 660-024-0010(6) uses the following definition of net buildable acre. “Net Buildable Acre” consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads. While the administrative rule does not include a definition of a gross buildable acre, using the definition above, a gross buildable acre will include areas used for rights-of-way for streets and roads. Areas used for rights-of-way are considered unbuildable.

Table C-5. Demand for vacant land to accommodate employment growth, Central Tillamook Region, 2013 to 2033

Land Use Type	Total New Emp.	Emp. On Refill Land	Emp. on New Land	Emp. Per Net Acre	Land Need (Net Acres)	Land Need (Gross Acres)
Low Forecast						
Industrial	310	31	279	15	19	23
Retail and Services	575	86	489	20	24	31
Government	84	13	71	20	4	4
Low Forecast	969	130	839		47	58
Medium Forecast						
Industrial	721	72	649	15	43	54
Retail and Services	863	129	734	20	37	46
Government	126	19	107	20	5	7
Medium Forecast	1,710	220	1,490		85	107
High Forecast						
Industrial	1,193	119	1,074	15	72	89
Retail and Services	1,171	176	995	20	50	62
Government	182	27	155	20	8	10
High Forecast	2,546	322	2,224		129	161

Source: ECONorthwest

Note: Vacant land includes land identified in the buildable lands inventory as vacant or partially vacant.

FACTORS THAT AFFECT LOCATIONAL DECISIONS

Why do firms locate where they do? There is no single answer – different firms choose their locations for different reasons. Key determinates of a location decision are a firm's *factors of production*. For example, a firm that spends a large portion of total costs on unskilled labor will be drawn to locations where labor is relatively inexpensive. A firm with large energy demands will give more weight to locations where energy is relatively inexpensive. In general, firms choose locations they believe will allow them to maximize net revenues: if demand for goods and services is held roughly constant, then revenue maximization is approximated by cost minimization.

The typical categories that economists use to describe a firm's production function are:

- **Labor.** Labor is often and increasingly the most important factor of production. Other things equal, firms look at productivity – labor output per dollar. Productivity can decrease if certain types of labor are in short supply, which increases the costs by requiring either more pay to acquire the labor that is available, the recruiting of labor from other areas, or the use of the less productive labor that is available locally. Based on existing commuting patterns, the Region has access to labor from Tillamook County and the Northern Coast.

- **Land.** Demand for land depends on the type of firm. Manufacturing firms need more space and tend to prefer suburban locations where land is relatively less expensive and less difficult to develop. Warehousing and distribution firms need to locate close to interstate highways. Some marine and ocean observing industries need land with direct access to the Bayfront and others can locate in areas away from the waterfront with other office buildings. Services for visitors need to be located in areas that attract visitors, such as along Highway 101 or near the waterfront.
- **Local infrastructure.** An important role of government is to increase economic capacity by improving quality and efficiency of infrastructure and facilities, such as roads, bridges, water and sewer systems, airport and cargo facilities, energy systems, and telecommunications.
- **Access to markets.** Though part of infrastructure, transportation merits special attention. Firms need to move their product, either goods or services, to the market, and they rely on access to different modes of transportation to do this. The City's access to Highway 101 and Highway 6 provide access to markets, from local to international markets (via Portland). In addition, the municipal airport transportation provides opportunities for air travel for passengers and freight. These modes of transportation provide advantages that may appeal to firms that use these methods of transportation.
- **Materials.** Firms producing goods, and even firms producing services, need various materials to develop products that they can sell. Some firms need natural resources: lumber manufacturing requires trees. Or, farther down the line, firms may need intermediate materials: for example, dimensioned lumber to build manufactured housing.
- **Entrepreneurship.** This input to production may be thought of as good management, or even more broadly as a spirit of innovation, optimism, and ambition that distinguishes one firm from another even though most of their other factor inputs may be quite similar.

The supply, cost, and quality of any of these factors obviously depend on market factors: on conditions of supply and demand locally, nationally, and even globally. But they also depend on public policy. In general, public policy can affect these factors of production through:

- **Regulation.** Regulations protect the health and safety of a community and help maintain the quality of life. Overly burdensome regulations, however, can be a disincentive for businesses to locate in a community. Simplified bureaucracies and straightforward regulations can reduce the burden on businesses and help them react quickly in a competitive marketplace.
- **Taxes.** Firms tend to seek locations where they can optimize their after-tax profits. Studies show that tax rates are not a primary location factor within a region—they matter only after businesses have made decisions based on labor, transportation, raw materials, and capital costs. The cost of these production factors is usually similar within a region. Therefore, differences in tax levels across communities within a region are more important in the location decision than are differences in tax levels between regions.
- **Financial incentives.** Governments can offer firms incentives to encourage growth. Studies have shown that most types of financial incentives have had little significant effect on firm location between regions. For manufacturing industries with significant equipment costs, however, property or investment tax credit or abatement incentives can play a significant role in location decisions. Incentives are more effective at redirecting growth within a region than they are at providing a competitive advantage between regions.

This discussion may suggest that a location decision is based entirely on a straight-forward accounting of costs, with the best location being the one with the lowest level of overall costs. Studies of economic development, however, have shown that location decisions depend on a variety of other factors that indirectly affect costs of production. These indirect factors include agglomerative economies (also known as industry clusters), quality of life, and innovative capacity.

- **Industry clusters.** Firms with similar business activities can realize operational savings when they congregate in a single location or region. Clustering can reduce costs by creating economies of scale for suppliers. For this reason, firms tend to locate in areas where there is already a presence of other firms engaged in similar or related activities.
- **Quality of life.** A community that features many quality amenities, such as access to recreational opportunities, culture, low crime, good schools, affordable housing, and a clean

environment can attract people simply because it is a nice place to be. A region's quality of life can attract skilled workers, and if the amenities lure enough potential workers to the region, the excess labor supply pushes their wages down so that firms in the region can find skilled labor for a relatively low cost. The characteristics of local communities can affect the distribution of economic development within a region, with different communities appealing to different types of workers and business owners. Sometimes location decisions by business owners are based on an emotional or historical attachment to a place or set of amenities, without much regard for the cost of other factors of production.

- **Innovative capacity.** Increasing evidence suggests that a culture promoting innovation, creativity, flexibility, and adaptability is essential to keeping U.S. cities economically vital and internationally competitive. Innovation is particularly important in industries that require an educated workforce. High-tech companies need to have access to new ideas typically associated with a university or research institute. Innovation affects both the overall level and type of economic development in a region. Government can be a key part of a community's innovative culture, through the provision of services and regulation of development and business activities that are responsive to the changing needs of business.

CHARACTERISTICS OF SITES NEEDED TO ACCOMMODATE GROWTH IN THE CENTRAL TILLAMOOK REGION

OAR 660-009-0015(2) requires the EOA identify the number of sites, by type, reasonably expected to be needed for the 20-year planning period. Types of needed sites are based on the site characteristics typical of expected uses. The Goal 9 rule provides flexibility in how jurisdictions conduct and organize this analysis. For example, site types can be described by plan designation (i.e., heavy or light industrial), they can be by general size categories that are defined locally (i.e., small, medium, or large sites), or it can be industry or use-based (i.e., manufacturing sites or distribution sites).

Buildable Lands Inventory Methodology

A key component of the Central Tillamook Region Economic Opportunities Analysis is the buildable lands inventory (BLI). The BLI consists of several steps:

1. Classifying land into mutually exclusive categories
2. Netting out development constraints
3. Developing tabular summaries of lands by classification and plan designation
4. Estimating land capacity in terms of dwelling units

This section describes the methods and definitions ECONorthwest used to complete the Central Tillamook Region employment buildable lands inventory.

BLI METHODS

The buildable lands inventory uses methods and definitions that are consistent with OAR 660-009 and OAR 660-024. The steps in the inventory were:

- Generate employment “land base.” This involved “clipping” all of the tax lots in the Central Tillamook Region with the zoning layer. The GIS function was followed by a quality assurance step to review the output and validate that the resulting dataset accurately represents all lands designated for employment use in the Central Tillamook Region.
- Classify lands. Each tax lot was classified into one of the following categories:
 - Vacant land
 - Partially vacant land
 - Unsuitable land
 - Developed land
 - Public land
 - Semi-public land

- Identify constraints. The Region identifies areas in steep slopes (over 15%), floodways, wetlands identified in the Local Wetlands Inventory (LWI), and land identified for future public facilities as constrained or committed lands. These areas were deducted from lands that were identified as vacant or partially vacant. To estimate the constrained area within each tax lot, all constraints listed above were merged into a single constraint file which was overlaid on tax lots.
- Evaluate redevelopment potential. According to statewide planning rules, redevelopable land is land on which development has already occurred but on which, due to present or expected market forces, there exists the potential that existing development will be converted to more intensive uses during the planning period.
- Tabulation and mapping. The results are presented in tabular and map format with accompanying narrative. The maps include lands by classification, and maps of vacant and partially vacant lands with constraints.

DEFINITIONS

The first step in the buildable inventory was to develop working definitions and assumptions. ECO began the buildable lands analysis with a tax lot database provided by the County's GIS Department. The tax lot database was current as of August 2012. The inventory builds from the tax lot-level database to estimates of buildable land by plan designation.

A key step in the buildable lands inventory was to classify each tax lot into a set of mutually exclusive categories. Consistent with applicable administrative rules, all tax lots in the Central Tillamook Region are classified into one of the following categories:

- *Vacant land.* Tax lots that have no structures or have buildings with very little value. For the purpose of this inventory, employment lands with improvement values under \$10,000 are considered vacant.
- *Partially vacant land.* Partially vacant tax lots are those occupied by a use but which contain enough land to be further subdivided without need of rezoning. This determination was made through review of aerial photographs.

- *Unsuitable land.* Land that has no access or potential access, land that is already committed to other uses by policy, or tax lots that are more than 90% constrained.
- *Developed land.* Land that is developed at densities consistent with zoning with improvements that make it unlikely to redevelop during the analysis period. Lands not classified as vacant, partially-vacant, or undevelopable are considered developed.
- *Public land.* Lands in public ownership are mostly considered unavailable for employment uses. This includes lands in Federal, State, County, or City ownership. Public lands were identified using the Tillamook County Assessment property tax exemption codes. This category only includes public lands that are located in employment plan designations.
- *Semi-public land.* Lands in medical use, public or private utilities, churches, and fraternal organizations. These lands were identified using land use descriptions in the Tillamook County Assessment database.

ECO initially classified land using a rule-based methodology. ECO then generated maps that show the results of the application of those rules, with some adjustments made through a validation step based on review of aerial photos and building permit data. The preliminary classification maps were provided to City and County staff for review and comment.

DEVELOPMENT CONSTRAINTS

Consistent with state guidance on buildable lands inventories, ECO deducted certain constraints from the buildable lands inventory including wetlands and steep slopes. We propose to use categories that are more restrictive than the definition provided in OAR 660-009-0005(2):

(2) "Development Constraints" means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas.

Based on the Division 9 rule and discussions with the TAC, ECO deducted the following constraints from the employment lands inventory.

- *Lands in identified wetlands.* Wetlands identified in the National Wetlands Inventory (NWI) or a local wetlands inventory were considered unsuitable and deducted from the inventory.
- *Land with slopes over 15%.* Lands with slopes over 15% are considered unsuitable for commercial and industrial development.
- *Lands within floodplains.* We did not deduct these lands from the buildable lands inventory. Most jurisdictions allow development in floodplains contingent upon meeting specific conditions.
- *Lands that were more than 90% in the floodway.* This primarily applies to commercial areas in the northern portions of the City of Tillamook. Considerable existing development has been permitted in this area; however, the inventory assumes that these sites are unsuitable for development.

In addition, the City of Tillamook's zoning ordinance restricts commercial development on land zoned Multiple Use Residential (R-0). Commercial retail and service use on R-0 are conditional uses, not exceeding 3,000 square feet per use. Based on discussion with the Technical Advisory Committee and City Staff, ECO made the following assumptions about commercial capacity on land zoned R-0:

- For land located along Highway 6, ECO assumed that 25% of the land would be suitable for commercial development.
- For land located in any other part of the City, ECO assumed that 10% of the land would be suitable for commercial development.

This project is primarily a technical project. As a result, the public input on this project has been focused on engaging stakeholders with substantial knowledge of the economy in the Central Tillamook Region. The next phase of economic development planning in the Region is developing an economic development strategy. We recommend engaging a broader cross-section of stakeholders and the public in that process.

The public input in this project has been through: (1) stakeholder interviews and (2) discussions at meetings of existing economic development organizations.

STAKEHOLDER INTERVIEWS

The following people were interviewed for this project:

- Mark Labhart, Tillamook County Commissioner
- Justin Aufdermauer, Chamber President
- Patrick Criteser, CEO of the Tillamook Creamery
- Mike Oliver, Tillamook Air Museum
- Doug Rosenberg, Retired owner of Rosenberg Building Supply & lead proponent of the Oregon Scenic Railroad

DISCUSSIONS AT MEETINGS

Members of the Technical Advisory Committee and ECONorthwest staff made presentations and facilitated discussions about the EOA at meetings with the following organizations:

- Tillamook Association Committee
- Tillamook Economic Development Council
- Port of Tillamook Bay Commission

In addition, the Regional EOA was the subject of discussion at a stakeholder workshop on May 9, 2013. ECONorthwest presented the results of the EOA at this workshop and facilitated a discussion about developing a regional economic development strategy. Stakeholders were invited from the organizations above. Other invited stakeholders were Tillamook City and Tillamook County decisionmakers.