

Appendix I: Economic Analysis for Highway 101 Area including Supplement

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Appendix II. State Health Division Findings involving Health Annexation – Highway 101 North Area

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Appendix III. 2003 Urban Growth Boundary Adjustment and Zone Change, Comprehensive Plan Amendment and Comprehensive Plan Map Amendment Findings of Fact

Background Statement:

The City of Tillamook retains jurisdictional authority to amend its Comprehensive Plan, Urban Growth Boundary and Zoning Map. The standards and criteria for modification of the Urban Growth Boundary are identified in State Planning Goals 2 and 14, as well as Oregon Administrative Rule 660-04-10(1)(c)(B). OAR 660-04-10(1)(c)(B) states that "when a local changes an established Urban Growth Boundary, it shall follow the procedures and requirements set forth in Goal 2 "Land Use Planning", Part II, Exceptions. An established Urban Growth Boundary is one that has been acknowledged by the Commission under ORS 197.251. Revised findings and reasons in support of an amendment to an established Urban Growth Boundary shall demonstrate compliance with the seven factors of Goal 14 and demonstrate that specific standards are met. The following description of required steps presented in the DLCDC UGB guidance memorandum are included to exhibit the steps in addressing the goals and required decision making process and documentation.

Urban Growth Boundary Adjustment Review:

An Urban Growth Boundary is a line drawn on planning and zoning maps to show where a City expects to grow. Amending an Urban Growth Boundary is an analytical process that involves the following steps:

Part 1: Laying the Groundwork

De-annexation. Map 1S 9 30BD, Tax Lot 100 is proposed to be de-annexed from the City Limits and Urban Growth Boundary (UGB). The subject property contains approximately 21 acres and has requested withdrawal from the City since it remains agricultural land, has plans for dairy farm expansion, and does not meet, nor has ever met, the current zoning requirements for the Open Space (O-S) zone designation within the City. Over the years, the subject property has expanded its current non-conforming farm operations without taking the applications through due public process.

Annexation. An area that proposed to be annexed into the City UGB is that area south of Highway 6, north of Third Street, east of the existing City Limits and west of the IOOF Cemetery (also known as Map #1S 9 29 690, Map #1S 9 29BC 200, 300,

2100, Map #1S 9 29AC 800, 900, 1100). These parcels of land contain approximately 19.50 acres.

In general, the City proposes to remove 21 acres of non-conforming use property zoned as Open Space (OS) and recover 19.5 acres of property currently zoned RR-PD and F-1, rezoning said property to an adjacent zone designation of Neighborhood Commercial (C-N) and Single-Family Residential (R-7.5).

The adjustment will result in a transfer of 1.5 acres of productive farmland from the City to the County.

Part 2: Addressing the Goals

Address the planning requirements under Goal 14, Urbanization. These requirements have been addressed in the following seven factors:

Amendments to the Urban Growth Boundary, Review Process for City or County Request (Legislative) and Review Criteria

(1) Demonstrated need to accommodate long-range urban population growth requirements consistent with LCDC goals:

The adjustment of the UGB, City Limits and accompanying land use actions will provide an opportunity to increase the housing and neighborhood commercial sites available for development within the City and continue to meet and exceed housing and commercial land needs for the long-range population growth that is projected. The proposed UGB adjustment will also decrease the amount of non-conforming uses within the City Limits. The UGB and City Limits adjustment meets LCDC goals for long-range growth.

(2) Need for housing, employment opportunities and livability:

The adjustment of the UGB, City Limits and accompanying land use actions will provide an opportunity to increase the number of housing sites available for development within the City. The addition of the subject properties to the UGB will increase the land available for residential development by 19.5 acres, and commercial land by approximately 8 acres. The increased availability of commercial land will allow mixed uses to concentrate around an existing neighborhood commercial/public & semi-public node within the City of Tillamook.

(3) Orderly and economic provision for public facilities and services;

Land to be brought into the UGB:

Public facilities are currently nearby the subject properties to be brought into the Urban Growth Boundary, and potentially these facilities could be extended from the main lines to provide services to the properties in an orderly and economic manner. The subject properties are already surrounded on three sides by the existing UGB and separated from the large agricultural areas

northward by State Highway 6 and sloping ground. Public facilities and services from the City are available nearby the area to be brought into the UGB.

Land to be de-annexed from City Limits and withdrawn from the UGB:

The subject property is located in area already utilized for agricultural purposes.

(4) Maximum efficiency of land uses within and on the fringe of the existing urban area;

Land to be brought into the UGB:

The subject properties are contiguous to the Urban Growth Boundary on the south, east and west sides. Some parts are also contiguous to the City Limits on the west side. These properties are already surrounded on three sides by the existing UGB and separated from the large agricultural areas northward by State Highway 6 and sloping ground that is unsuitable for agricultural purposes. A majority of the tax lots involved in the UGB adjustment are already partially within the UGB. This UGB adjustment would bring the lots into the UGB to a greater extent and alleviate that hardship on the property owners. Additionally, City sewer and water lines are located to the south and west of the subject properties and are available for additional hook-up.

Land to be de-annexed from City Limits and withdrawn from the UGB:

The subject property will also maximize the efficiency of land uses as the property inefficiently used for urban purposes will be de-annexed from the City Limits and withdrawn from the UGB. Currently any agricultural additions proposed on the subject property to be de-annexed are non-conforming according to the City zone designation, and therefore require a lengthy public process which is an overburden to the property owner carrying out farm operations and is inefficient in terms of land uses.

(5) Environmental, Energy, Economic and Social consequences;

The ESEE consequences of the proposed uses would minimally affect the community, and upon further development of the properties will provide environmental, energy, economic and social benefits to the community, which outweigh any losses. The City's implementing ordinances including site plan review processes and general design standards regulate development by imposing specific design standards.

This supplemental ESEE analysis addresses how the adjusted UGB and City Limits may affect the City and may impact the proposed zone designations. These land uses in this instance, include all permitted or conditionally permitted uses allowed in the proposed zoned properties. The following chart shows the ESEE consequences of the UGB and City Limits adjustments.

, FULLY ALLOWING UGB ADJUSTMENT, PROHIBITING UGB ADJUSTMENT LIMITING UGB ADJUSTMENT TO DE-ANNEXATION
ECONOMIC CONSEQUENCES OF . . .	Full development of property. Potential increased property value, property tax revenues, and potential property uses. Will alleviate City of farm-deferred non-conforming agricultural uses that have no potential increase in property value and property tax revenue.	Restricted development of properties for farm use only. No potential increase in property value and property tax revenue.	Will alleviate City of farm-deferred non-conforming agricultural uses but no potential increase in property value and property tax revenue.
SOCIAL CONSEQUENCES OF . . .	Allows for property owners of unused farmland to develop property to urban standards. Provides opportunity for City to increase mixed uses and concentrate development in an already existing neighborhood commercial node.	Does not allow unused farmland to be developed to urban standards. Non-conforming farmland is required to be taken through the due public process for any proposed expansion of agricultural use.	Allows farm operations to continue on current property without consideration of non-conformity and the requirements for expanding farm uses to take effect. Does not allow unused farmland to be developed to urban standards.
ENVIRONMENTAL CONSEQUENCES OF . . .	Minimal. The proposed zoning changes will not alter the environmental consequences that currently exist on the property.	Minimal. The proposed zoning changes will not alter the environmental consequences that currently exist on the property.	Minimal. The proposed zoning changes will not alter the environmental consequences that currently exist on the property.
ENERGY CONSEQUENCES OF . . .	Reduces the future extension of City public services across State Highway 6 and Railroad ROW to future development on City property. Promotes infill of City services to property surrounded by existing services.	Does not reduce the future extension of City public services across State Highway 6 and Railroad ROW to future development on City property. Does not promote infill of City services to property surrounded by existing services.	Reduces the future extension of City public services across State Highway 6 and Railroad ROW to future development on City property. But does not promote infill of City services to property surrounded by existing services.

(6) Retention of agricultural land;

Land to be brought into the UGB:

The subject properties contain Class II and Class III soils. However, the properties are confined by Highway 6 to the north and Third Street to the south, and City Zoning on the south (R-7.5 and C-N), east (I-L and R-7.5), and west (P & SP and C-N). Agricultural uses on a portion of the properties, proposed to be brought into the UGB, are more complicated by the existence of large outbuildings even though the property is zoned for exclusive farm use, and limit the agricultural benefits. Part of the properties with quality soil classification has been zoned for non-agricultural use, rural residential, and are not subject to soil medium production.

Land to be de-annexed from City Limits and withdrawn from UGB:

The property proposed to be de-annexed from the City Limits and removed from the UGB is currently used for agricultural purposes and expanding. It is located on productive high-class soil and should be rezoned for exclusive farm use (F-1). This property should be returned to the County for the continued retention of agricultural land and accommodation of agricultural uses.

(7) Compatibility of the proposed urban uses with nearby agricultural activities, and compatibility of the proposed agricultural uses with urban activities;

Land to be brought into the UGB:

The subject properties, currently zoned RR-PD and F-1 would not result in uses that are incompatible with nearby similar uses. These said properties are not directly adjacent to other properties that are zoned agricultural due to the separation of these properties from one another by State Highway 6.

Properties to the south, east and west are zoned for urban uses. Therefore the proposed urban uses are compatible with nearby agricultural activities since Highway 6 separates the urban uses from these agricultural uses.

Land to be de-annexed from City Limits and UGB:

The property to be de-annexed from the City is, and will continue to be, compatible with surrounding uses. Land to the north and east of the subject property is used for agricultural purposes. The Port Railroad Right-of-way and a steep slope divide this property from urban uses within the City Limits.

Further a large portion of this land is designated as wetlands and a majority of the ground remains in the floodplain. The subject property to be de-annexed from the City Limits and UGB would not result in a use incompatible with nearby uses.

(8) Compatibility with the policies regarding the Urban growth Boundary specified in the City and County Comprehensive Plans;

This UGB adjustment is compatible with the policies regarding the Urban Growth Boundary (UGB) as specified in the City and County Comprehensive Plans. It focuses on Efficiency of Land Use, Environmental, Energy, Economic and Social Consequences, Retention of Agricultural Land, and Section 11, which lists the criteria in these findings as mentioned above.

Address the planning requirements under Goal 3, Agricultural Land. These requirements have been addressed in the following factor:

(1) To preserve and maintain agricultural lands;

Although the subject properties are or have been used for agricultural purposes, and contain Class II and Class III soils, Tax Lot 200 has been rezoned to Rural Residential Planned Development (RR-PD) by the County of Tillamook; a non-agricultural use. This action substantially eliminates the property from long term agricultural. One of the smaller parcels (Tax Lot 300) is zoned F-1 but used as an equipment staging and storage area, with barns for cattle. The smaller parcels cannot provide for a sustainable agricultural enterprise due to the severe restriction in acreage left for dairy operations.

The uses on the subject properties proposed to be taken into the City UGB are restricted by adjacent Highway 6 and Third Street. The restrictions resulting from the bordering on the properties by the road networks separates the pasturing operations to the North of Highway 6 from the subject properties to the south of the highway.

The use on the subject properties proposed to be de-annexed from the City Limits and UGB currently support a large productive farm operation. Long-term plans are to continue to use this property for agricultural purposes.

An adjustment of the City Limits and UGB will not reduce, but enhance acreage in actual agricultural production and will not conflict with Goal 3.

Address the planning requirements under Goal 2, Land Use Planning, Exception findings in OAR 660-04-010(1)(c). The following findings have been addressed:

(1) Why existing developed areas within the UGB and nearby exception areas are not sufficient to accommodate projected growth;

Existing developed areas within the current UGB and nearby exception areas are sufficient to accommodate projected growth. This adjustment removes a large piece of property from the City Limits and UGB that is unsuitable for urban purposes and therefore an addition of a similarly sized portion of land has been proposed to be brought into the UGB which is suitable for urban uses. With this adjustment of the UGB, additional pieces of land zoned residential and commercial will be available to accommodate projected growth.

(2) That the Economic, Social, Environmental and Energy Consequences have been minimized;

The ESEE consequences apparent with the change in jurisdictional boundaries appear to be minimal and appear to be beneficial to both the County and the City.

(3) That the proposed UGB Expansion is compatible with adjacent and nearby uses or is rendered so through measures designed to reduce adverse impacts.

The properties within the proposed UGB adjustment are compatible with surrounding uses. The property to be de-annexed from the City Limits and UGB is used for agricultural purposes as is the area surrounding the property. The property to be brought into the UGB is compatible with the urban uses that are located to the south, east and west. The proposed adjustment will serve to protect the nearby farmlands with special consideration for the most productive lands. State Highway 6 will serve as a protection corridor for the nearby farmlands.

Address the planning requirements under Goal 2, Land Use Planning, Part II-Exceptions. The following findings have been addressed:

The City of Tillamook may adopt an exception to a goal when:

(c) The following standards are met:

(1) Reasons justify why the state policy embodied in the applicable goals should not apply;

These reasons are given under the discussion relating to Goal 3 and Goal 14.

(2) Areas which do not require a new exception cannot reasonably accommodate the use;

The subject properties to be brought into the UGB are too small to reasonably accommodate agricultural uses. They are located just south of State Highway 6 and are adjacent to the existing UGB and adjacent urban uses.

(3) The long term economic, social environmental and energy consequences resulting from the use of the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located in areas requiring a goal exception other than the proposed site;

The long-term ESEE consequences resulting from the uses on the subject properties would not be significantly more adverse than if other properties were developed. The properties to be brought into the UGB do not have any floodplain restrictions, and are adjacent to the City UGB on three (3) sides, City Limits on the west, and City sewer and water lines and are available for immediate hook-up to avoid septic/drainfield placement.

(4) The proposed uses are compatible with other adjacent uses or will be so rendered through measures designed to reduce adverse impacts.

The proposed uses (small scale commercial and residential) are compatible to adjoining parcels currently within the City UGB. Any adverse impacts resulting from the zone changes to the subject properties will be mitigated by the requirements of the City's Site Plan Review standards.

Exception Process Conclusion: The boundary adjustment appears to meet the goal exception criteria. In this case, the City concludes that the evidence presented demonstrates that no adverse impacts will occur in the transition of the properties from rural to urban, nor will there be adverse impacts on adjacent agricultural properties to the north.

Appendix IV. Findings of Fact for Annexation of North 101 Area

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Appendix V. City of Tillamook location and Boundaries of Each of the Areas Designated for Each Land Use and Zone Designation

Public/Semi-Public

There are a number of areas within the Urban Growth Boundary designated as Public/Semi-Public Space. These include:

Fairview Grange,

The IOOF Cemetery,

The County Fairgrounds, Tillamook Bay Community College, The Swiss Hall, and the County Public Works Department Grounds,

The East Elementary property,

The Tillamook Junior High School property,

The Tillamook County Transportation Building,

The Wilson School property,

The ESD Building,

The Old Catholic High School and Parish Hall Buildings,

Tillamook High School property,

Tillamook PUD Building and property,

Tillamook County Courthouse, City Hall, and Pioneer Museum,

City parking lots at Second Street and Ivy Avenue,

The Liberty Elementary School and YMCA property,

City Public Works Department property,

Tillamook County General Hospital,

City Waste Water Treatment Plant,

Open Space

There are a number of areas in the Urban Growth Boundary designated as Open Space.

These include:

Sue H. Elmore Park,

Lillian Goodspeed Park,

Carnahan Park and the additional open space along the Trask River,

Veteran's Peace Park,

Coatesville Ninth Street Park,

Hoqarton Interpretive Trail Park, and the additional open space along and near Hoqarton

Slough north of First and Front Street, and

scattered tax lots along Highway 101 North that correspond to each of the FEMA buyouts.

Residential Land

Most land currently in residential use is south of First Street, surrounding the downtown area and east of the mill. It is made up of a majority of low density single-family residential units including the following low density residential areas:

1. That area south of First Street, west of Grove Avenue and Ivy Avenue, along Twelfth Street to the Trask River;
2. That area east of Laurel Avenue, Madrona Avenue and Ocean Avenue, along First Street south to Eleventh Street, west of the Mill;
3. That area east of the Mill, south of First Street, north of Twelfth Street, along and west of Marolf Loop Road;
4. That area east of the Fairgrounds south of Third Street, inside the Urban Growth Boundary.

The small areas of land made up of higher density multiple family residential units include the following areas:

1. That area south of Brookfield Avenue, east of the County Public Works Department, north of Holden Creek;
2. That area west of Marolf Loop Road adjacent to Marolf Place;
3. That area south of Third Street, west of Evergreen Drive, north of the mill site;
4. That area south of Third Street between Pine Avenue and Linden Drive;
5. That area north of Third Street east of the Pine Avenue intersection;
6. That area north of Twelfth Street (Marolf Loop Road) south of Holden Creek;
7. That area northeast of the Twelfth Street and Evergreen Drive intersection;
8. That area south of Sixth Street, north of Ninth Street on Chestnut Drive;
9. That area north of the Sixth Street and Cottonwood intersection;
10. That area south of Third Street, north of Meadowlark Lane.

Most vacant and not fully developed land zoned for residential uses lies east and south of the County Fairgrounds and north of Twelfth Street between Evergreen Drive and Marolf Loop Road. These areas are further described in terms of exact location on the approved and State acknowledged City Comprehensive Plan and Zoning Map.

Commercial Land

Land currently in commercial use includes the following areas:

1. *That area along North Main Avenue north of Hoquarton Slough and south of the Wilson River;*
2. *That area along Main Avenue and Pacific Avenue (the Highway 101 couplet) south of Hoquarton Slough, east of Stillwell Avenue, west of Laurel Avenue, to the south City Limits;*
3. *That area east of Wilson River Loop Road, north of the County Fairgrounds, west of Schild Road, south of State Highway 6;*
4. *That area adjacent to the intersection of Third Street and Evergreen Drive;*
5. *Other scattered parcels located along Third Street .*

Industrial Land

Much of the city's industrial use is concentrated in the following areas:

1. *That area along Front Street;*
2. *That area on Third Street north of the County Fairgrounds;*
3. *That area around and including the Mill.*

These industrial uses include wholesale, commercial, or retail, and manufacturing. *These areas are further described in terms of exact location on the approved and State acknowledged City Comprehensive Plan and Zoning Map.*

Appendix VI. City of Tillamook Land Use Tables

TABLE 1: EXISTING ZONED LAND USE WITHIN PRESENT TILLAMOOK CITY LIMITS IN 2008

Land Use	Acres
Residential	319
Single-family	(152)
Single-family & Duplex	(75)
Multi-family	(92)
Commercial	214
Central Commercial	(50)
Highway Commercial	(159)
Neighborhood Commercial	(5)
Industrial	110
General Industrial	(89)
Light Industrial	(21)
Public and Semi-Public	174
Street and Right-of-Way	179
Open Space	83
Total Land	1,079
Developed Land *	1,018
(Vacant) Undeveloped Land	61

Source: City of Tillamook Zoning Map, 2008

Within the City Limits, approximately 30% of the land is zoned for residential use, 20% for commercial use, 10% industrial, 16% public/semi-public, and 8% for open space. Approximately 16% of the area inside the City Limits is used for street right-of-ways.

TABLE 2: EXISTING ZONED LAND USE IN THE URBAN GROWTH AREA IN 2008

Land Use	Acres
Residential	227
Single-family	(86)
Single-family & Duplex	(55)
Multi-family	(86)
Commercial	27
Highway Commercial	(23)
Neighborhood Commercial	(4)
Industrial (Light Industrial)	74
Public and Semi-Public	10
Streets and Right-of-Way	30
Open Space	64
Total Land	432
Developed Land *	297
(Vacant) Undeveloped Land	135

Source: City of Tillamook Zoning Map, 2008

* Developed Lands as noted in Tables 1 & 2 refer to properties with buildings. It does not take into consideration the maximum buildable potential of each Tax Lot.

Within the Urban Growth Area, approximately 53% of the land is zoned for residential use, 6% for commercial use, 17% industrial, 2% public/semi-public, and 15% for open space. Approximately 7% of the Urban Growth Area is used for streets right-of-ways.

Tables 1 and 2, above, describe the developed parcels within the Urban Growth Boundary.

Table 1 and 2 do not described non-conforming uses within each zone designation. Table 3 (below) describes the number of non-conforming uses in each of the generalized zones (residential, commercial, and industrial).

TABLE 3: NON-CONFORMING USES WITHIN THE CITY LIMITS AND URBAN GROWTH BOUNDARY

Area	Residential	Commercial	Industrial	Total
City Limits:	31	75	16	122
Urban Growth Area:	0	0	6	6
Total:	31	75	22	128

Source: City of Tillamook Tax Lot Data

According to Table 3, there are 122 non-conforming uses within the City Limits, and six (6) within the Urban Growth Area. The corresponding acreage is as follows:

Residential:	12.49 acres
Commercial:	13.08 acres
<u>Industrial:</u>	<u>11.58 acres</u>
Total:	37.15 acres

This consumes approximately 2.5% of the total area of the City. These non-conforming uses consist of primary single-family and multiple-family residential dwellings in the Central Commercial District where only secondary residential uses are allowed; primary residential dwellings in the Industrial District, where only care-taker dwellings are allowed conditionally; commercial and industrial uses within the Residential Districts that don't allow such uses; and multiple-family residential development within the Low Density Residential Districts. Some of this non-conformity may be brought into compliance upon rezoning the properties.

The allocation of undeveloped land and developed land designated for conversion or redevelopment to another use from a non-conforming use is listed below. The acreage listed for conversion or redevelopment is for land development currently with a use other than that given in the Plan or with a conforming use under-utilizing the property.

TABLE 4: COMPREHENSIVE PLAN LAND USE ALLOCATION FOR DEVELOPMENT/REDEVELOPMENT (CONVERSION)

Land Use	ACRES		Total
	Undeveloped	Conversion of <i>Redevelopable/Non-conforming</i>	
Residential	73	12	85
(single-family residential)	(44)	(10)	54
(multi-family office)	(29)	(2)	(31)
Commercial	28	19	45
(Neighborhood Commercial)	(0)	(5)	(5)
(Central Commercial)	(2)	(9)	(11)
(Highway Commercial)	(26)	(3)	(29)
Industrial	60	12	72
<i>(Light Industrial)</i>	(58)	(10)	(68)
<i>(General Industrial)</i>	(2)	(2)	(4)

Total: **161** **43** **202**

TABLE 5: UNBUILDABLE LAND INVENTORY

(In acres)

	Residential			Industrial	
	R-7.5	R-5.0	R-0	I-L	I-G
Perennial Stream Buffers	2.0	0.28	1.5	1.4	0.0
	Highway Comm.		Neighborhood Comm.		Central Comm.
River and Slough Buffers	5.12		0.0		1.1

Other than those various buffer areas, the available acreage within the UGB is either free of negative development characteristics or, as in the case of the floodplain area along North Highway 101, adequately protected.

The area within the Floodplain in relationship to each zone district is shown in Table 6 below.

TABLE 6: LAND ACREAGE WITHIN THE FLOODPLAIN

<u><i>Floodplain</i></u>	<u><i>Residential</i></u>			<u><i>Industrial</i></u>		<u><i>Commercial</i></u>
	R-7.5	R-5.0	R-0	I-L	I-G	C-H
<u><i>Zone AE</i></u>	<u><i>0.00</i></u>	<u><i>0.00</i></u>	<u><i>0.00</i></u>	<u><i>0.00</i></u>	<u><i>0.00</i></u>	<u><i>0.00</i></u>
<u><i>Floodway</i></u>	<u><i>0.00</i></u>	<u><i>0.00</i></u>	<u><i>0.00</i></u>	<u><i>2.03</i></u>	<u><i>0.00</i></u>	<u><i>41.92</i></u>

Total

TABLE 7: 2008 BUILDABLE LAND WITHIN TILLAMOOK CITY LIMITS

<i>Land Use</i>	<i>Acre</i>	<i>Existing Tax Lots</i>	<i>Existing Developed Units</i>	<i>Potential Development</i>	
				<i>(in units)</i>	<i>(in acres)</i>
<i>Low Density Res.</i>	<i>226.43</i>	<i>1,195</i>	<i>1,071</i>	<i>459</i>	<i>43.95</i>
<i>Med. Density Res.</i>	<i>92.29</i>	<i>282</i>	<i>556</i>	<i>877</i>	<i>31.02</i>
<i>Commercial</i>	<i>214.34</i>	<i>518</i>	<i>316</i>	<i>323</i>	<i>23.57</i>
<i>Industrial</i>	<i>109.73</i>	<i>71</i>	<i>66</i>	<i>5</i>	<i>6.48</i>
<i>Total:</i>	<i>642.79</i>	<i>2,066</i>	<i>2,009</i>	<i>1,664</i>	<i>105.02</i>

Source: City of Tillamook Tax Lot Data

TABLE 8: 2008 BUILDABLE LAND WITHIN TILLAMOOK URBAN GROWTH AREA

<i>Land Use</i>	<i>Acre</i>	<i>Existing Tax Lots</i>	<i>Existing Developed Units</i>	<i>Potential Development</i>	
				<i>(in units)</i>	<i>(in acres)</i>
<i>Low Density Res.</i>	<i>140.61</i>	<i>170</i>	<i>165</i>	<i>807</i>	<i>115.54</i>
<i>Med. Density Res.</i>	<i>86.49</i>	<i>67</i>	<i>324</i>	<i>1,445</i>	<i>51.45</i>
<i>Commercial</i>	<i>26.70</i>	<i>131</i>	<i>11</i>	<i>211</i>	<i>21.81</i>
<i>Industrial</i>	<i>73.50</i>	<i>12</i>	<i>10</i>	<i>66</i>	<i>61.96</i>
<i>Total:</i>	<i>327.30</i>	<i>380</i>	<i>510</i>	<i>2,529</i>	<i>250.76</i>

Source: City of Tillamook Tax Lot Data

TABLE 9: 2000 BUILDABLE LAND AT THE PORT OF TILLAMOOK BAY

<i>Land Use</i>	<i>Acres</i>	<i>Existing Developed Acres</i>	<i>Vacant Potentially Developable acres</i>
<i>Industrial</i>	<i>1600.00</i>	<i>600.00</i>	<i>1,000.00</i>
<i>Total:</i>	<i>1600.00</i>	<i>600.00</i>	<i>1,000.00</i>

Source: Port of Tillamook Bay, 2003

TABLE 10: GEOGRAPHIC POPULATIONS

Within City Limits:

<i>Type of Residential Dwelling Unit</i>	<i>2000 Total Housing Units</i>	<i>2000 Household Size</i>	<i>Totals</i>	<i>1980 Total Housing Units</i>	<i>1980 Household Population Totals</i>	<i>% Population Change since 1980</i>
<i>Single-Family</i>	<i>1,222</i>	<i>2.27</i>	<i>2,776</i>	<i>1,272</i>	<i>3,129</i>	<i>- 11%</i>
<i>Multi-Family</i>	<i>657</i>	<i>2.27</i>	<i>1,492</i>	<i>504</i>	<i>821</i>	<i>+ 82%</i>
<i>Mobile Homes</i>	<i>37</i>	<i>2.27</i>	<i>84</i>	<i>23</i>	<i>42</i>	<i>+100%</i>
<i>Subtotal:</i>	<i>1,916</i>	<i>2.27</i>	<i>4,352</i>	<i>1,799</i>	<i>3,992</i>	<i>+ 9%</i>

Within Urban Growth Area:

<i>Type of Residential Dwelling Unit</i>	<i>2000 Total Housing Units</i>	<i>2000 Household Size</i>	<i>Totals</i>	<i>1980 Total Housing Units</i>	<i>1980 Household Population Totals</i>	<i>% Population Change since 1980</i>
<i>Single-Family</i>	<i>207</i>	<i>2.46</i>	<i>509</i>	<i>216</i>	<i>531</i>	<i>- 4%</i>
<i>Multi-Family</i>	<i>145</i>	<i>2.43</i>	<i>352</i>	<i>34</i>	<i>55</i>	<i>+540%</i>
<i>Mobile Homes</i>	<i>36</i>	<i>2.43</i>	<i>87</i>	<i>39</i>	<i>70</i>	<i>+ 24%</i>
<i>Subtotal:</i>	<i>388</i>	<i>2.44</i>	<i>948</i>	<i>289</i>	<i>656</i>	<i>+ 44%</i>
<i>Total:</i>			<i>5,300</i>		<i>4,648</i>	<i>+ 14%</i>

TABLE 11: PROJECTED DEMAND FOR OFFICE, INDUSTRIAL, AND RETAIL LAND WITHIN THE CITY OF TILLAMOOK URBAN GROWTH AREA AND PORT OF TILLAMOOK PROPERTY BASED ON THE TILLAMOOK COUNTY GROWTH PROJECTIONS

	<i>Commercial</i>	<i>Industrial</i>	<i>Total</i>
<i>Base Case</i>			
<i>Current Supply (Acres)</i>	<i>197</i>	<i>1,068</i>	<i>1,264</i>
<i>Less: 2025 Demand (Acres)</i>	<i>141</i>	<i>76</i>	<i>217</i>
<i>Over/(Under) Supply</i>	<i>56</i>	<i>992</i>	<i>1,048</i>
<i>Low Growth</i>			
<i>Current Supply (Acres)</i>	<i>197</i>	<i>1,068</i>	<i>1,264</i>
<i>Less: 2025 Demand (Acres)</i>	<i>64</i>	<i>51</i>	<i>115</i>
<i>Over/(Under) Supply (Acres)</i>	<i>133</i>	<i>1,017</i>	<i>1,150</i>
<i>High Growth</i>			
<i>Current Supply (Acres)</i>	<i>197</i>	<i>1,068</i>	<i>1,264</i>
<i>Less: 2025 Demand (Acres)</i>	<i>159</i>	<i>115</i>	<i>274</i>
<i>Over/(Under) Supply (Acres)</i>	<i>38</i>	<i>943</i>	<i>981</i>

Source: Tillamook Commercial and Industrial Land Demand Analysis, Hobson and Associates, 1992 (revised 2009)

TABLE 12: PROJECTED DEMAND FOR COMMERCIAL AND INDUSTRIAL LAND WITHIN THE CITY OF TILLAMOOK URBAN GROWTH BOUNDARY

Commercial Demand:

Step 1: Total present commercial employees = % of City pop. Employed
 Total City Population in Commercial sector
 $\frac{2204}{4700} = 46.9\%$

Step 2: % of City pop. employed in Com. sector x Proj. pop. for yr 2020 = Est. of total employees in 2020
 $46.9\% \times 5811 = 2,725$

Step 3: Total Net Acres in Commercial Use = Avg. amt. of net acreage utilized by each com. employee
 Total present commercial employees
 $\frac{307.6}{2204} = .14$

Step 4: Est. Tot. Com. Employees in 2020 x Avg. amt. of net acreage = Total acreage needed in 2020
 $2943 \times .14 = 410.7$

Step 5: Total acreage needed in 2020 – Land presently in com. use = Add. Acres necessary
 $410.7 - 307.6 = 103.1$

Step 6: Add. Acres necessary x 25% allow. for parking + Add. Acres necessary = Tot. Acreage needed.
 $103.1 \times 25\% = 25.8 + 103.1 = 128.9$

Total acreage needed for Commercial Development: **128.9**

Industrial Demand:

Step 1: Total present industrial employees = % of City pop. Employed
 Total City Population in Commercial sector
 $\frac{787}{4700} = 16.7\%$

Step 2: % of City pop. employed in Com. sector x Proj. pop. for yr 2020 = Est. of total employees in 2020
 $16.7\% \times 5811 = 970$

Step 3: Total Net Acres in Industrial Use = Avg. amt. of net acreage utilized by each com. employee
 Total present Industrial employees
 $\frac{108.4}{787} = .13$

Step 4: Est. Tot. Ind. Employees in 2020 x Avg. amt. of net acreage = Total acreage needed in 2020
 $1051 \times .13 = 144.8$

Step 5: Total acreage needed in 2020 – Land presently in ind. use = Add. Acres necessary
 $144.8 - 108.4 = 36.4$

Step 6: Add. Acres necessary x 25% allow. for parking + Add. Acres necessary = Tot. Acreage needed.
 $36.4 \times 25\% = 9.1 + 36.4 = 45.5$

Total acreage needed for Industrial Development: **45.5**

Appendix VII. Prior General Plan (1972)

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**Appendix VIII. Urban Service Area
Policies & Implementation Guidelines,
and County Ordinance Adopting the
City's Plan including Coordination
Functions in the UGMA, [2002](#).**

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Appendix IX. 1979/1980 Economic Report

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Appendix X. Financial Statement for the City of Tillamook

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Appendix XI. Technical Report

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Appendix XII - City of Tillamook Local Wetlands Inventory, 1997

Wetlands

The Statewide Planning Goals define wetland as "land areas where excess water is the dominant factor determining the nature of soil development and the types of plant and animal communities living at the soil surface."

The following wetlands in Table 5-1, identified in the City of Tillamook Local Wetland Inventory (Wilson et al, 1997) are Significant Natural Resources:

TABLE 5-1: TILLAMOOK SIGNIFICANT WETLANDS

Waterway	LWI wetland code	Waterway	LWI wetland code
Cojack Creek	COJ1	Holden Creek	HOL3
Colby Creek	COL1	Holden Creek	HOL4
Dougherty Slough	DOU1	Holden Creek	HOL5
Hall Slough	HAL1	Holden Creek	HOL6
Hall Slough	HAL2	Hoquarten Slough	HOQ1
Hall Slough	HAL3	Hoquarten Slough	HOQ2
Hall Slough	HAL4	Hoquarten Slough	HOQ3
Holden Creek	HOL1	Hoquarten Slough	HOQ4
Holden Creek	HOL2	Trask River	TRA1

In cooperation with the Oregon Department of Fish and Wildlife, an inventory of Goal 5 Wetlands was completed. Four sites were identified and described in the following analysis:

- 1) The Meadow Avenue Wetland is generally located south of Meadow Avenue and contains approximately 14 acres. This acreage has multiple owners including private individuals and the Tillamook School District No. 9. It is predominantly a forested wetland with no identified conflicting uses. The City will protect this wetland.
- 2) The Fairlane Drive Wetland runs immediately parallel to Fairlane Drive and contains approximately two acres. The site is a shrub and forested wetland in association with a small perennial stream. The property is under single ownership with no identified conflicting uses. The City will protect this wetland.
- 3) The South Highway 101 Wetland is immediately adjacent to Highway 101 upon entering the southern entrance to the City. The site is a shrub and forested wetland containing approximately one acre. The area is within an "open space" district with no conflicting uses identified. The City will protect this wetland.

- 4) The Fifth Street Wetland is found at the west end of Fifth Street. The site is an emergent wetland containing approximately 1.5 acres. The area is part of a large tract zoned for parks. Carnahan Park is immediately adjacent to the north, but effectively separated by a chain-link fence. No conflicting uses have been identified. The City will protect this wetland. The Map provides the physical location of these wetlands.

Qualifications for significance

To qualify as significant, a wetland must have a high level of function in one of four functional categories (water quality, hydrologic control, fish habitat, or wildlife habitat), and/or be rated in the second highest category for fish habitat and have a direct surface water connection to a stream segment that is mapped by DSL or ODFW as habitat for "indigenous anadromous salmonids." (DSL maps available at <http://statelands.dsl.state.or.us/esshabitat.html>).

A "high level of function" is defined as "intact" fish habitat, "intact" water quality, "intact" hydrologic control, or "diverse" wildlife habitat, as defined in the Oregon Freshwater Wetland Assessment Methodology ("OFWAM") (DSL, 1996). The "second highest category" for fish habitat is defined as "impacted or degraded" in OFWAM (DSL, 1996).

Wetlands Wildlife

The species listed are typical of wetlands. In addition there are many other species that sometimes frequent wetlands or are benefited by wetland habitat. Several species of bats and swallows feed on insects that breed profusely in wetlands. Many kinds of sparrows, warblers and other songbirds feed and nest in the vegetation in and around wetlands. Several kinds of mice and shrews besides those listed may find wetland habitat to their liking, and various species of hawks and owls often hunt such areas.

TABLE 5-3: WILDLIFE SPECIES THAT UTILIZE WELANDS IN TILLAMOOK COUNTY

Mammals

Roosevelt Elk
Black-tailed Deer
Raccoon
Mink
Short-tailed Weasel
Long-tailed Weasel
Striped Skunk
River Otter
Pacific Water Shrew
Beaver
Muskrat
Townsend Vole
Pacific Jumping Mouse

Reptile and Amphibians

Common Garter Snake
Northwestern Garter Snake
Pacific Tree Frog
Northern Red-legged Frog
Western Toad

Northwestern Salamander
Western Red-backed Salamander

Water Fowl

Mallard
Gadwall
Pintail
American Widgeon
Green-winged Teal
Northern Shoveler
Wood Duck
Ruddy Duck
Common Merganser
Hooded Merganser
Pied-billed Grebe
American Coot

Hawks

Marsh Hawk
Osprey
White-tailed Kite

Wading Birds

Green Blue Heron
Green Heron
Black-crowned Night Heron
Greater Yellowlegs
Lesser Yellowlegs
Willet
American Bittern
Long-billed Dowitcher
Short-billed Dowitcher
Common Snipe
Killdeer

Other Birds

Kingfisher
Red-winged Blackbird
Brewers Blackbird
Long-billed Marsh Wren
Rough Skinned Newt

Appendix XIII - City of Tillamook Riparian Inventory, 1999



In 1999, in conjunction with a Healthy Streams Grant from the Department of Land Conservation and Development the entire UGB land area was, after a completed local wetland inventory, function assessment and evaluated as to water quality and habitat quality. This resulted in the accurate location and listing with analysis, the locally significant wetlands and riparian corridors. These resources were identified and mapped as per requirements in Division 23 of the Oregon Administrative Rule, implementing State Planning Goal 5. According to the study and maps, there are approximately 87 acres of identified significant wetlands within the UGB. These resources are incorporated for adoption in the Water Resources Overlay District, Section 21.1 of the Tillamook City Land Development Code. These significant wetlands are identified on the wetlands map in Chapter 18. The following policies serve to protect the significant wetland and riparian corridor resources listed as locally significant in the City of Tillamook.

The following significant riparian corridors and significant wetlands listed in Table 5-2 have been adopted and are regulated subject to the Water Resources Overlay District Section of the City Zoning Ordinance:

TABLE 5-2: TILLAMOOK SIGNIFICANT RIPARIAN REACHES (FACING DOWNSTREAM)

Waterway	Reach code	Bank (facing downstream)
Cojack Creek	R-COJ1-2	L
Cojack Creek	R-COJ1-3	R&L
Colby Creek	R-COL1-1	R&L
Colby Creek	R-COL1-2	L
Colby Creek	R-COL2-1	R&L
Dougherty Slough	R-DOU0-1	R&L
Dougherty Slough	R-DOU0-2	R&L
Hall Slough	R-HAL0-1	R&L
Hall Slough	R-HAL0-2	R&L
Hall Slough	R-HAL0-3	R&L
Hall Slough	R-HAL0-4	R&L
Hall Slough	R-HAL3-1	R&L
Holden Creek	R-HOL1-1	R&L
Holden Creek	R-HOL1-2	R&L
Holden Creek	R-HOL1-3	R&L
Holden Creek	R-HOL2-1	R&L
Holden Creek	R-HOL3-1	R&L
Holden Creek	R-HOL3-2	R&L
Holden Creek	R-HOL3-3	R&L
Holden Creek	R-HOL4-1	R&L
Holden Creek	R-HOL5-1	R&L
Holden Creek	R-HOL5-2	R&L
Holden Creek	R-HOL6-1	R&L
Hoquarten Slough	R-HOQ1-1	R&L
Hoquarten Slough	R-HOQ1-2	R&L
Hoquarten Slough	R-HOQ1-3	L
Hoquarten Slough	R-HOQ1-4	L
Hoquarten Slough	R-HOQ1-5	L

Hoquarten Slough
Hoquarten Slough
Jack Creek
Jack Creek
Trask River
Trask River
Wilson River
Wilson River

R-HOQ3-1
R-HOQ3-2
R-JAC1-1
R-JAC1-2
R-TRA0-1
R-TRA0-2
R-WIL0-1
R-WIL0-2

R&L
R&L
R&L
R&L
R
R
L
L

Final Draft

**Appendix XIV - Water Facilities
System Master Plan, Tillamook Water
User's Map , and City Distribution and
Transmission Mains.**

A.

B.

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Appendix XV. Reservoir Storage

A. Reservoir storage:

(1) Renovation of the Port of Tillamook Storage reservoir to 1.25 MG (million gallons).

TABLE T: RAMIFICATIONS OF POPULATION ON TILLAMOOK STP
AVG FLOW**
(mgd)

Population BOD5* Equivalent (lbs/day)	Winter	Summer	(mgd)	PEAK FLOW*** Unit Modif	Req'd Trtmnt
0	0	1.29	0.36	1.29	
4,000	800	1.85	0.92	2.80	
5,000	1,000	1.99	1.06	3.04	
6,000	1,000	2.13	1.20	3.35	
7,000	1,400	2.27	1.34	3.54	1, 4
8,000	1,600	2.41	1.48	3.87	2
10,000	2,000	2.69	1.76	4.51	3, 5
12,000	2,400	2.97	2.04	5.15	
14,000	2,800	3.25	2.32	5.60	

* BOD5 @ 0.20 lb/cap/day
 ** Flow @ 140 gpcd + anticipated 1997 I/I
 *** Peaking Factor from Fig. 5.5 Facilities Plan

1. New larger raw sewage pumps (New pump station?)
2. Additional Secondary Clarifier (750 gpd/ft²)
3. Additional Digester(s)
4. New Primary Clarifier(s)
5. Additional Secondary Treatment (RBC's)

(2) Construction of a new 2.0 MG reservoir on the Port site.

B. System Development

- (1) Fawcett Creek supply intertie
- (2) Additional Reservoir storage
- (3) Possible source augmentation
- (4) Two high capacity wells
- (5) 5-year upgrading plan

Project reservoir storage requirements are shown below:

	Year - 1979	Year - 2000
<u>Average Daily Need</u>	1.00 MGD *	2.00 MGD
<u>Storage Element</u>		
(1) Normal Storage Needs (3 days)	3.00 MG *	6.00 MG
(2) Fire Flow Needs	1.05	1.05
<u>Total Storage Needs</u>	4.05 MG	7.05 MG

Appendix XVI - City of Tillamook
Wastewater Facilities Plan, 2003

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**Appendix XVII - Stormwater Facilities
Plan, 2004**

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Appendix XVIII - City of Tillamook Flood Mitigation Action Plan, Update 2010

March 2010
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Acknowledgement

This Flood Mitigation Plan Update (the Update) was prepared with review, editing, and updated information provided through the efforts of the City of Tillamook Flood Mitigation Plan Oversight Committee members, as well as city, county and natural resource agency staff.

The Update is constructed around the original document and in many cases uses the identical information. This is especially seen in the Appendices. *Appendix A* was updated to reflect changes in organizations and contact information; *Appendix B* contains the information about the 2009 process; *Appendix C* has minor edits to include new information; and *Appendices D and E* remain unchanged.

Some of the photo inserts and sidebars remain from the original text and in some cases, the original text was unedited.

Contact information from the original document is below.

Oversight Committee Members

Andy Neal, Tillamook Chamber of Commerce
Butch Parker, Tillamook County Community Development
Denise Lofman, Tillamook Bay Watershed Council
Don Hurd, Tillamook Urban Renewal District
Doug Henson, Tillamook Revitalization Association
Doug Rosenberg, Tillamook Bay Habitat and Estuary Improvement District
Gordon McCraw, Tillamook County Emergency Management
Jan Stewart, Tillamook Planning Commission
Joe Martin Tillamook City Council
Judy Mammano, Tillamook Bay Habitat and Estuary Improvement District
Larry Davy, Tillamook County General Hospital
Leo Kuntz, Nehalem Marine Manufacturing
Leon Vellinga, Drainage Districts
Lisa Phipps, Tillamook Estuaries Partnership
Margaret Page, Business Owner/County Board of Realtors
Mark Labhart, Tillamook County Commission
Matt Mumford, Tillamook Transportation District
Matt Streeter, Business Owner
Rudy Fenk, Tillamook County Soil & Water Conservation District
Shawn Reiersgaard, Tillamook Cheese
Val Folkema, Tillamook Estuaries Partners

Other Stakeholders

Gus Meyer, Citizen
Tilda Chadwick-Jones, TBHEID Staff
Oregon Department of Fish & Wildlife
Oregon Solutions Program

Executive Summary

Background and Purpose

Following the flood and landslide disaster in February 1996, the City of Tillamook and Tillamook County participated in Federal Emergency Management Administration's (FEMA) emergency preparedness programs. In November 1996, Tillamook County completed the **1996 Flood Damage and Recovery Plan** that inventoried disaster-related losses and damages, evaluated economic impacts, and proposed economic recovery strategies.¹ This was followed by the **Tillamook County Flood Hazard Mitigation Plan** that set goals and policies to reduce flood related hazards and damages; reduce environmental impact of flood control; and reduce the long-term cost of flood control and floodplain management. The county's plan focused only on flooding along the rivers throughout Tillamook County.

In November 2001, the Tillamook City Council passed Resolution No.1354 to adopt the Tillamook County plan and agreed to apply for federal funding to develop a flood mitigation plan for the city. In December 2002, the City adopted the **City of Tillamook Flood Mitigation Action Plan** with Resolution 1402.1. The Oregon Natural Hazards Workgroup, from the Community Service Center at University of Oregon, worked with a City appointed Steering Committee that guided the process, and developed the original plan with funding from Flood Mitigation Assistance Program.

In December 2006, the Tillamook County adopted its Multi-Jurisdictional Hazard Mitigation Plan. This plan set out to look at all potential hazards in the county and its cities. The County Commission directed its agencies to identify available funding to implement proposals and actions to lessen the adverse impacts of any future natural disasters. Businesses, industries, and community groups were encouraged to be involved with

“The local mitigation plan is the representation of the jurisdictions commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards.” CFR 201.6

¹ 1996 Tillamook County Flood Damage and Recovery Plan Final Report, p1

plan updates and expansions in the future. At the same time, all seven city councils adopted their city's section within the county- wide plan.²

Flooding in Tillamook

Most flooding in the City of Tillamook occurs along US Highway 101, also known as N. Main, from the overflow of the Wilson and Trask rivers, and to a lesser extent, Dougherty, Hall, Hoquarton sloughs on the north side of the city, and Holden Creek on the south.

Historical alterations to courses of local rivers, creeks, and sloughs and development in the floodplain have changed the nature of flooding in Tillamook.³

As a result of recently completed projects, alterations to the floodplain provided more open space. An example is the result of a FEMA funded buy -out at the Dean property. Removal of the buildings and 12,000 CY of rock and debris from the floodway allows flood waters to quickly subside once the weather conditions change.

Flood Mitigation Plan

The city's flood mitigation plan became a catalyst for agency coordination and public involvement. It set goals and actions to protect life and property; define future mitigation projects; attract project funding; and reduce flood insurance premiums. It recommended strengthening partnerships between local and regional government agencies, community organizations, and citizens to hasten response and recovery. This was to be carried out through a strong program of public education and outreach for preparedness and mitigation.

Strengthened Partnerships

After the disasters of 1996, Tillamook County became a Project Impact Community. Tillamook County Emergency Communications District became Oregon's first 9-1-1 District in 1998 a coordinated interagency response system that quickly goes into action during disasters. Reverse 9-1-1 now provides early flood warning, coordinated and timely response during a disaster with coordinated recovery support following. Through the efforts of elected officials, Oregon Governor's office approved formation of an Oregon Solutions Flooding Project to focus on reducing the effects of flooding in the Tillamook Area.

² STORM Safe, FEMA and Oregon Office of Emergency Management, p1

³ City of Tillamook 2002 Flood Mitigation Plan, p v

Public Outreach & Involvement

The city's website provides improved public access to information and links to the Tillamook County and FEMA's web site for flood information. The Tillamook County Emergency Communications District website has links to all partner agencies.

The City of Tillamook continues to provide the most current information about flood maps and flood insurance to realtors and lenders each year; At City Hall the staff provides information about flood impacts and requirements for specific properties upon request.

The Tillamook Bay Habitat and Estuary Improvement District (TBHEID) provide excellent public information presentations about flood hazards and mitigation efforts. These sessions provide information to the community, including print materials produced by FEMA, Oregon Emergency Management, and others.

Tillamook County Economic and Small Business Development distributes the "*Tillamook County Disaster Preparedness Guide for Business*", co-developed with community leaders, to city halls and Chamber of Commerce offices throughout the county. They are also offering to provide trainings to business groups regarding the contents and how to use the guide as a tool for a business.

Attracting Funds for Mitigation Projects

City of Tillamook successfully used the 2002 plan to document mitigation activities; as a needs assessment to justify applying for grants such as FEMA's Flood Mitigation Assistance Program (FMA); and to apply for updated Flood Insurance Rate Maps. This plan meets criteria needed to apply for FEMA Hazard Mitigation Grant Program funding used to elevate, relocate, or buy-out severe repetitive loss properties.

Tillamook Bay Habitat and Estuary Improvement District formed in June 2002 in north City of Tillamook as a non-profit self-taxing water control district. District funds matched partners' funds for maintenance and reduction of flood-ecosystem damages to area north of the City of Tillamook.

The Oregon Solutions project brought seed money to leverage larger grants, and in some cases perhaps even loans, to fund mitigation projects.

Gained Eligibility for the Community Rating System

By adopting the 2002 Flood Mitigation Plan, City of Tillamook became eligible to enroll in FEMA's Community Rating System (CRS). The city is rated at 8 out of 10 categories, with 1 being the best. Points are earned

and the rating number goes down as a community completes more mitigation work. Following receipt of the 8 rating, city residents and businesses received a 10% reduction in their flood insurance premiums through the National Flood Insurance Program (NFIP). Annual reviews and applications demonstrating continued compliance keep the city eligible for the CRS program. A new rating calculation occurs every 5 years when the national FEMA office reviews applications and determines the value of mitigation activities.

Tillamook Flood Mitigation Goals⁴

The flood mitigation goals are statements of desired outcomes for reducing community risk from floods. These goals remain the same as the original plan. They become a filter when selecting and/or prioritizing projects.

- A. Protect Life and Property*
- B. Preserve Natural Areas Related to Flooding*
- C. Coordinate and Enhance Emergency Services*
- D. Improve Structural Projects*
- E. Enhance and Promote Public Education*
- F. Improve and Promote Partnerships, **Coordination, and Implementation***

Flood Mitigation Action Accomplishments

The action items were detailed recommendations for activities in which local, regional, and state agencies could participate to reduce future losses from flood events. City of Tillamook was listed as the coordinating agency for all projects. Projects were divided into short term (1-2 years) and long term (3-5 years) activities. A summary of each is below.

Summary of Short-term Mitigation Actions (1-2 Yrs)

⁴ City of Tillamook 2002 Flood Mitigation Action Plan

Action	Goals	Listed Partners	Status
S-T #1 Institute a Flood Mitigation Plan Oversight Committee	E,F	County, Drainage Districts, TBHEID, TBWC, TEP, Chamber of Commerce, County Emergency Mgt., TCCA, TCGH, Oregon Solutions Group, Tillamook County Transportation District, Tillamook SWCD, Tillamook Chamber of Commerce, Tillamook Revitalization, Tillamook Urban Renewal Dist, 9-1-1 District	Committee convened in May 2009 to update the 2002 plan. Plan due for 5 year update in 2010
S-T #2 Community Rating System Participation	A,B,E,F	County Emergency Mgt, FEMA, Insurance Services Organization, Inc., County Community Development	City met qualifications, reduced flood insurance premiums by 10%, current rating is 8
S-T-#3 Develop commercial district Floodplain Mgt Strategy	A, B	County, Drainage Districts, TBHEID, TBWC, TEP, Chamber of Commerce, County Emergency Mgt., TCCA, TCGH, Oregon Solutions Group, Tillamook County Transportation District, Tillamook SWCD, Tillamook Chamber of Commerce, Tillamook Revitalization, Tillamook Urban Renewal Dist, 9-1-1 District	Using FEMA funds city offers 75% of the cost to buy or elevate repetitive loss property. City is developing plan for best use of vacant land along N. Main and looking at potential receiving sites for future businesses volunteering for this program. New construction must follow city ordinances for construction in the floodplain
S-T #4 Residential property mitigation	A, B	TBHEID, County, EDC, Chamber, Homeowners Assn., TEP, Realtors	No residential property owners requested assistance
S-T #5 Develop comprehensive public outreach and education program	A, C, E, F	Chamber, local realtors, businesses, schools, TPUD, TCGH, TCCA, Headlight Herald, TBHEID, County Emergency Mgt, TBCC, TBWC, American Red Cross. TEP	No comprehensive outreach program exists, although many partners offer outreach and education within their mission.
S-T #6 Improve access and update city's flood map info.	E, F	Corps of Engineers-Portland office; Water Resources Department, TBWC, FEMA	City maps digitized, and amended Amendment letters are available on the county website.

Summary of Long-Term Actions (3-5 yrs)

Action	Goals	Listed Partners	Status
L-T #1 Develop City Storm Water Mgt. Plan	A, D	Bay City, TEP, County Public Works, Drainage Districts, TBWC, NRCS, TBHEID, Community Solutions Team	Plan was completed: includes preliminary engineering and cost estimates
L-T #2 Develop a flow regime project	A, D	TEP, TBHEID, ODFW, TBWC, <i>Oregon Solutions Flooding Project</i>	HEC-RAS model developed; Project Exodus designed
L-T #3 Develop a city emergency response system	A, C, F	National Weather Service, ODF, USGS, TBHEID, OEEM, American Red Cross, TCGH, fire/police, KTIL, POTB, ODOT, Drainage Districts, Tillamook Youth Authority, TBWC	Reverse 9-1-1 now provides early warning to business and home owners when floods threaten; a Command and Control Center is set up at the 9-1-1 Center
L-T #4 Restore riparian areas, floodplains and wetlands; protect water quality	A, B, C, D, F	County TBWC, TEP, TSWCD, NRCS, TBHEID, DEQ, ODFW, County Emergency Mgt.	Hoquarton Trail provides interpretation in a riparian area; plan in the works looking at active and passive treatments in the N. Main area. Project Exodus 30% design
L-T #5 Strengthen land use planning and zoning	A, F	DLCD, County, TBHEID	As buy-outs occurred, zoning changes to Open Space on those parcels. No permanent structures on those sites Elevation of BFE for new construction

Introduction

Tillamook Community Profile

Population and Demographics

Rivers run through it and they all feed into Tillamook Bay! City of Tillamook is located in Central Tillamook County at the intersection of US Highway 101 and Oregon Highway 6, on Oregon's north coast. The Wilson River forms the north boundary, Holden Creek runs through the south side, and the Trask River borders the south west edge of the city where it is joined near tidewater by the Tillamook River. Running through the low lying N. Main Ave. commercial district are Hoquarton, Dougherty, and Hall sloughs. Timber and wood products, dairy production, commercial and sport fishing, and tourism are the traditional industries for this region.

Tillamook is a small city with an estimated 4700 residents in 2008. It is the largest jurisdiction in the county and has steadily grown over the last decade, growing on average 0.94% a year since 2000⁵. The city annexed new areas to the east and west of its boundaries in 2005 which accounts for some of the population increase. Nearly 32% of Tillamook's resident population is younger than 20, about 47% are between 20 and 50 years old, and just over 21% are over 50 years old. Approximately 11% of the total population is Hispanic or Latino. Median household is \$27,550 and 65.7% of the population has low or moderate income.⁶

Housing and Development

With the annexation of land on the east side to the city, a large number of housing units were added to the city's inventory. These include multi-family dwellings with the exception of one new development. Most of the structures are 0-15 years old.

In addition to elevation, flood proofing, and relocation of repetitive loss commercial buildings along N. Main Ave., the city saw public and private investment on the west side of town that included construction of large new facilities for a public library, medical offices near the hospital, Safeway, Bank of Astoria and the TLC Federal Credit Union. Tillamook Bay Community College built a



Welcome sign on U.S. Highway 6. Source: ONHW

⁵ Reid Johnson, Economic Opportunity Analysis, October 2009, p7

⁶ Income Survey, 2005

new main campus on the east side of the city. Fred Meyer significantly expanded its facility, a new Burger King, another retail building, currently occupied by Denney's Restaurant were all completed on N. Main Ave. and Wilson River Loop.

Employment and Industry

As the Tillamook County Seat, regional offices of state and federal government agencies are located in the City of Tillamook. Tillamook School District 9, Tillamook Bay Community College, and several small private schools provide employment and, in some cases are partners in employee training programs. The food products industry includes dairy production and specialty meat products. In addition there are wood products companies and a fairly wide variety of retail businesses. Tourism is a large sector of the economy as well. Visitors from the Portland area arrive via Oregon Hwy 6 and other travelers moving north or south along the Oregon Coast all travel through Tillamook. The Tillamook Cheese Factory Visitor Center sees nearly a million visitors a year and hunters and sports fishermen stay in Tillamook motels and frequent the restaurants in the fall. There is a growing medical services economy in the area as Tillamook County General Hospital expanded and the new medical office buildings have been constructed in the same neighborhood.

Overview of the Flood Mitigation Plan Update

Purpose of the plan update

Flood mitigation plans assist communities in reducing risk from flood damages by identifying resources, information, and strategies for reducing flood risk, meanwhile helping guide and coordinate mitigation activities & public investment throughout a defined area.

The purpose of this Flood Mitigation Plan Update is threefold:

1. Evaluate the 2002 Action Plan to assess completion and effectiveness.
2. Propose new action items and expected outcomes.
3. Remain in compliance with federal assistance program requirements.

Methodology

This updated document is based on information gathered and compiled by VLG Consulting. That included written comments from members of the Oversight Committee following review of the City of Tillamook 2002 Flood Mitigation Plan; interviews with city and county staff; written comments from ODFW staff; reports from Oregon Solutions, the US Army Corps of Engineers, and the Project Exodus Draft Final Report, prepared by Northwest Hydraulic Consultants & HBH Consulting Engineers. In addition to the previous flood mitigation plans, FEMA requirements and tools on the FEMA Oregon Emergency Management (OEM) and Environmental Systems Research Institute (ESRI) websites were used to prepare a comprehensive review and analysis.

Oversight Committee

A City of Tillamook Flood Mitigation Oversight Committee convened to review and evaluate implementation of action items and perform the formal review process. The Oversight Committee consists of a broad base of stakeholder members from the following local government, agencies, and organizations:

- Business and property owners
- City Council
- City Planning Commission
- Oregon Solutions Program
- Tillamook Bay Habitat and Estuary Improvement District
- Tillamook Bay Watershed Council *organization's*
- Tillamook Chamber of Commerce
- Tillamook County Department of Community Development
- Tillamook County Department of Emergency Management
- Tillamook County General Hospital
- Tillamook Estuaries Partnership
- Tillamook Revitalization Association
- Tillamook Soil and Water Conservation District
- Tillamook Urban Renewal District
- Trask and other local drainage districts

Stakeholder:

Person, group, or organization that has direct or indirect stake in an organization because it can affect or be affected by the actions, objectives, and policies.

Webster's Dictionary

Organization

Section 1: Introduction provides a brief community profile and describes the purpose, methodology, and organization of the *Action Plan*

Section 2: Flooding in the City of Tillamook updates data for mitigation plan activities, and retains discussion about various factors that affect flooding to illustrate the need for continued flood mitigation in the City of Tillamook.

Section 3: Flood Hazard Assessment explains the hazard identification, vulnerability assessment, and risk analysis and provides limited analysis

Section 4: Community Flood Issues updates actions on issues facing community

Section 5: discusses existing mitigation programs and resources available and some actions taken by local regional state and federal agencies, organizations as well as private businesses and individuals.

Section 6: 2003 Plan Goals and Action Item Status reiterates the goals of the *Mitigation Plan* and provides a status on action items from the 2003 Plan.

Section 7: Evaluation of 2003 Plan Goals and 2009-2014 Action Items presents successes and unfinished work for achieving the plan goals and

recommends flood mitigation action items including cost information and sources of funding to implement.

Section 8: Plan Maintenance and Evaluation offers recommended changes to strengthen this element and assure that regular review and evaluation occur.

Appendix A: Flood Resource Directory provides local, regional, state and national sources of flood mitigation information.

Appendix B: Public Process presents methods used to collect information from the Steering Committee, stakeholders, and citizens.

Appendix C: Acronyms outlines acronyms for organizations referenced in the plan.

Appendix D: Cost-Benefit Analysis provides information from the State of Oregon and FEMA on how to conduct an economic analysis of mitigation strategies.

Appendix E: Flood Terminology provides technical descriptions and information about common flood terms.

Appendix F: Written comments received: shows final written comments received during formal public comment periods

Section 2:

Flooding in the City of Tillamook

Tillamook is a Native American word from the Kilamuck Tribe that translates to “Land of Many Waters.” Five rivers, with a long history of flooding, feed into Tillamook Bay: the Kilchis, Miami, Tillamook, Trask, and Wilson. City of Tillamook has experienced flooding throughout its history, but more recently, severe flood events occurred frequently during the 1990s and the first 9 years of the 21st century. Flooding poses a threat to life and safety, public and private property, and can cause great disruptions to the local economy.

Flooding in the City of Tillamook occurs along US Highway 101 from the overflow of the Wilson and Trask rivers, and to a lesser extent, Dougherty, Hall, Hoquarton sloughs, in the north and Holden Creek at the South.

The damaging floods in the North Main commercial district and the low lying dairy land within the city limits are primarily due to flooding of the Wilson River. Table 2.1 show historic crests on the river since 2002, with 1964 and 1996 as comparators. Prior to 2006 these were the highest floods recorded.



1972 flood. Source: Tillamook Historical Society

Table 2.1
Historic Crests on the Wilson River

December	22	1964	20.26
February	8	1996	19.51
February	1	2003	14.80
January	10	2006	15.60
January	30	2006	13.27
November	7	2006	22.84
December	3	2007	20.50
November	13	2008	15.92
January	2	2009	13.86
January	8	2009	15.92

Source: NOAA Weather Service and Tom Manning, Tillamook County Emergency Management

Flood stage on the Wilson River is 11 feet. Table 2.2 shows what to expect at various flood levels on the Wilson River.

**Table 2.2
Flood Affects by flood level**

Wilson River Flood Level	Impact
12.0	Minor flooding of low-lying dairy and pasture land north of Tillamook
14.0	Widespread lowland and dairy land flooding begins; sloughs north of the city (mainly Dougherty) begin to overflow along the river; minor flooding begins in the business district north of Tillamook and along N. Main Ave.
15.5	Expect widespread flooding in the north part of Tillamook along N. Main Ave to the vicinity of Tillamook Cheese Factory; the most noticeable flooding impacts are to businesses near Dougherty slough; widespread flooding of low lying dairy pastureland along with numerous rural access roads outside of Tillamook.
19.0	Widespread flooding in the town of Tillamook and surrounding areas; N. Main Ave. through the northern portion of Tillamook has historically been closed at this and higher stages.
21.5	Expect flooding as devastating as the February 1996 flood
22.5	Expect flooding as devastating as the December 1998 and December 1996 events.

Source: NOAA Weather Service and Tom Manning, Tillamook County Emergency Management

National Flood Insurance Program

As of July 31, 2009 there were a total of 178 claims filed for flood insurance, and only 1 was still open. Total payments for damages are \$7,364, 288.72. Since adopting the Flood Mitigation Plan, City of Tillamook has assisted 2 businesses to re-locate, 2 business owners to elevate their buildings, and 4 businesses with sever repetitive losses voluntarily participated in the FEMA Buy-out program. Table 2.4 shows those businesses and the action taken. The City purchased the Tillamook Inn before the 2002 plan was in place, and the Tillamook Veterinary Clinic used assistance from the city to elevate its facility prior to that time.

FEMA funds can be used to purchase a property at 75% of it's appraised value; elevate a property using FEMA funds for 75% of the actual cost to elevate; or relocate a structure, which is defined as physically lifting and re-locating the structure. None of the Tillamook projects was actually completed under the relocation category, although 2 businesses used their buy-out payments to relocate their businesses to higher ground. Table 2.3 shows assistance to businesses owners for buyout or elevation since 2002.

Table 2.3
City of Tillamook Flood Mitigation

Property	Year Complete	Buy-out	Relocate	Elevated	Mitigation Cost
Tillamook Inn	Aug. 2000	X			\$513,654
Coast Tire	Sept. 2003	X			\$255,770
North Port Plaza	Oct. 2007			X	\$1,504,922
Dean Motors	July 2006	X			\$771,341
Rental Center	Oct. 2007	X	relocation		\$217,796
Western Royal	Dec. 2004			X	\$161,200
RV Repair	Oct. 2009	X	relocation		\$470,870
Dairy Queen	August 2009	X			\$680,776

Source: Tillamook County Community Development Department

What Factors Create Flood Risk?

Flooding occurs when climate, geology, and hydrology combine to create conditions where water flows outside of its usual course. Flooding is a frequent occurrence on many coastal rivers and their tributaries in Oregon. Seasonal flooding is common in the lowlands and usually has little or no widespread or long-term detrimental effects. In Tillamook, geography and climate conditions create chronic flooding that leaves behind a layer of fertile black loam across the valley floor each season. However, an ordinary seasonal flood can turn into a catastrophic event under certain conditions.

Geography and Geology

The City of Tillamook lies in the lowlands of the 582-square mile Tillamook Bay basin. Steep, forested slopes with elevations up to 3,690 feet characterize the uplands of the Tillamook basin. River channels are moderately confined and precipitation on the steep slopes is routed rapidly downhill. Below the 100-foot elevation, the basin begins to level into the flat valley floor where unconfined channels traverse the lowlands to Tillamook Bay. This drowned-river estuary is one of the largest in Oregon, covering up to 12-square miles at high tide.⁷

Historic downtown Tillamook lies 22 feet above sea level, on an ancient riverbank. The Wilson River to the north, and the Trask to the south, border the City's commercial area. Dougherty, Hall, and Hoquarton sloughs cross under the N. Main Ave. corridor. The map on the following page illustrates Tillamook's orientation within the lower Wilson and Trask floodplains.

While most rivers throughout the County reach flood levels at least once every rainy season, the Wilson and Trask rivers flood more frequently, usually cresting above flood stage more than once a year. Records show that in a period of 26 years from

⁷ City of Tillamook Flood Mitigation Plan, p 11

1970 to 1996, the Wilson River exceeded flood stage 93 times and in the 13 years post-1996 there are more than a dozen occurrences.⁸

Climate and Precipitation

As marine air moves onshore along the Oregon coast, it rises and cools over the foothills of the Coast Range, promoting heavy rainfall in the higher-elevations – often as much as four to six inches in a single day. Steep-gradient coastal streams quickly move floodwaters through the watershed, causing them to concentrate in the rivers’ lower reaches before discharging into the Pacific Ocean. While coastal streams are usually at flood stage for less than two days, severe storms of unusually long duration can raise streams above the flood stage for three to four days or more.⁹ The most widespread and potentially dangerous flooding of lowlands occurs when excessive stream flooding combines with adverse coastal conditions. If strong winds and storm surges accompany high spring tides, extensive coastal flooding can result. When extreme river flows then meet high sea levels, floodwaters cannot discharge into the ocean. With no outlet waters backflow into the estuary and flood the low-lying areas.

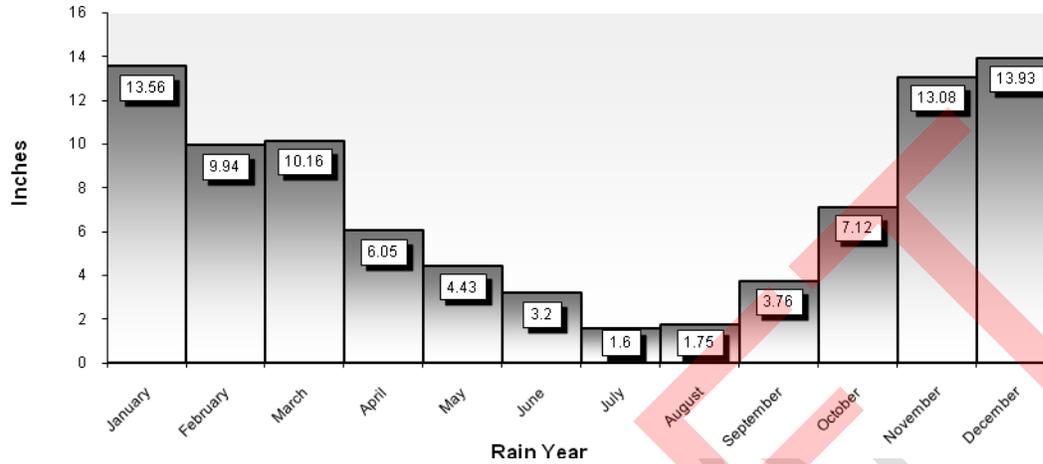
Weather extremes also contribute to the potential for catastrophic flooding. During the rainy season it is common for a series of back-to-back storms to saturate soils and fill wetlands, ponds, and depressions throughout the floodplain with excess water. With these natural catch basins filled to capacity, if storms persist, or if a particularly large storm system moves onshore, major flooding usually results. Cold spells that bring heavy snowfall to coastal mountains, followed by the fast warming and heavy rainfall that accompany a subtropical front (often referred to as a “Pineapple Express”), can also pose serious flood threats. The flood of 1996 is an extreme example of this type of rain-on-snow event. With an anticipated climatic trend towards warmer winters due to global warming, there is an increased chance for winter rain and rain-on-snow events.

Flooding is most common from October through April, when storms from the Pacific Ocean bring intense rainfall to the area. Tillamook receives approximately 88 inches of rain on average each year. During the rainy season, monthly rainfall totals average far higher than other months of the year. Figure 3.1 is based on rainfall data recorded in City of Tillamook from 1961-1990 and is available from the Oregon Climate Service (OCS) website.

⁸ City of Tillamook 2002 Flood Mitigation Plan, p11 plus info from Tillamook Emergency Mgt. Department

⁹ City of Tillamook 2002 Flood Mitigation Plan

Figure 2.1.
Average Monthly Rainfall for Tillamook, Oregon



: Oregon Climate Service

Source

Land Use

The Tillamook Bay basin was once inhabited by the Kilamuck tribe and frequented by other Native American coastal tribes. Upon discovery of the area's fertile lowlands, productive fisheries, and large expanse of forests, Americans and Europeans began settling in Tillamook in the 1850s. With increased human presence on the landscape, natural processes in both the upland and lowland areas of the basin were affected.

Research suggests coniferous forests of the Pacific Northwest historically have had low frequency, high-intensity fire cycles estimated at 400-year intervals. Fueled by a prolonged drought and ignited by human-caused error, a series of three fires raged through Tillamook's forested uplands in 1933. Termed the "Tillamook Burn", it remains the most destructive fire in Oregon's recorded history. Six decades of severe fires north and south of Tillamook basin preceded the Tillamook Burn and additional fires in the Tillamook basin occurred in 1939, 1945, and 1951. A total of 360,882 acres were burned in only 80 years, severely damaging the soil and inhibiting natural forest regeneration.

Timber logging began in the Tillamook basin valleys in the 19th century with ox teams and horses. With the advent of the steam trains and donkey engines, timber extraction expanded into the uplands. After the Tillamook Burn, large salvage logging programs began and a network of logging roads fragmented this region. The primary effects of these upland changes—fire, logging, and salvage—increased water delivery to streams, transportation downstream, and increased sediment delivery to lowlands.

Early settlers in the lowlands engaged in the traditional practice of reclaiming floodplain lands by constructing levees and dikes and installing drainage networks. To provide both protection from floods and brackish water from incoming tides, multiple landowners and drainage districts erected individual systems of levees and dikes. To maximize the amount of land to be protected and take advantage of the higher ground of natural levees, most of these flood control structures were located immediately alongside rivers and sloughs. To increase the length of the growing and grazing season, drainage tiles were placed below the surface of

agricultural land to remove excess water while also increasing susceptibility to land subsidence.

To aid in navigation, river channels were dredged and large wood was removed to increase channel depth, provide upstream access, and increase river flow capacity. Cut-off dams were constructed to eliminate the bends of winding river channels and, in turn, shorten the course of the river. These simplification measures removed alternative channels for floodwaters to travel during high flow events and increased the erosive action on banks by allowing for increased flow velocities.

Agriculture, primarily associated with Tillamook's dairy industry, is still the most prominent land use within the greater Tillamook valley lowlands. While most of the land is pasture benefiting from new soil deposits from seasonal flooding, livestock health and loss of access to grazing land are risks associated with floods. Very large floods can smother the fields and carry large deposits of weed seeds that render the pastures useless for long periods of time. Clean-up and replanting are costly, as are the additional feed purchases necessary because pastures are unavailable. Confined animal feeding operations can pose a threat to human safety and aquatic habitat when accidentally exposed to floodwaters by releasing concentrated animal wastes into area streams.

Urban land use is the second most extensive use in the 100-year floodplain. Heavier building concentration, roads and other needed infrastructure make the cost much higher in these areas when flooding occurs. Commercial development tends to be located in this region, causing significant disruption to the local economy. Floodwaters often block roadways for long periods, cutting off residents from their homes or employees from work, while associated high winds can take down power lines for an unspecified amount of time. Reduction of flood risk in developed areas has a greater overall effect on reducing the cost from damages. The interaction of human activities with changing natural systems has increased the magnitude, frequency, and impacts of flood events. These events affect water quality through increased erosion and exposure of floodwaters with industrial, agricultural, and urban waste products.¹⁰

Characteristics of Flooding

In 1997 the US Senate authorized the Tillamook Bay and Estuary, Oregon, General Investigation to evaluate flood damage reduction and ecosystem restoration in the Tillamook Bay Watershed. Products of this study include development of a one-dimensional hydrodynamic modeling tool, Mike 11 that was ultimately converted to the HEC-RAS Model.

Local governments require Elevation Certificates developed by a licensed professional engineer for all proposed developments in the 100 year flood zone. Tillamook City's Zoning Ordinance states that the cumulative effect of any proposed development [in the floodway], when combined with all other existing and anticipated development, shall not increase the water surface elevation of the base

¹⁰ Ibid.

flood more than one foot at any point with the flood zone.¹¹ Many types of flooding occur in Tillamook. They include riverine flooding, shallow area flooding, urban flooding, and coastal flooding.

Riverine Flooding

Riverine flooding is the over bank flooding of rivers and streams. The natural processes of riverine flooding add sediment and nutrients to fertile floodplain areas. Flooding in large river systems typically results from large-scale weather systems that generate prolonged rainfall over a wide geographic area, causing flooding in hundreds of smaller streams, which then drain into the major rivers. The most severe flooding conditions generally occur when direct rainfall is augmented by snowmelt. If the soil is saturated or frozen, stream flow may increase due to the inability of the soil to absorb additional precipitation. The danger of riverine flooding occurs mainly during the winter months, with the onset of persistent, heavy rainfall, and during the spring, with the melting of snow in the Coast Range. Shallow area flooding is a special type of riverine flooding. FEMA defines shallow flood hazards as areas that are inundated by the 100-year flood with flood depths of only 1 to 3 feet. These areas are generally flooded by low velocity sheet flows of water.

Urban Flooding

As land is converted from fields or woodlands to roads and parking lots, it loses its ability to absorb rainfall. Urbanization of the watershed changes the hydrologic systems of the basin. Heavy rainfall collects and flows faster on impervious concrete and asphalt surfaces. Water moves from clouds to the ground and into streams at a much faster rate in urban areas. Adding these elements to the hydrological systems can result in floodwaters that rise rapidly and peak with what is often violent force. Almost one-quarter of the area around Tillamook Bay is urbanized, and is comprised of impermeable surfaces that either collect water or concentrate the flow of water in unnatural channels. During periods of urban flooding, streets can become swift moving rivers and basements can fill with water. Storm drains often back up with vegetative debris causing additional localized flooding.

Coastal Flooding

Coastal flooding occurs in low-lying coastal areas, and is caused by heavy rain, large waves, or even tsunamis triggered by underwater seismic events. The areas susceptible to this intense wave action are termed high velocity zones, or "V-zones." Several portions of US Highway 101 in northern Tillamook are below the recorded seasonal high tide of 10.2 feet and therefore subject to coastal flooding.

FIRM Maps and Flood Insurance Studies

Tillamook enrolled in the National Flood Insurance Program (NFIP) in 1978, originating the requirement to elevate facilities constructed in the floodplain.

¹¹ Ibid. p16

FEMA and the Environmental Systems Research Institute (ESRI) have formed a partnership to provide multi-hazard maps and information to the public via the Internet. ESRI produces GIS software, including ArcView® and ArcInfo®. The ESRI web site has information on GIS technology and downloadable maps. The hazards maps provided on the ESRI site will assist communities in evaluating geographic information about natural hazards. Flood information for most Oregon communities is available on the ESRI web site. Visit <http://www.esri.com> for more information.

Communities participating in the NFIP may adopt regulations that are more stringent than those contained in 44 CFR §60.3, but not less stringent.¹² Floodplain maps are used to implement floodplain regulations and to delineate flood insurance purchase requirements. A Flood Insurance Rate Map (FIRM) is the official map produced by the FEMA, which delineates Special Flood Hazard Areas or floodplains where NFIP regulations apply. Insurance agents and mortgage lenders use FIRMs to determine if flood insurance is required and what insurance rates apply.¹³ Water surface elevations are combined with topographic data to develop FIRMs and illustrate areas that would be inundated during a 100-year flood, floodway areas, and elevations marking the 100-year-flood level. In some cases they also include base flood elevations (BFEs) and areas

located within the 500-year floodplain.¹⁴

Map amendments can be requested when repetitive losses occur in structures that although built above known flood elevations, become repetitive loss properties. Two such properties were amended in January 2006 and those letters appear in the record when one accesses the Tillamook FIRM map on the FEMA website.

¹² Ibid.7

¹³ Ibid.

¹⁴ ibid

Flood Hazard Assessment

Hazard Identification

Hazard identification is the first phase of a flood hazard assessment. Identification is the process of estimating (1) the geographic area at risk from flooding, (2) the intensity of the flooding that can be expected in specific areas of the floodplain, and (3) the probability of occurrence of flood events. This process usually results in a floodplain map. Floodplain maps provide detailed public information that can assist planning jurisdictions in making policy and land use decisions. The hazard identification maps on the following pages are based on the most recent Flood Insurance Rate Map (FIRM).

The FIRM depicts the extent of the 100- and 500-year floodplain in the city, or where floodwaters would extend if there were such a flood. The floodway area is also shown on the FIRM and depicts the area that should remain free of obstructions so as not to impede conveyance of the river system. The 100-year floodplain in Tillamook extends along the Wilson and Trask rivers, reaches of Holden Creek and a series of interrelated sloughs. The predominant flow along these waterways is from east to west but can be exacerbated by high tide in Tillamook Bay when the flows become restricted and variable, causing flood waters to pond. When the tide falls, the floodwaters enter Tillamook Bay through established drainage courses and a series of one-way tide gates.

The FIRM for Tillamook City was first completed in 1978 but no floodway was established as part of the initial Flood Insurance Study because of the complexity of flooding in Tillamook City and the tidal effects on flooding. Floodwaters often flow in many directions away from the rivers and sloughs, as well as down the river channel. Frequent high water events have changed the streambed elevation in Wilson and Trask Rivers and the major sloughs, raising and widening flood levels and potential impacts. Moreover, increased development within Tillamook can also affect the hydrologic characteristics of the basin. In 1980, Tillamook City annexed the US Highway 101 corridor north of Highway 6 to Wilson River Bridge, extending the city limits to lands that were previously in the County's defined floodplain. Prompted by many of these changes, FEMA began the process of studying and redefining Tillamook City's FIRM and establishing a floodway area in 1999. The Tillamook City Council approved adoption of the revised FIRM in September 2002.

The City of Tillamook is working with Department of Land Conservation and Development (DLCD) through Oregon Solutions Project #4 to review of

FEMA uses FIRMs to identify properties that need to purchase flood insurance and, if developed, need to meet floodplain regulations. Copies of the Tillamook FIRM are available at Tillamook City Hall.

properties in the floodplain and floodway that became vacant as a result of the FEMA buy-outs. As part of the program the property's zone was changed from commercial to open space. The study is analyzing two things: the best options for new uses of the vacant land, and options to establish receiving sites for those businesses that may not require N. Main Ave. exposure and want to relocate their business out of their flood prone location.

The Oregon Solutions process to address repetitive flood damage losses in the Tillamook Bay area, resulted in an agreement among federal state and local government agencies, local non-profit groups, and local business interests. Three groups emerged from that process: a finance team to seek funding for projects; a land use team to evaluate what land use measures were in place that could be more consistently enforced, and/or what new land use options might need to be evaluated for implementation; and finally the projects generating design team.

Through studies conducted by the US Army Corps of Engineers and the Oregon Solutions Program hydrodynamic modeling of flooding initially identified nearly 60 potential alternative measures that were believed to provide some flood benefit, and/or ecosystem restoration. This number was eventually reduced to 14 after further evaluation to determine which of the alternatives could result in both flood reduction and ecosystem restoration. To get down to the 14 projects the Corps of engineers performed engineering and biological evaluation in the area around the City of Tillamook.¹⁵ After this evaluation there were only two project alternatives that showed some promise for accomplishing both objectives. One the Hall Slough Project that would reconnect the tidal flows in the old slough, allow for high flow flushing from the Wilson River, and setback levees with riparian plantings. This is still a high priority ecosystem restoration project and would eliminate flooding in the N. Main Ave. business district up to approximately the 2-year flood event. The cost to complete this project was seen as prohibitive at the time of the study and the project was set aside.

The other project is the Wetland Acquisition/Swale alternative that would restore tidal marsh/wetland with actions to offset flood increases. The Oregon Solutions process to address repetitive flood damage losses in the Tillamook Bay area, resulted in an agreement among federal state and local government agencies, local non-profit groups, and local business interests. Three groups emerged from that process: a finance team to seek funding for projects; a land use team to evaluate what land use measures were in place that could be more consistently enforced, and/or what new land use options might need to be evaluated for implementation; and finally the projects generating design team. The group adopted a list of action items and selected 6 infrastructure projects designed to reduce flood impacts. Among those projects were the Hall Slough project and the Modified Wetland Restoration and Swale project. After reviewing these two projects it was agreed by the Design Team and the Corps of

¹⁵ Tillamook Bay and Estuary, Oregon General Investigation Feasibility Report Executive Summary, February 2005

Engineers that with some modification these projects could possibly be merged into a new more complex project that would dramatically improve flooding conditions as well as providing the ecosystem restoration to the floodplain.¹⁶ The resulting combination was named Project Exodus. Information about Oregon Solutions is available on the internet.

Vulnerability Assessment

Vulnerability assessments combine hazard identification with an inventory of existing or planned property and population within the floodplain. This process helps to identify the number of properties at risk from flooding and the dollar value of that property at risk.

In addition to the elevations, relocations and buy-outs that resulted from the use of FEMA funds, there were two businesses that relocated on their own. While their structures remain in the floodway, they are conducting commerce very successfully in their new locations and no longer have the costs incurred from business closures and clean-up costs. One of these is Valley Fresh Produce

The City of Tillamook keeps all 100-year flood building elevation certificates on file in City Hall. Contact the City Manager or City Planner for more information about these records.

whose trade was all local and who relocated to high ground in a very convenient intersection on East Third Street in Tillamook. The other is Safeway. This company was self insured, and had relocated into the floodplain 20 years ago. Following a series of increasingly more difficult flood related situations, the company purchased land at the west edge of downtown Tillamook and built a new facility near their previous location.

To assess vulnerability, Tillamook County GIS used the best data available from the Tillamook County Assessor to estimate property values within the study

area and matched this data with the FIRM boundaries. This vulnerability assessment includes most privately owned tax lots with structures within the floodplain boundaries. They lots included in the assessment have any portion of their area within the 100-year floodplain and have an improved value of greater than \$1000.

The city recognizes the need to build upon and improve this vulnerability assessment when better data become available. This includes 'ground truthing' existing data sets, improved floodplain mapping (ground elevations) in greater detail (1:200 or 1:100 scale), correlation with high-resolution aerial photographs, and overall better integration with the county's GIS.

Table 2.1 presents a summary of the vulnerability assessment for the 100-year floodplain in Tillamook. The table shows that there is \$49.3 million in assessed improved value within the 100-year floodplain. That value is spread over 113 acres

¹⁶ Notes from Oregon Solutions Design Team

of land within the 100-year floodplain. The largest use in terms of both acreage and assessed improved value includes commercial and industrial zoning, covering a total of 90 acres, and with a value of \$39.7 million.

**Table 2.1
Vulnerability Assessment for the 100-year Floodplain**

Building Code Category	Number of Properties	Assessed Improved Value	Acreage within 100-year floodplain
COMMERCIAL	77	\$27,888,340	66
INDUSTRIAL	9	\$11,852,680	20
SINGLE FAMILY RESIDENTIAL	108	\$5,650,160	18
MULTI-FAMILY RESIDENTIAL	26	\$3,963,730	9
TOTAL	224	\$49,564,910	113
Public/Semi Public			30
Open Space			265

Source: Tillamook County GIS, Tillamook County Assessor

Table 2.2 shows the vulnerability assessment expanded to cover the 100-year and 500-year floodplain. This table illustrates that the amount of improved value and the amount of acreage within the floodplain more than when the 500-year floodplain is included in the assessment. Notice that the 500-year floodplain includes more than acres of

**Table 2.2
Vulnerability Assessment for the 100 and 500-year Floodplain**

Building Code Category	Number of Properties	Assessed Improved Value	Acreage within 100-year floodplain
COMMERCIAL	90	28,172,510	68
INDUSTRIAL	10	11,903,870	26
SINGLE FAMILY RESIDENTIAL	108	9,639,500	34
MULTI-FAMILY RESIDENTIAL	26	4,077,490	10
TOTAL	264	53,793,370	138
			31
Public/Semi-Public			265
Open Space			

Source: Tillamook County GIS

Risk Analysis¹⁷

Risk analysis is the third and most advanced phase of a hazard assessment, building upon the hazard identification and vulnerability assessment. A flood risk analysis includes two components: (1) the amount of loss to both property and life that may

¹⁷ City of Tillamook 2002 Flood Mitigation Plan

result from a flood event (defined by the vulnerability assessment); and (2) the number of flood events expected to occur over time. Risk analysis involves estimating the damage, injuries, and financial losses likely to be sustained in an area over a given period of time from a flood event.

This level of analysis involves using mathematical models. Flow velocity models can assist in predicting the amount of damage expected from different magnitudes of flood events. The data used to develop these models is based on hydrological analysis of landscape features. Changes in the landscape, often associated with human development, can alter the flow velocity and the severity of damage that can be expected from a flood event.

Using GIS technology and flow velocity models, it is possible to map the damage that can be expected from flood events over time and to pinpoint the effects of certain flood events on individual properties.

At the time of publication of this plan, data was insufficient to conduct a full risk analysis for flood events in Tillamook City.

Fostering partnerships between the City, Tillamook County GIS, and the State Floodplain Manager will help support development of improved floodplain data for the City. This plan includes recommendations for building partnerships that will support the conducting a future flood risk analysis in Tillamook City.

Community Flood Issues

What is susceptible to damage during a flood event?

Development in the floodplain and floodway is most at risk from flooding, with damage occurring on a regular basis. The single largest impact on a community from flood events is the potential for loss of life and property. During certain years, property loss resulting from flood damage is extensive and can disrupt Tillamook's residents, visitors, community services and economic activity for days, weeks, or much longer.

Life and Safety

Protection of human life is of primary importance. This issue is tied to several other community issues described below. Keeping homes, businesses, and public infrastructure safe from floodwaters will also help protect human lives. In addition, protection of livestock from injury and death is vitally important to the area's thriving dairy industry.

Private Property Damage

The type of property damage caused by flood events depends on the depth and velocity of the floodwaters. Faster moving floodwaters can wash buildings off their foundations and sweep cars downstream. Pipelines, bridges, and other infrastructure can be damaged when high waters combine with flood debris. Extensive flood damage can be caused by basement flooding. Seepage into basements or daylight basements is common during flood events, not only in or near floodplains, but also on hillsides and other areas that are far removed from floodplains. Much flood damage is caused by water saturating building materials susceptible to loss (e.g., wood, insulation, wallboard, fabric, furnishings, floor coverings, and appliances).

Homes

In many cases, flooding damage to private homes renders them unlivable. The federal government provides disaster funding for people who cannot, or should not, live in their homes because of damage or other disaster related reasons. In the wake of the 1996 floods, Tillamook County received almost \$1.9 million in Disaster Housing Assistance Program, Small Business Assistance Home Disaster Loans, and Individual and Family Grant Program funds to help offset flood damage to homes.

Manufactured Homes

According to the Tillamook Planning Department, there are no mobile home parks currently located within known floodplains. However, there are individual manufactured homes that may have some portion of their property in the 100-year floodplain. The safety of these structures requires compliance with the City's flood hazard overlay zoning ordinance, state building codes, and the NFIP. Newly placed structures are to be elevated to a permanent foundation.

Business and Industry

Flood events impact businesses by damaging property and by interrupting commerce. High water can cut off customer and employee access to a business as well as close the business for repairs. Several business owners in City of Tillamook reported that they expect to close their business at least one day a year or more because of flooding. A quick response to the needs of businesses affected by flood events can help a community maintain economic vitality in the face of flood damage. Responses to business damages can include funding to assist owners in elevating, buy-out, or relocating flood-prone structures.

Public Infrastructure

Publicly owned facilities are a key component of daily life for all citizens. Damage to public water and sewer systems, transportation networks, flood control facilities, emergency facilities, and offices can hinder the ability of city, county and state government to deliver services. Of particular importance during such events are damages to critical facilities located within flood hazard areas (i.e., hospitals, fire stations, police, shelters). Government can take action to reduce risk to public infrastructure from flood events and also craft public policy that reduces risk to private property.

Critical Facilities

Critical facilities are police stations, fire stations, hospitals and shelters, which all provide important services to the community and need to be functional during and after a flood event. Tillamook County General Hospital, located in west City of Tillamook provides emergency care to county residents. The northwest corner of the facility is often inundated with water during more significant flood events, which limits the hospital's capacity to operate its life flight transportation system.

Electricity and Telecommunications

Flooding can impact electrical supply systems, telephone, cable lines, and radio transmission, often referred to as lifelines. Floodwaters and associated high winds and heavy rainfall during a severe event can short out electrical lines or cause transformers to fail. Additionally, debris transported by floodwaters or high winds can knock down power poles and put live, high-voltage lines in the water, posing a serious electrocution threat to people. Underground lines are more resistant to flood damage, but can be exposed and damaged by swift currents. Protection of these lifelines during flood events helps ensure that important information can be relayed to the public and allows for more efficient recovery efforts.

Roads

In addition to access for emergency vehicles of all types, pick-up and delivery to the different businesses is critical for both continuation of business plant, but also for the individual producers.

Tillamook Cheese has an agreement with the County Sheriff that addresses when TCCA trucks can pass through flood waters along the Wilson River Loop Road. There is a road marker at Wilson River Loop Road S-N RD B-694 (mile .362) that has

a mark on it at 3'6". The County will close Wilson River Loop Road to cars at some point between 1' and 2' of water over the road, TCCA milk trucks are allowed to travel the loop road until the flood waters reach the 3'6" mark on the road marker.

The reasons for this agreement are:

1. TCCA truck drivers are experienced.
2. TCCA trucks can handle more flood water safely
3. Establishing the mark on the road marker and setting the policy takes the guesswork out of when trucks can pass and when they cannot.

When the Wilson is flooded the Tillamook Transportation District busses use the Wilson River Loop Road and then go back down 101 to Hoquarten Slough as close as they can get to the scheduled route. In 2006, some buses were stranded on the north side of the Wilson River. The District was able to start service the third day after the floodwaters went down enough.

When Hwy. 101 is closed by Rockaway Beach, Garibaldi or Wheeler the busses use Miami Foley road and go behind them and then back through Mohler and down 101 as far as they can to avoid disrupting service any more than necessary.

During natural hazard events, or any type of emergency or disaster, dependable road connections are critical for providing emergency services. Road systems in Tillamook are maintained by multiple jurisdictions. Federal, state, county, and city governments all have a stake in protecting roads from flood damage and lack of access. Tillamook County Public Works is responsible for county road maintenance and aware of roads susceptible to frequent flooding. Road networks often traverse floodplain and floodway areas, the most notable of which is US Highway 101 north of Tillamook's historic downtown to the Wilson Bridge. The highway, maintained by Oregon Department of Transportation (ODOT), is subject to high water annually as it crosses Hall, Dougherty, and Hoquarten sloughs and the Wilson River in less than a two-mile distance.

Funding for county road repair work in Oregon is based upon the number of registered vehicles in the county, not property tax. Many residential properties in Tillamook County are vacation homes and the owners usually have their vehicles registered in the county of their permanent residence. The result is that coastal communities do not receive the appropriate funding to provide the same level of services for a largely visiting public. In addition, federal funding is often population driven, where again second-home owners are not counted. Recently, Tillamook County tried to pass a tax levy for county road funds but it was defeated by voters.

Bridges

Bridges are vulnerable for a number of reasons, and waterlines are commonly attached to bridges, so that when a bridge is damaged by large debris flows or erosion at the abutments, the waterline is also cut off. Throughout the city and the county, bridges are federally, state, county, or privately owned. A state designated inspector inspects all state, county, and city bridges every two years, but private bridges are not inspected and, therefore, can remain a threat to public safety if insufficient.

Storm Water Systems

Storm water systems collect and concentrate rain water and deliver it rapidly into local waterways. During heavy rain and flood events, these systems are often pushed past their capacity and storm water begins to flow over ground, causing additional infrastructure damage. While storm water systems help capture and remove rain water from the urbanized area, increased flows downstream can be detrimental.

Local drainage problems are common throughout the area. The City's Public Works staff is responsible for property within the city limits and must respond to local drainage threats. City of Tillamook recently completed a Stormwater Management plan that includes preliminary design and cost estimates. The biggest challenge is figuring out how to pay for the implementation. For example completing the projects that would address flooding issues in the areas around Holden Creek is estimated to cost over \$1,000,000 not counting the cost of permits.

Water and Wastewater Treatment Facilities

The City Water Department and Fairview Water provide the domestic water supply to Tillamook residents within the urban growth area. Tillamook Wastewater Treatment Plant located on the western perimeter of town provides wastewater management services to approximately 4,700 people. A new wastewater treatment plan is nearing completion. This will be followed by extension of sewer services to an area on the east side of town that is yet to be annexed. It is reasonable to expect that when this project is under construction, some of the culvert and piping changes recommended in the Wastewater Management Plan can be included in those plans.

Water Quality

Environmental quality varies among the waterways in Tillamook. Oregon's Department of Environmental Quality (DEQ) has identified the Wilson and Trask Rivers and Dougherty and Hoquarton Sloughs as water quality-limited. Problems include summer temperatures in the rivers and year-round bacteria in each slough. The water is considered too warm to be an ideal habitat for certain cold water fish species during the summer months.

Increased sedimentation from upstream sources, such as logging and road building practices has incrementally increased the sediment loads collecting in the lower rivers and bay. Sedimentation and lack of riparian coverage both contribute to increased water temperatures in these rivers. Agriculture and urban runoff contributes to high fecal bacteria counts that exceed the standard for water contact recreation.

Floodwaters can further threaten water quality in Tillamook by increasing sediment loads from upstream sources or coming into contact with concentrated livestock waste, hazardous material storage areas, septic and sewage systems, and waste disposal sites. Currently, some facility upgrades are being undertaken.

Flood Management Opportunities

Maintaining and restoring natural areas helps mitigate the impact of flood events on the built environment. Flooding changes the natural landscape and hydrology of an affected area. High water replenishes rich nutrients in floodplain soils and can also benefit riparian areas. Often the best flood control techniques control water using natural features, such as wetlands that assist in water storage and bank stability. Preserving natural wetland systems can assist in water absorption during flood events and buffer water level fluctuations.

Tillamook County recently acquired a former dairy farm west of the City to implement a number of restoration projects: returning the land to wetlands and open space, removing levees and lowering the bay levee to high-tide level, and installing fish-friendly tidegates. Collectively, these projects help provide more efficient water storage and conveyance during flood events and keep waters out of Tillamook's commercial district.

Parks and Open Space

Parks and open spaces help provide a buffer between flood hazards and structures. Preserving existing open space in the floodplain can mitigate future flood impacts by reducing the amount of development in flood hazard areas. Current efforts to increase public open space in the City have been paired with the need to restore and preserve natural systems that provide wildlife habitat and water conveyance during flood events.

A study is currently underway to provide alternatives for low impact use of open space that recently became available through flood mitigation activities.

Riparian Areas

Riparian areas are important transitional areas that link water and land ecosystems. Vegetation in riparian areas is comprised of plants that require much water, like willows and cottonwood trees. During flood events, high water can cause significant erosion but well-managed riparian areas can reduce the amount of bank erosion and, in turn, protect water quality. A healthy and dense vegetation cover in riparian areas also buffers the high energy of floodwaters from washing out adjacent lands.

Wetlands

Many floodplain and stream-associated wetlands absorb and store storm water flows, which reduces flood velocities and stream bank erosion. Preserving these wetlands reduces flood damage and the need for more expensive flood control structures. When the rainy season is over, many wetlands augment summer stream flows by slowly releasing the stored water back to the stream system. Wetlands are highly effective at removing nitrogen, phosphorous, heavy metals, and other pollutants from water. For this reason, artificial wetlands are often constructed for cleaning storm water runoff and for tertiary treatment (polishing) of wastewater. Wetlands bordering streams and rivers and those that intercept runoff from fields and roads provide this valuable service free of charge. The United States Fish and

Wildlife Service has found Tillamook Bay Estuary wetlands to be an important ecosystem for biodiversity

Site-specific Flooding Issues in the City of Tillamook

The following summary explains some of the areas in the city that present important, often repetitive, flood loss and damage issues. Where available, recommendations have been made and are addressed in the flood mitigation action items recommended later in this document.

Holden Creek

The city's stormwater management plan addresses the flooding issues along Holden Creek and has a price tag of \$1,244,000. The community needs to address the best method to pay for these projects, many of which are high priority hydraulic improvements.

North Main Avenue

For businesses that do not rely on tourism traffic, relocating to another place in the City may not affect their business as much as those dependent on tourist traffic. The challenge the City faces is identifying a relocation project that is economically feasible for the property owner. Three repetitive loss businesses found relocation sites that suited their needs and following their relocation are thriving in their new location. They are the exception.

The city completed an economic analysis study to identify potential receiving sites for relocating businesses. These sites must be appropriately zoned, with adequate services, access, space for parking and economically feasible.

Commercial properties purchased by the city are turned into public open space reduces the City's tax base. Leases to temporary or mobile vendors generate some revenue, including property tax, but not enough to make up for the revenue lost in the purchase.

One recommendation for further investigation is establishing a 'no net loss of commercial land' policy for the city.

Reclaim low areas, keep floodways open, and concentrate cluster development on high elevation areas and areas where builders can meet the requirements under the City and FEMA rules.

Community Issue Summary

Community Issue		Issue at stake	Potential Solution
Property	Evergreen Dr.	New 132-unit assisted living facility approved, often inundated area	Culvert work and improvement on Holden Ck.
	Neilsen Rd.	Tillamook Care Center residents twice evacuated Failing septic systems (not within City limits)	Must annex to connect to sewer. This is a land use rule issue
	Flood Insurance	High premiums, cost prohibitive	City CRS reduced rates by 10%, new info may change that to even higher discount
	Repetitive loss properties		City worked with FEMA and County to elevate, or buy 8 business properties.
Business and Industry	Tillamook Lumber	Damage during high flood events	Detention pond recently completed Culvert work and improvement on Holden Ck.
	Les Schwab	Trask River and Holden Creek back up and cause flooding	Culvert work and improvement on Holden Ck.
	Chevrolet dealership	Damage to vehicles on lot	Reverse 9-1-1 now in place
	North Highway 101 commercial corridor	Repetitive structural damage, inventory damage, closed to traffic during extreme events Vehicles traversing during high water cause wake damage Undeveloped commercial property	Reverse 9-1-1 now in place Wet and dry flood proofing 2 businesses assisted to relocate New zoning ordinances changed commercial buy-out lands to Open Space. Map changes
Public Facilities	Child care center (Head Start)	Built in accordance with 100-year base flood elevation requirement in 1995 and facility has flooded twice since then	FIRM Maps Revised 4/2006 Culvert work and improvement on Holden Creek
Critical Facilities	Tillamook County General Hospital	Helipad inundated during significant events Ambulance access blocked on South Hwy 101	Currently seeking funding for 4-5 ft. elevation Alternate route is South Prairie, Brickyard, Trask River to Third St.

Community Issue		Issue at stake	Potential Solution
Roads	N. Main Ave.	Access cut-off between north and south county during extreme events	Wilson River By-Pass emergency route recently finished
	Tone Rd, bridge	SW flooding in City	4ft tubes installed for drainage
	Latimer Rd (Wilson loop junction with Hwy 101)	Tends to flood before or same time as Hwy 101	Project Exodus
	KTIL area (Trask & Tillamook R. meet)	Issue during more serious events	Check with EM about this element
Storm Water / Water Facilities	City of Tillamook Storm water system	No storm water management plan	Developed plan; to be implemented, need \$\$\$
	Water Treatment Facility	Trask River and Holden Creek back-up	New WWTP constructed in different location.
	Third Street area septic systems	High groundwater table backs up septic systems	To be connected to sewer as part of city plan
Levees, diversions, and channel modifications	Latimer Rd. / Wilson R. levee	In need of maintenance	Secure funding for maintenance
	South City	Long flood durations, regular winter storms are causing nuisance floods	Stormwater mgt. plan implementation will address this
Parks and Open Space	Hoquarton Slough	Reconnect to Tillamook River	reconnection
	N. Main Ave.		Reclaim low areas, keep floodways open, focus cluster development on high ground
Wetlands	Carnahan Park	Two ponds disconnected from Trask River	Reconnect wetlands to add storage and conveyance

Existing Mitigation Activities

Existing mitigation activities include current mitigation programs and action items that are being implemented by local, county, regional, state, or federal agencies, private businesses, individuals, or organizations.

Local Programs

Acquisition and Protection of Open Space in the Floodplain

In 2000, the City and Tillamook County, and OEM used FEMA's Hazard Mitigation Grant Program (HMGP) to acquire and remove the Tillamook Inn along US Highway 101. The city leases this property to an espresso vender who can hitch up her facility and get it out of the flood hazard in the event of a pending flood event. This program also allowed the city to assist Western Royal Inn and Northport Plaza to elevate their facilities following significant repetitive flood damage claims. Other property acquisitions include Coast Tire, Tillamook Rental Center, the Dean Motors property, Dairy Queen, and Tillamook RV Repair.

These acquisitions are true mitigation projects that remove damage-prone structures from harms way, keep businesses in place or provide additional open space in the floodplain, and will make the City eligible for more credits for the CRS program.

Drainage Districts

Trask, Stillwell, Sunset, and other drainage districts have been involved in on-going levee maintenance, while some have installed pump stations and spillways with Project Impact funds and others are working with Tillamook Estuaries Partnerships to install improved fish-friendly tidegates.

Tillamook Bay Estuary & Habitat Improvement District

A non-profit, voluntary taxing district formed in June 2002, the Tillamook Bay Estuary and Habitat Improvement District raises funds to implement, support, and maintain flood mitigation projects that alleviate flood impacts in the Tillamook Bay watershed and improve the habitat and estuary around Tillamook Bay and in the Tillamook, Trask, Wilson and Kilchis River drainages.

Regional and State Programs

Wilson River Loop Detour

Oregon Department of Highway Transportation (ODOT) and Tillamook County Public Works, and Tillamook County Flood Control Group worked together to secure State funds to build a detour route around US Highway 101 in the event of a flooding emergency. The flood-prone area lies between First Street and Latimer Road in north Tillamook. Three bridges built on the Wilson River Loop east of town and Latimer Road elevated the road several feet to allow passenger and commercial traffic to flow. The detour serves as a valuable solution to allow continued commercial



Wilson River bypass Source: ONHW

and emergency transport during flood events. There are still times when this road is impassible, but this project reduces the occurrence and the duration of flooding.

Tillamook County Comprehensive Plan

The Tillamook County Comprehensive Plan complies with the guidance of *Oregon's Statewide Planning Goals and Guidelines*. Reviewed by the state to meet strict statewide land use requirements, the Comprehensive Plan establishes the guiding goals and principles for land use in Tillamook County. Specifically, the Tillamook County Comprehensive Plan addresses Statewide Land Use Planning Goal 7: Natural Hazards.

Goal 7 assures that cities and counties protect life and property from natural disasters and hazards through planning strategies that restrict development in areas of known hazards. Goal 7 requires that local governments base development plans on inventories of known areas of natural disasters and hazards and that the intensity of development should be limited by the degree to which the natural hazard occurs within the areas of proposed development.

Tillamook County Comprehensive Conservation and Management Plan (CCMP)

The Comprehensive Conservation and Management Plan was completed and approved in December 1999. This plan outlines specific actions to improve water quality, enhance critical habitats, reduce sediment loading, and improve the floodplain conditions as they affect people, property, water quality, and the natural environment.

Tillamook County Flood Hazard Mitigation Plan

Tillamook County produced the Flood Mitigation Plan in October 1996 after the 1996 floods. The mitigation plan recommended strategies to reduce the occurrence and damages caused by major flood events along the rivers throughout Tillamook County. The plan was developed for the entire county to provide solutions for other jurisdictions to use and benefit from and be implemented in close cooperation with them. Contact the Tillamook County Emergency Manager or Tillamook County Analyst for more information about the County's Flood Mitigation Plan.

Tillamook County Hazard Mitigation Plan

Tillamook County produced an all hazard mitigation plan that looked at tsunamis, earthquakes, landslides, and flooding, and major fire. Each city in the County participated in this plan and included its Vulnerability Assessment and Risk Assessment checklists in the plan. The County and each of the cities adopted this plan in 2004. The county just received funding for an update that is due to Oregon Emergency Management and FEMA in 2011.

Oregon Solutions Tillamook Flooding Project

After the 2006 flood, the State, County, and City representatives sent a letter to Governor Kulongoski requesting that Tillamook flood mitigation efforts be designated an Oregon Solutions project. The Oregon Solutions program provides a structure and process for public and private sectors to collaborate in addressing community needs. After conducting a project assessment in March 2007 the Governor's office made the official designation in April 2007. The Governor assured

participation of his staff and appropriate state agencies with other participating public and private partners through the designation of this effort as an Oregon Solutions Project. A Project Team assembled in an effort to bring partners to the table.

In 2005, the US Army Corps of Engineers completed a 2-dimensional unsteady flow hydrodynamic analysis of the project area that included environmental, economic and real estate analyses using a sophisticated HEC-RAS model specifically developed for the project area.

Project Exodus was developed through the Oregon Solutions Flooding Project, and described in the October 2009 report prepared by Northwest Hydraulic Consultants (NHC Report) under contract to Tillamook County. The report provides the background, objectives, and methods used to investigate possible flood damage reduction measures within the flood plain that lies between Hoquarten Slough, Wilson River, and Tillamook Bay. The report also describes evaluation of various alternatives. Finally, the report presents a preliminary (30%) design for a recommended project, consisting of three (3) project elements: The Southern Flow Corridor, the North Bank Wilson River Field Regrading and the South Bank Wilson River Berm. Read more about this project in Section 5.

National Programs

Federal Emergency Management Agency National Flood Insurance Program

The NFIP is a federal program administered by the Federal Emergency Management Agency (FEMA). The function of the NFIP is to provide flood insurance to homes and businesses located in floodplains at a reasonable cost, and to encourage the location of new development out of the floodplain. The program maps flood risk areas, and requires local implementation to reduce the risk, primarily through restricting new development in floodways and floodplains. The maps are known as Flood Insurance Rate Maps (FIRM).

Community Rating System

Another program under the NFIP is the Community Rating System (CRS). This voluntary program recognizes and rewards local efforts that go beyond the minimum standards of the NFIP. This recognition is in the form of reduced flood insurance premiums for communities that adopt such standards. The Community Rating System encourages voluntary community activities that reduce flood losses, facilitate accurate insurance ratings, and promote flood insurance awareness. Currently, Tillamook County is participating in the CRS program.

Project Impact

Project Impact: Building a Disaster-Resistant Community was a national initiative launched in 1997 by FEMA that aimed to change the way America dealt with disasters. The program encouraged community leaders, citizen and businesses to work together in assessing the community's vulnerability to hazards and implement strategies to limit damage before disasters occurred. FEMA invited Tillamook County to participate as a Project Impact community in 1998 because of its high risk

for earthquakes and floods and the presence of systems already in place that would help make the community more disaster resistant. This effort was intended as an investment to enhance and strengthen the economic structure and long-term stability of Tillamook, regardless of when disasters strike. Projects completed throughout the county during Project Impact include:

- Lower Trask River Drainage pump station and spillway
- Tillamook County Department of Emergency Management expansion and hiring of a full-time director and one staff person;
- Upgraded county flood maps and hazard maps for seismic, landslides and coastal erosion from DOGAMI-GIS;
- Willow tree cuttings and riparian improvement community project completed by Tillamook Junior High Jazz Band;
- Improved, fish-friendly tidegates installed by the National Estuary Project;
- Elevation of several homes and small businesses;
- Construction of “cowpads” (elevated islands for livestock refuge) on dairy farms; and
- Drainage improvements, levee breaching and removal, and levee repair work in the Tillamook Bay basin.

Hazard Mitigation Grant Program

The HMGP administered by FEMA provides grants to state and local governments to implement long-term hazard mitigation measures after the President has declared a federal disaster.

FEMA Region X Policy on Fish Enhancement Structures in the Floodway

The recent designation of several northwest salmon and steelhead runs as threatened or endangered has resulted in an increased effort to restore fish habitat. Restoring habitat often involves placing structures in stream, including fish weirs, log drops, root wads and small rock deflectors, are “encroachments” when placed in mapped floodways. A literal interpretation of the FEMA floodway standard may require a relatively expensive “no-rise” analysis would exceed the cost of the habitat enhancement project.

In order to encourage habitat enhancement projects while still providing communities with information needed to make appropriate floodplain management decisions, FEMA Region X will allow communities to rely on the judgment of a qualified professional regarding the impact of fish enhancement structures on flood elevations. Qualified professionals include hydrologists and hydraulics professionals and staff of fisheries, natural resource, or water resource agencies. This will minimize the cost of getting a “no-rise” analysis. However, the community, while making use of the professional’s advice, must still make the ultimate decision on whether to allow the habitat enhancement structure.

For more information on the policy on fish enhancement structures in the floodway, contact FEMA Region X at (425) 487-4682.

Army Corps of Engineers

Advanced Emergency Measures

Designed by the US Army Corps of Engineers Portland office, Tillamook County contracted a series of flood projects in the lower Tillamook Bay watershed, providing flood mitigation directly to areas in the lower Wilson river drainage and Tillamook City. These projects were simple, temporary measures designed to lessen immediate flooding impacts while the community sought other permanent, long-term solutions through the Corps of Engineers' Tillamook Bay Feasibility Study. This was the first time the Portland office secured funding from the USACOE for a multi-complex project. Beginning in 1999 and now complete the three projects cost an estimated \$400,000.

These projects included:

- 250 feet of rip-rapping on Wilson-Dougherty Slough bank;
- an engineered log jam at the headwater of Dougherty Slough, where spruce trees were layered and anchored to help slow waters entering from its confluence with the Wilson River and debris and sediment were removed from the north and west forks of the Wilson;
- and installation of 12 six-foot tidegates: two at Hall Slough near Makinster Road and the remaining ten installed at the Tillamook Bay dike to provide quicker drainage of floodwaters.

Tillamook Bay Feasibility Study

The 2005 US Army Corps of Engineers studied Tillamook Bay to determine methods to reduce the damage caused by flooding. The goal of the study was to identify and evaluate the problems and opportunities associated with flood damage reduction and ecosystem restoration in the Tillamook Bay watershed and to recommend appropriate actions consistent with federal guidance and sponsor capability. Specifically, the study was to recommend sites with ecosystem restoration and flood mitigation potential.

American Red Cross Response and Shelters

The American Red Cross focuses on meeting people's immediate emergency disaster-caused needs. When a disaster threatens or strikes, the Red Cross provides shelter, food, and health and mental health services to address basic human needs. In addition to these services, the core of Red Cross disaster relief is the assistance given to individuals and families affected by disaster to enable them to resume their normal daily activities independently.

The Oregon Trail Chapter of the American Red Cross operating out of Portland, Oregon serves the citizens of Tillamook County. After the repeated and severe flood events during the 1990s, a Red Cross service center outlet was established in the City of Tillamook and emergency shelters were designated in three locations - north, central, and south county. Central Tillamook County's shelter is The 4-H Dormitory at the Tillamook County Fairgrounds in the east part of town. A part-time

coordinator operates the service center located in downtown Tillamook five days a week and coordinates with local churches, service groups, and Tillamook County Department of Emergency Management to provide education on disaster preparedness.

DRAFT

2003 Plan Goals and Action Items Status

Tillamook Flood Mitigation Plan Goals

Reducing risk from flood events can be described in terms of a series of goals, which can be achieved through a variety of mitigation activities. This section describes the six Tillamook flood mitigation goals and provides additional information about potential mitigation activities that will assist the City in reaching these goals. See Table 6.1 for a summary of goal statements.

A. Protect Life and Property

Activities that protect structures include elevation or relocation projects, floodwall construction, or sand bagging around affected property. Landowners typically undertake property protection activities on a building-by-building or parcel basis. Designing flow-through foundations and floors to withstand floodwaters or not allowing fiberglass insulation under floor spaces reduces flood damage. Improved building structures can become community flood proofing demonstration projects and repetitive loss properties receive priority for acquisition. Participation in NFIP incentive programs such as the Community Rating System helps lower insurance premiums for home and business owners.

The use and development of flood prone areas is limited through planning, land acquisitions, or regulation. Open space and floodways can be acquired, preserved and enhanced while future development is encouraged in non-floodway areas using zoning and accurate flood maps. New buildings found to increase flooding on neighboring properties can be restricted and development of impervious surfaces minimized.

Preserve Natural Areas Related to Flooding

Preserving natural areas includes working with the landscape hydrology to enhance floodplain function and allowing flooding to naturally replenish the lowlands. Existing wetlands can be protected or enlarged to create additional floodwater holding areas. Open space along rivers, sloughs, tributary streams, and the bay can be utilized as public areas. Hazardous materials secured in the floodway and floodplain prevents waters from being contaminated during flood events.

B. Coordinate and Enhance Emergency Services

Emergency services measures undertaken during a flood minimize its impact and save human lives. Communicating vital information, providing individual support, and ensuring emergency vehicle access for the delivery of medical and other necessary services are of key importance during a flood event. A flood warning, response, and clean-up strategy can be coordinated, implemented, and monitoring response coordination during actual events can improve future response.

Hazardous materials secured prior to flood events protect human health. Limiting vehicle speed or closing major thoroughfares to local only traffic during high water events helps protect properties from wake damage.

C. Improve Structural Projects

Structural projects, such as levees or diversions, help keep floodwaters away from an area, while channel modification and restoration can improve water conveyance. Modifying existing structures can improve floodplain connections and allow for improved passage of floodwaters and hydrologic function, such as modifying existing levees to be setback levees. Redesigning culverts and bridges to handle 100-year flood event flows can help maintain road networks while promoting proper movement of floodwaters. Implementation of traditional structural solutions when other options do not exist can protect critical structures or infrastructure. Tie sound resource protection to solutions for flood control.

D. Enhance and Promote Public Education

Providing information and education about flood mitigation efforts creates an informed citizenry and visiting public. Public education activities help people better understand emergency management measures, flooding dynamics, floodplain function, importance of natural features for flood protection, and long-term flood avoidance measures. Information can be distributed by brochure, featured in local newspapers or broadcast on local television and radio stations. Community groups such as TBHEID, SWCD, TEP, TBWC, and students can help engage neighbors and others in targeted public outreach projects. Public information should incorporate local knowledge from residents who have experienced several floods. Promoting good public relations outside the community about the actual danger of flooding is also important.

E. Improve and Promote Partnerships, Coordination and Implementation

Fostering on-going community partnerships and forging new links with other agencies and project partners within and outside the City can help implement flood mitigation projects with the common good involved. To reduce community cost and time, projects should be designed to coordinate with existing plans and projects, such as the Tillamook Bay Comprehensive Conservation Management Plan and the US Army Corps of Engineers Tillamook Bay Feasibility Study. Implementation refers to strategies for implementing the plan. When possible, permanent and/or low-maintenance solutions to flood problems should be selected. The City should insist funding opportunities go to on-the-ground projects that are tied to appropriate ecological and emergency management solutions. Emphasizing local control and solutions while gaining cooperation from State and Federal government can better facilitate plan implementation.

Table6.1
Summary of 2003 Action Plan Goals & Status

Goal	Recommendation	Status 2010
Goal A	<i>Protect Life and Property</i>	
	Engage in and promote long-term, cost-effective regional planning and property protection activities that will reduce or eliminate adverse impacts from flooding.	Goal 7 update; Economic Analysis; Project Exodus
	Promote property protection activities on a building-by-building or parcel basis that are consistent with long-term regional planning and target repetitive loss properties.	buy-outs & elevations;
	Participate in incentive programs, such as CRS, to help lower insurance premiums for home and business owners.	Rating = 8, 10% reduction; 2010 review, expect new rating
	Improve coordination and collaboration with Tillamook County Office of Emergency Management to initiate and conduct preventative measures.	Ongoing efforts;
	Promote development methods that do not adversely impact flooding or water conveyance.	Project Exodus; clean up of Dean Property
Goal B	<i>Preserve Natural Areas Related to Flooding</i>	
	Preserve and restore natural areas and water conveyance to enhance floodplain function.	Project Exodus
	Protect or enlarge existing wetlands and open areas to maintain or create additional floodwater holding areas.	Buy outs: Dean, Rental Center, Coast Tire, Dairy Queen,
	Preserve and enhance public open space along floodways, rivers, sloughs, tributary streams, and the bay to insure adequate floodplain function.	Study to identify best uses of newly designated open space
Goal C	<i>Coordinate and Enhance Emergency Services</i>	
	Promote, strengthen, and coordinate flood warning, emergency response, and recovery strategies.	Reverse 911; participate in all agency disaster response center
	Improve coordination with Tillamook County Office of Emergency Management to initiate and conduct emergency measures.	See above for pre disaster/emergency response, follow-up
Goal D	<i>Improve Structural Projects</i>	
	Modify existing structures to improve hydrologic function.	Project Exodus, Holden Cr. Projects designed
	Develop solutions that ensure all non-emergency flood mitigation maintains or enhances natural resource protection.	Incorporated into projects planning process for long term projects
	Implement structural flood mitigation solutions to protect critical structures and infrastructure when other alternatives do not exist.	

Goal E	<i>Enhance and Promote Public Education</i>	
	Provide and distribute information and education for local citizens, businesses, and visitors.	Maps, brochures at City Hall; website with links to FEMA info
	Document and utilize local knowledge in flood mitigation planning activities	Long time residents included on Oversight Committee
	Promote good public relations inside and outside the community.	
Goal F	<i>Improve and Promote Partnerships, Coordination, and Implementation</i>	
	Foster on-going community partnerships and forge new links with other agencies and organizations within and outside the City when implementing flood mitigation activities.	Oregon Solutions Flooding Group (fed, state, local agencies) City/County coordination
	Develop and coordinate new projects with existing plans and efforts.	County Hazard Mitigation Plan, City Flood Mitigation Plan, Comp Plan, CCMP, etc
	Pursue and implement permanent and/or low-maintenance, cost-effective solutions to flood problems.	Zoning modifications; mobile activities on city property
	Emphasize on-the-ground projects that best meet mutual goals of environmental considerations and flood mitigation.	Included in planning process for project approval.

Evaluation of 2003 Plan and Recommendations of 2010 Action Items

Short-Term Action Item #1: Institute a flood mitigation plan oversight committee

Status:

This recommendation for quarterly and annual reviews was not followed, and no committee was convened until Spring 2009. Once the city staff applied for and received enrollment in the Community Rating System, annual reviews were completed with OEM staff to assure continued compliance. There was never time or staff to perform the proposed quarterly meetings. With the number of partnering agency activities focused on flood mitigation and ecosystem quarterly meetings would appear to be very frustrating and unproductive for all involved. All meetings of a committee working for, with, or under the direction of a public agency are public meetings. Public meetings require a large investment of staff before, during and after a meeting.

The City Council re-appointed the original Steering Committee in the Fall of 2008 and contracted with VLG Consulting in March 2009. The Steering Committee was convened in April, and using the recommendations in the Plan Maintenance section the Oversight Committee was formed. At a meeting in May, the group agreed that there would be only one committee, and that would be the Oversight Committee.

Recommendation:

The following is a synthesis of the suggestions and recommendations of city staff and Oversight Committee members.

- ✓ September is Hazard Preparedness Month and FEMA has a national public information activity that takes place that month.
- ✓ City of Tillamook submits its CRS application for continued eligibility to OEM for review and additional points, in September each year.
- ✓ Most of the mitigation activities and enforcement happens through the planning department.
- ✓ An important component of the plan is public outreach and information

Each July, the Oversight Committee should review the city's flood mitigation activities with city staff and assist with preparation of the CRS application. This collaboration will assure full implementation as specified. This review will also provide the data required for a public education program, and assist with the acquisition of funding for the projects in the upcoming work plan.

Cost: \$2,000 staff time and materials

Source of Funds: City Budget

Short-Term Action Item #2: Reduce federal flood insurance premiums by participating in the NFIP Community Rating System (CRS) program.

Status:

City staff took the workshop, became eligible for the program, received a rating of 8. This rating reduces NFIP insurance premium rates by 10%. The rating should improve when the City submits the CRS application with the Flood Mitigation Plan Update in 2010.

Recommendation:

At least one City staff should attend free FEMA/NFIP training in Washington DC or complete the on-line course to become a Certified Floodplain Manager.

Cost: \$5,000 travel

Source of Funds: Planning Department Budget

Short-Term Action Item #3: Develop a commercial district floodplain management strategy
Ideas for Implementation

Status: (in italics below each item)

- Protect existing development and businesses using wet and dry flood proofing and other flood reduction methods.

Through a cooperative working partnership sandbags and sand are available for use to protect property from flood waters; flood walls can be build around flood prone buildings with proper permits from the city; and new construction requires elevation above the Base Flood Elevation (BFE).

- Target repetitive flood loss or floodway commercial properties for acquisition and/or relocation projects.

Since the plan was adopted, six properties were assisted through the NFIP program and two others moved on their own. Four were buy-outs and 2 were elevations. Two of the buy-outs used their funds to relocate their businesses.

- Seek funding and technical assistance for a comprehensive business evaluation of the commercial district.

Funds were awarded by DLCD and the study is underway that looks at who and where relocation could be an option as well as providing options for uses of the lands vacated under the buy-out program.

- Promote cluster commercial development in non-floodway areas and restrict new development in the floodway. Examine concept of a balanced cut and fill. Continue to restrict new or improved developments that increase flooding to adjacent properties in excess of current city standards.
- Utilize the County's Tillamook Bay Feasibility Study and other computer models that run flood scenarios to determine best alternatives for relocation and acquisition.

Corps of Engineers used a one dimensional hydrodynamic model to determine the likely areas of flooding under different conditions. The results assisted them to determine that the Hall Slough project and the Modified Acquisition/Swale project would reduce flood impacts and restore ecosystem values.

- Effectively clear mapped lowland floodways or floodplain of hazardous materials.

Several projects were completed including a huge effort to clean the channel to the west of Hwy 101 behind the old Dairy Queen and Dean Motors property. In spring 2008, the Dean Property clean-up removed 12,000 CY of rock and debris from the floodway.

Recommendation:

Investigate establishing a ‘no net loss of commercial land’ policy for the city, so that when a buy-out causes zoning change from commercial use to open space, other acreage of equivalent economic value is zoned commercial.

Cost: \$8,000

Source of Funds: DLCD Planning Grant

Short-Term Action Item #4: Identify, prioritize and mitigate residential properties currently at risk to flooding

Status:

No residential property owners applied for this service, so the action was not implemented. Several residents elevated their own homes without public assistance. Many at risk homes were elevated during the Project Impact efforts following the 1996 flood.

A Holden Creek study group formed to collect information about flood insurance claims from the southeast part of the city in an effort to mitigate future flood impacts in this area. The work is not yet complete.

Given information on new DFIRMS, this becomes a larger issue as more residential properties are indicated to be in the floodplain and/or floodway.

Recommendation:

- 1) City needs to begin implementation of the Stormwater Management Plan by including engineering and construction of priority projects in the 2010-2011 budget cycle. Implementation will be a long term project because of the time requirement to obtain financing, complete engineering and complete the construction. Cost is included under another item.
- 2) New Full Vulnerability Assessment must include residential areas and commercial properties in flood hazard areas.

Cost: \$ 20,000

Source of Funds: Hazard Mitigation Grant Program

Short-Term Action Item #5: Develop a comprehensive public outreach and education program

Status:

Although some of these activities were completed, there is no comprehensive public outreach and education plan. Without a comprehensive strategy, the various groups within the community determine the scope and content of the public outreach effort.

The City has a link to the County website, and the County links directly to FEMA as well as having good information on the web. There are digitized flood maps at City Hall. The city sends a letter to realtors, lenders, and insurers each year reminding them of the maps and

NEIP insurance needs, as well as providing any updates. Those that come to the city with questions about specific properties can get information at the counter.

- Develop a series of maps and brochures that discuss flood hazards, natural benefits of flooding, long-term avoidance measures, flood regulations, and emergency preparedness. Distribute this information annually to local citizens and employees and make available to visitors.
- Establish a centralized flood resource library to house written information.
- Develop a fact sheet, information packet, talking points, and a flood information website to help ensure accurate information and accounts of flood events obtained by the media.
- Sponsor annual hazard information forums/fairs where emergency officials, resource agency staff, and others provide information and/or presentations about flood effects, mitigation, and preparedness or have a booth/demonstration at the county fair. Distribute a list of available presenters to community groups.
- Include students in fairs, local outreach campaigns, and development of education materials, announcements, and/or collection of local flood history as an annual school project. *Who would do this?*
- Develop a flood/natural history/hazard awareness unit for school teachers or community groups. *Who would do this?*
- Construct informational kiosks and murals that discuss positive and negative aspects of flooding at key locations, such as Fred Meyer, Safeway, and rest stops.
- Coordinate information at billboard sites to provide flood-related information and advertise flood insurance on an on-going basis.
How would one do this and who would keep it stocked and staffed, who would pay for it.
- Highlight and promote design methods used in new and remodeled buildings to provide citizens ideas and understanding about flood proofing construction. *TBHEID distributes these documents produced by FEMA*
- Provide technical assistance to landowners and service groups.

Recommendation:

City should request assistance from partners to develop a comprehensive Information and Education program around flood hazards and flood mitigation opportunities. This should include participating in FEMA's Disaster Preparedness month activities each September. This partnership should include city, county, chambers of commerce, urban renewal, workforce, school districts, TEP, Watershed Council, TBHEID etc.

Cost: *staff time of all partners who will also develop budget for materials and distribution costs.*

Source of Funds: *Staff time from current budgets; EPA information/education funds; FEMA publications; piggybacking on existing distribution systems, such as newsletters, PSA's, billing inserts, donation, and organization information and education budget pooling.*

Short-Term Action Item #6: Improve access and update City's flood mapping information

- Have City FIRMs, flood hazard overlays, and other map information available in GIS and/or electronic format at City Hall and on the Internet.

- *Amended FIRM maps reflect the actual flood levels at Head Start and the Blue Heron. The DRAFT FIRM maps are now accessible through the City of Tillamook Website. It links to the County Community Development site, and to the FEMA site. The City is protesting the new delineation, and notifying citizens there is a public comment period in effect. The full process of review and adoption of new FIRMs takes about a year. . A letter went out to the city's realtor and lender list in February to be sure buyers, sellers, and lenders have the current information. This will have*
- *Seek assistance from community groups, retirees, and/or interns to build an electronic City flood information database by compiling elevation certificates, size, occupancy, estimated property and content value, past losses, and other data for structures located within the floodplain.*
- *Collect and compile all data from rainfall and river gauges and store in GIS format. Obtain wetlands designation maps for city jurisdiction.*

Long-Term Flood Mitigation Activities

Long-term flood mitigation activities are mitigation activities that are likely to take more than two years to implement

Long-Term Action Item #1: Develop a City storm water management plan

Status:

The City of Tillamook completed a Stormwater Management Plan. The plan prioritizes project by hydrologic benefit, with many of the high priority projects located in the Holden Creek area. The first step toward implementation is raising the estimated \$1,244,000 required to implement the prioritized projects.

Recommendation:

- 1 *City needs to begin implementation of the Stormwater Management Plan by including engineering and construction of priority projects in the 2010-2011 budget cycle. Implementation will be a long term project because of the time requirement to obtain financing, complete engineering and complete the construction.*
- 2 *City should consider establishing stormwater feed as a source of debt service for implementation loans.*

Cost: \$50,000 for design of Holden Creek projects

Sources of funds: 1% loans from DEQ through the Planning Program Funds in the Clean Water Revolving Loan Fund; Loans or CDBG from state Infrastructure Finance Authority for Design and construction; debt service can be paid from Stormwater Implementation Fees; Limited Improvement Districts can be formed; Funding could be secured through Urban Renewal District.

Long-Term Action Item #2: Develop a flow regime project proposal

Status:

In 2005, the US Army Corps of Engineers completed a 2-dimensional unsteady flow hydrodynamic analysis of the project area that included environmental, economic

and real estate analyses using a sophisticated HEC-RAS model specifically developed for the project area.

In 2007, Oregon Solutions Tillamook Flooding project is to develop and implement a plan consistent with the Project Team's stated goal. That goal is "reduce flooding and the adverse impacts of flooding while incorporating environmental, social, and economic values in the development of short and long term solutions.

The team prioritized projects in September 2007 and began implementation shortly thereafter. The project list is a mix of capital projects and planning and analysis efforts primarily funded by a legislative appropriation from the state. Recognizing the complexity of flooding in the Wilson River, and that prior work by the Corps of Engineers focused on projects that met both ecosystem restoration and flood reduction criteria, the Project Team combined the Hall Slough and the Modified Wetland Restoration and Swale project into Project Exodus, and broaden the overall project scope.

The projects in priority order are:

1. Wilson/Trask Spillway
2. Tone Road Spillway
3. Dougherty Slough Permanent Structure
4. Comprehensive Community Vision and Strategic Plan
5. Trask Hook
6. Implement City/County Flood Mitigation Plans
7. Mediated Gravel Agreement/Stream Corridor Management Plan
8. *Hall Slough Project*
9. *Modified Wetland Restoration and Swale* *is there a way to bracket these??*
10. Tomlinson Slough Connection Restoration
11. Study of Drainage Diking District Issues
12. Old Trask Channel Restoration
13. Wilson River Dredging - Mouth & Bay Shoal
14. Wilson River Restoration
15. Upper Basin Storage
16. Implement Storm Water Maintenance Plan
17. Bay Dredging - multiple sites
18. Bay Dredging - East Channel

2009-10 repair and long-term maintenance of the Shilo Levee will be presented as an Oregon Solutions Project .

Project Exodus

Project Exodus is permanent and the public benefits are substantial.

As shown on pages 10- 14 of the NHC Report, during the one hundred (100) year flood there will be up to a one (1 ') foot reduction in flood levels at the south end of the project area along US Highway 101 and up to one point five (1.5') feet flood reduction in flood levels at the north end of the project area along

US Highway 101. This portion of the project area, consisting of five hundred (500') feet on each side of US Highway 101 contains a major piece of the City of Tillamook's commercial businesses representing millions of dollars in value. This project will also reduce flooding on the port's railroad up and downstream of the north-south rail line by about six (6") inches in the one hundred (100) year flood. The environmental benefits will also be substantial. Between five hundred and six hundred (500 - 600) acres of salt marsh wetland will be created as a direct consequence of this project with direct benefit to the federally listed Coho Salmon. Also both Hoquarten and Dougherty Sloughs are currently listed by the Oregon Department of Environmental Quality (DEQ) as water quality impaired streams. According to the Director of DEQ, the beneficial effects on water quality in those streams as a direct result of this project will be "immediate and dramatic."

This project will eliminate or substantially reduce the risk of future flood damages to the benefitted section of railroad. As noted elsewhere in this application, the Port of Tillamook Bay Railroad will continue to be an important asset to the Port. The ability to construct ocean wave energy devices at the Port's industrial park and then transport those oversize devices by rail to the Port of Garibaldi for ocean transport will be critical to the economic viability of this alternative energy project and the region. This project is important in maintaining the rail line as a critical facility for Tillamook County as a whole. In past years when Highway 101 and Wilson River Loop road closed, the railroad was the only transportation link joining the North and South ends of the County. Additionally, Tillamook County General Hospital, as the county's only hospital, is a critical facility. As indicated elsewhere within this application, the limited hospital access issue for much of the county's population will be greatly reduced or eliminated by the project. Despite the substantial flood mitigation benefits from this project, it has large ecosystem restoration benefits and will likely qualify for a streamlined restoration permit. The project has been designated to qualify under the Federal Nationwide Permit (NWP-27) and the General Authorization under the State of Oregon Removal-Fill Law. It has also been designed to comport with NOAA Fisheries restoration programmatic biological opinion (SLOPES IV). Southern flow corridor funding request was submitted to FEMA as part of the Port of Tillamook Bay's Alternate projects.

Recommendation:

The city should continue partnerships and pursuing funding to implement the physical structures identified by the flow-regime as most likely to reduce flood impacts.

Cost: \$7,173,290 (Southern Flow Corridor only)

Sources of Funds: FEMA Alternate Project with OWEB acquisition funds of \$2,000,000.

Long-Term Action Item #3: Develop a city emergency response system

- Establish a permanent check-in center for communication and support during floods and other natural hazard events and a dedicated phone number that provides recorded updates. Have information tailored to actual local conditions automatically sent and available on a call-in basis from OEM;

- *The city is part of the Emergency Communication Center's disaster response protocols coordinated by the county and the 911 District. Each affected city, agency, utility, and emergency response provider has a representative present at the center with a phone connection. Reverse 9-1-1 is in place for early warning of folks who need to evacuate the low lying areas.*
- *Assist ODOT in the closure of US Highway 101 during high water events to minimize further losses caused by wake effect and work with law enforcement to ticket wake creators. Identify and establish alternate transportation routes, immediate use of railroad, including air evacuation and ingress/egress at airport.*

Airport and rail access requires coordination with POTB; local transportation within the county is still viable.

- *City Manager will serve as designee to observe, monitor and evaluate response coordination;*
- *Develop an early flood warning system by increasing the number and location of rain gauges to assist in storm analysis and flood warning. Document upstream rain gauges and add rain gauges to existing cell towers for timely access to the remote data. Install flood warning lights or siren system;*

Emergency management installed 2 new gauges

- *Document flood levels and resulting damages immediately after a flood event. Work with Watershed Council members to collect data and compile into one information resource.*
- *Conduct annual flood and other natural hazard event emergency response drills at schools, government institutions, and businesses each fall; must include coordination between school districts, city, and emergency personnel. District 9*
- *Increase and maintain a City sandbag bank for ready availability to homes and business owners; Sandbags and sand ready at county public works yard.*

Recommendation: City should budget to pay annual fees to support this partnership

Long-Term Action Item #4: Restore riparian areas, floodplains, and wetlands and protect water quality

Status:

Study of best uses of land left vacant by FEMA buy-outs is nearly complete.

Combined with strategic purchases previously made by the city, several options are under consideration.

Between Hoquarten Slough and the north side of Hadley Road, there are 6 vacant properties that are part of this study.

- *Coordinate with landowners to identify areas that have a high erosion potential. Support riparian planting of native riparian vegetation to provide bank stabilization and dissipate flood water flow;*

- Develop a requirement for sediment control on all off-site construction projects not covered by C1200 permit;
- Work with interest groups and citizens to reconnect wetlands/ponds near parks. Explore partnerships with Nature Conservancy, Ducks Unlimited, Trust for Public Land or other similar organizations to help acquire and manage key wetlands and floodways as public open space;
- Identify natural resource 'best management practices' and provide tax incentives to participating landowners. Identify and map existing levees that can be redesigned as setback levees or removed to promote water conveyance;
- Connect properties with failing septic systems (within the urban growth boundary) to City sewer system. Support existing manure control program on agricultural lands; and
- Identify current and historical hazardous material sites within flood hazard areas and require owners to secure hazardous materials prior to flood events.

Recommendation:

The City should work with the Tillamook Bay Watershed Council, TBHEID, TEP, the SWCD and riparian landowners to develop, implement, and fund riparian restoration projects on the city's streams and rivers.

The city should continue to work with the Oregon Solutions Project to fund and implement the wetland and floodplain projects already planned.

Costs:

Sources of Funds: Oregon Watershed Enhancement Board through SWCD small grants program; EPA through Tillamook Estuaries Partnerships; TCCA for ag land plantings; DEQ through 319 funds for Non-Point Source Pollution Control projects to abate stormwater runoff pollution; Stormwater implementation fees.

Long-Term Action Item #5: Strengthen land use planning and zoning

Status: (in italics below each suggested element)

- Strengthen existing flood ordinances consistent with the State's update of Goal 7 during comprehensive plan periodic review. Consider development an adoption of a repetitive flood loss ordinance and rezoning for known special flood hazard areas;

City of Tillamook is undergoing periodic review with particular focus on Goal 7. The staff continues to enforce floodplain ordinances FEMA buy-out property is rezoned Open Space with a deed that restricts the construction of permanent structures.

- Establish land use planning and zoning language that requires best available flood hazard data be used;

This is being included in the city's Goal 7 update.

- Work with the Department of Land Conservation and Development to modify the City's urban growth boundary.

- Coordinate with County Community Development to determine developable land in the City of Tillamook;
- Amend current zoning code to establish lot coverage standards for single-family residential zones.
- Use Transfer of Development Rights or rezoning areas more suitable for infiltration.

Recommendation:

City should consider 'no net loss of equitable commercial lands' policy to mitigate job loss, and loss of tax revenue to the city. Some of this information should be included in the recent Reid Johnson Study

Cost: Staff and Planning Commission workshop with DLCD; possibly need some professional services work for around \$8,000

Source of Funds: FEMA Hazard Mitigation Grant funds, and/or DLCD Planning grant; Urban Renewal funds for match.

Plan Maintenance

Evaluating and Updating the Plan

Flood Mitigation Plan Review

Each July, Oversight Committee should review the city's flood mitigation activities with city staff and assist with preparation of the CRS application. This collaboration will assure full implementation as specified. This review will also provide the data required for a public education program, and assist with the acquisition of funding for the projects in the upcoming work plan.

Flood Mitigation Plan Review

A City of Tillamook Flood Mitigation Oversight Committee will consist of stakeholders and will work with City Staff to perform an annual evaluation of the Flood Mitigation Plan using the Evaluation Tool provided by FEMA. This evaluation will take place in July each year and will include a review and evaluation of activities eligible for Community Response System points, as well as a review of and recommendations for city investments in physical mitigation projects. The Oversight Committee will include, but not be limited to, the following organizations:

- City of Tillamook Council
- County Board of Realtors
- Drainage Districts
- Homeowners
- Nehalem Marine Manufacturing
- Tillamook Bay Habitat & Estuary Improvement District
- Tillamook Bay Watershed Council
- Tillamook Chamber of Commerce
- Tillamook Cheese
- Business Owners
- Tillamook County Community Development
- Tillamook County Emergency Management
- Tillamook County General Hospital
- Tillamook County Soil & Water Conservation District
- City of Tillamook Planning Commission
- Tillamook Revitalization Agency
- Tillamook Transportation District
- Tillamook Urban Renewal District

Convening the Oversight Committee

This is the city's plan and the role of the Oversight Committee is one of oversight. This task force has no authority to implement the plan, once the city take action to adopt the plan, they commit to implementation. City Planning Staff will have responsibility for initiating the annual review process. City may choose to contract with an outside party to perform the duties of arranging and managing the meeting each year. This will be a public meeting where

official minutes are kept and a report of recommendations will be prepared for presentation to the City Planning Commission and the City Council.

A presentation and status report will also be conducted annually before the City Planning Commission and the City Council during regularly scheduled meeting times. These meetings will provide the public a forum at which citizens can express concerns, opinions, or ideas about the Plan. The City of Tillamook will maintain public involvement and advertise the presentation via local media and existing community groups. The convener will be responsible for using City resources to publicize these meetings and maintain public involvement through the radio, public access channel, website, and newspaper.

Continued Public Involvement

Annual meetings of the Oversight Committee will be public meetings and they will be advertised as such in the local newspaper, on the city website, and posted at City Hall. The public will be invited to participate during the review meetings and public comments will be taken on the final review before preparation of the CRS application each year.

Appendix XIX - City of Tillamook Recycling Plan, 2003

**City of Tillamook and Tillamook County
Implementation of General and Expanded
Education and Promotion Programs for Residential, Commercial and Institutional Generators of Solid
Waste
Revised October 2003**

The City of Tillamook is the only city in Tillamook County with a population over 4,000. The City is responsible for implementing three program elements within the city limits. Three program elements must also be offered within the City of Tillamook urban growth boundary (UGB). Information efforts designed to meet the Expanded Education and Promotion program element will sometimes overlap the City of Tillamook, the UGB and the County boundaries. The City of Tillamook, with the cooperation of the franchise holder, will take responsibility for implementing the program elements within the City and the UGB. Tillamook County will provide some support for the Expanded Education and Promotion program element countywide.

The City of Tillamook and UGB are required to meet two general requirements:

- Provide on-site collection service for source separated recyclable materials at least monthly (Alternative Recycling Program application is attached.);
- Provide a general public education and promotion program (the general program is covered by the plans described for the expanded education and promotion program.).

In addition, the City of Tillamook and the UGB will implement the following three additional program elements (to a large degree these program elements are being implemented. This plan formally documents existing practices and supplements the programs in some areas related to Expanded Education and Promotion):

- Expanded Recycling Drop-off Depots (described in the Alternative Recycling Program application);
- Expanded Education and Promotion (described in this document);
- Commercial and Institutional Recycling (the expanded education and promotion component of the commercial program is described in this document; detailed information on the commercial businesses and institutions to be served, the materials to be collected and the promotion of the service is attached).

The following program description primarily describes how program requirements for the City of Tillamook and the UGB will be met. Some activities that are described will have a countywide impact. Expansion of the required program elements to areas outside of the City of Tillamook and UGB are voluntary on the part of Tillamook County.

- A. Provide new customer brochure or packet to each new residential and commercial service customer. Brochure or packet shall include the following:
 - 1) Description of the materials collected; the schedule for collection and service provider; explanation of proper preparation of materials for collection; a list of the reasons why source separation of materials for recycling is necessary; and
 - 2) Information about waste prevention, reuse and composting.

In year 1 of this program, the new customer brochure or packet will be sent to existing as well as new residential and service customers. The new customer brochure or packet will be updated every five (5) years.

The residential brochure or packet will be specifically designed to meet the needs of residential generators of solid waste.

The commercial brochure or packet will be specifically designed to meet the needs of commercial generators of solid waste.

On December 31st of each calendar year, the City of Tillamook will request a list of all new residential and commercial businesses that have received the above information from City Sanitary. The City of Tillamook will additionally request documentation that an annual mailing has gone out to all residential and commercial customers of City Sanitary. Documentation will include: examples of two separate brochures, one brochure targeted towards residential customers and the second brochure targeted towards commercial customers; the number of customers receiving brochures broken down by residential and commercial; and a receipt showing payment for the mailing.

- B. Provide promotion to all residential and commercial service customers. All residential and commercial service customers shall be informed annually through the provision of quarterly education and promotion of the following:
- 1) Description of the materials collected; the schedule for collection and service provider; explanation of proper preparation of materials for collection; a list of the reasons why source separation of materials for recycling is necessary; and
 - 2) Waste prevention and reduction methods;
 - 3) Reuse of materials and composting techniques; and
 - 4) The benefits of waste prevention, reuse and composting.

The City of Tillamook and its Franchise hauler, City Sanitary Service of Tillamook, and Tillamook County Government will provide and promote the following alternative recycling program (this proposal will be reviewed annually and any proposed changes submitted to DEQ for approval):

- a) City Sanitary will be responsible for an annual mailing to all residential and commercial customers on the benefits of recycling and waste prevention, the procedure for preparing materials for collection and the types of materials recycled during the past year (Year 1 this was met through the "new" customer brochure or packet); the annual mailing sent to commercial customers shall specifically address commercial recycling and waste prevention; this annual mailing will be updated at least every five (5) years;
- b) The City of Tillamook and Tillamook County will place articles in the Headlight Herald, and other publications, on recycling, waste prevention, composting and alternatives to household hazardous waste on at least a quarterly basis. These articles will count as two quarterly promotions each for residential and institutional/business customers as long as at least two articles are targeted towards residential generators and two are targeted towards commercial generators;
- c) The City of Tillamook and Tillamook County will provide one or more public service announcements (PSA's) per year on the local county radio stations with a focus on reducing waste, reuse or composting; and
- d) Cable television may be utilized to present messages on recycling, reuse, waste prevention and composting.

- C. Annual Recycling Information. This requirement is met by “a)” under the quarterly promotion.
- D. Participate in one or more community or media events per year, which promote recycling, waste prevention or composting.
- 1) The City of Tillamook and Tillamook County will work together on an annual basis to determine how to participate in one event (besides the household hazardous waste collection event) to meet this requirement: activities may include booths at events such as the Tillamook County Fair or the Tillamook County Home and Garden Show, Tillamook County Saturday Farmers' Market. Promotion will be targeted at both residential and commercial generators of solid waste.
 - 2) The County of Tillamook will provide information on alternatives to household hazardous waste at its annual household hazardous waste collection event.
- E. Utilize a variety of materials and media. The City of Tillamook and Tillamook County will meet this goal by utilizing direct mail, the Headlight Herald, PSA's, the placement of educational materials in county libraries and city halls, and possibly cable television. There will also be participation in one community event annually, such as the annual county fair, the County's annual household hazardous waste event, and the Farmer's Market.
- F. Roles of the City of Tillamook, City of Tillamook Franchise hauler, City Sanitary Service of Tillamook, and Tillamook County Government.
- 1) City of Tillamook's role will be to:
 - a) promote recycling by having recycling materials available for the public at City Hall;
 - b) promote via at least one or more PSA's a year the benefits gained by recycling, reducing, and reusing;
 - c) provide via the City's water and sewer bills, a mailing that encourages customers to reduce, reuse and recycle;
 - d) volunteer time in the booth at a public event in the Urban Growth Boundary with the County and City Sanitary regarding efforts to recycle, reuse and reduce;
 - e) have on hand, for the public, at City Hall information on the merits of recycling, reuse and reducing materials that go into the waste stream.
 - 2) City Sanitary's role will be to:
 - a) manage the three (3) depots, collect residential recyclables on request on route and keep written record of amount collected each time and each location for annual report to the City, County and State of each request;
 - b) collects the following from commercial customers:
 - Cardboard,
 - Newspaper,
 - Magazines,
 - Office paper,
 - Glass,
 - Tin;and keep written record of amounts and types collected for annual report to the City, County and State, of each request;

- c) provide the following information at the recycling depots and shacks:
 - Reasons why people should recycle; list of materials that can be recycled; and instruction for the proper preparation of recyclable materials,
 - Reasons why people should reduce waste, reuse materials and compost,
 - How to reduce waste, reuse materials and compost;
- d) provide to all of their commercial and residential accounts/customers an annual mailing on the reasons and the “how to’s” to reduce, reuse, and recycle:
 - This mailing shall occur in October of each year;
 - Two separate brochures shall be distributed to residential; and commercial customers;
- e) participate in a volunteer effort to man the booth at the Tillamook County Fair along with the County on the merits of recycling, reuse and reduce as well as composting; and
- f) be responsible for implementing the opportunity to recycle and will be responsible for the education, promotion and notification activities via their customer mailing list. The City of Tillamook will be responsible for recycling education and promotion to the general public as per sub question C.

3) Tillamook County’s role will be to:

- a) participate in one or more community or media events per year which promote recycling, waste prevention or composting;
- b) design and staff a booth at the county fair each August;
- c) provide information on alternatives to household hazardous waste at its annual household hazardous waste collection event; and
- d) provide information, at various other County events including but not limited to the annual Home and Garden Show at the Tillamook County Fair Grounds, on the positive aspects of recycling, reducing and reusing products to divert items from going into the garbage can.

4) The Combined role of City of Tillamook, City Sanitary and Tillamook County is to provide the following:

- a) At the depot sites and shacks –
 - 1) reasons why people should recycle; a list of materials that can be recycled; instructions for the proper preparation of recyclable materials;
 - 2) reasons why people should reduce waste, reuse materials and compost;
 - 3) how to reduce waste, reuse materials and compost; and
 - 4) provide recycling information, once a year, via a mailer through City Sanitary Service to present and new commercial and residential customers;

G. Recyclable materials which will be recovered using the alternative recycling program are as follows:

- Cardboard
- Newspaper
- Glass
- Magazines/ catalogs
- Office paper
- Tin
- Ferrous and nonferrous scrap
- Aluminum
- Refrigerators/Freezers
- Washer/Dryers
- Tires
- Motor oil

- Batteries

- H. City Sanitary shall additionally provide the following information in its annual Recycling report to the City, County and State DEQ:
- 1) The City of Tillamook's annual waste shed recovery rate compared to State rate requirements, using the alternative program, for both sources - State DEQ and Tillamook County generated numbers.
 - 2) Estimates of recyclables collected, as described in F(2)(a & b) above.
 - 3) Improvements/Investments with respect to recycling efforts in the City of Tillamook; City Sanitary Service has in the recent past done the following in terms of its investment plans with respect to recycling equipment and structures:
Fenced their yard at their office (cost \$30, 000) black topped their site (cost \$35,000) in preparation for using their site as one of the three depot sites. A cardboard collection truck was purchased for \$95,000. Numerous drop boxes and roll off containers at \$30,000.
 - 4) Assist in the development and promotion of a city curbside recycling service for its residential and commercial customers through a public process and, promotion of the three (3) depot stations, which are in convenient locations for Tillamook residents within ¼ mile distance of most residential areas.
 - 5) Report the City Population served annually as a percent of the total City of Tillamook population. The highest projected population increase to the planning period 2020 is 1.5% a year.
 - 6) Identify the methods of service currently being used, to include depots, on-route, and on call recycling service. All of these services are conveniently accessible to all Tillamook residents and commercial businesses.
- I. As part of this application and understanding changing circumstances, the City of Tillamook, through utilization of/participation by the Citizens Advisory Committee, Planning Commission and City Council, is committed to conducting a one (1)-year review of the effectiveness of the current/proposed alternative recycling program.

Approved by City Planning Commission October 2003

Approved by City Council November 2003

Appendix XX - Tillamook Airport



Appendix XXI - City of Tillamook
Transportation System Plan, 2003

DRAFT

Appendix XXII – City of Tillamook
Transportation Refinement Plan

DRAFT

Appendix XXIII - Tillamook City 2020 Vision Statement

TILLAMOOK CITY 2020: VISION STATEMENT TILLAMOOK CITY VISION STATEMENT

TILLAMOOK CITY 2020 VISION STATEMENT EXECUTIVE SUMMARY- AUG. 1998

Over the past twelve months the Tillamook City Visioning Task Force, established by the Tillamook City Council, embarked on a community endeavor vital to the future of the city. The City Council is especially thankful for the commitment and stewardship exhibited by the Tillamook Visioning 97/98 Task Force. Busy individuals in all walks of community life ambitiously undertook the difficult task of crafting the Tillamook City Vision Statement.

The Statement encompasses ten Vision Scenarios addressing consensus on vital community future directions. These futures include City Downtown Revitalization, Land Development, Education, Health, Quality Natural Resources, City Gateways, Community Values, as well as Community Character and Livability.

The Tillamook City 2020 Vision Statement details key attributes of ten Scenarios as well as spelling out Action Plan Strategies for achieving the City Future Vision.

ACKNOWLEDGMENTS

The City wishes to specially thank the Task Force Membership and Guest Participants for their conscientious leadership in forging the Tillamook City 2020 Vision. It is a distinct pleasure to acknowledge the committed involvement of broad community leadership. The unflagging commitment and intelligence exhibited in achieving this challenging task is gratefully appreciated.

VISION STATEMENT COMMUNITY SUPPORT

The City of Tillamook has obtained effective support, in the form of grant awards, which are aimed at furthering smart development practices, wise community growth policies, and downtown revitalization. The City anticipates and encourages the continued volunteer spirit and participation in the form of Action Plan Implementation Committees. In this light, the City is coordinating resources needed to further the efforts of future implementing committees.

VISIONING TASK FORCE PARTICIPANT RECOGNITION

The following individuals distinguished themselves in this important endeavor:

VISIONING 97/98 TASK FORCE

Mr. Vic Affolter
Mr. Ed Armstrong
Ms. Tilda Chadwick Jones
Mr. Jack Collekton
Mr. Rudy Fenk

Ms. Val Folkema
Mr. Mark Gervasi
Mr. Herman Gonzales
Mr. Bob McPheeters
Ms. Eileem Miller
Mr. Brad Pierce
Ms. Linda Shaffer
Mr. Gary Smith
Ms. Jan Stewart-Wells

GUEST PARTICIPANTS

Ms. Helen Bonsall
Mr. Jay Charland
Mr. Tom Connaughton
Mr. Mike Ellis
Ms. Julie Fletcher
Mr. Jerry Halberg
Mr. Wendell Hesseltine
Ms. Elaine Hopson
Ms. Pan-Russel Hurliman
Mr. Ray Jacobs
Ms. Jo Jenkins
Mr. Jerry Jones
Mr. Steven Kershaw
Mr. Jeff King
Dr. Bob Moore
Mr. Ken Phillips
Mr. John Putman
Ms. Bonnie Reed
Mr. John Sandusky
Mr. Robert Spittles
Mr. Mark Trentholm

TILLAMOOK CITY 2020: VISION STATEMENT

In 2020, we envision a community of 6,000 to 8,000 people. The growth of our community has occurred in a livable and sensitive manner, which respects our heritage and provides quality of life for all socio-economic groups in our community. Our city center invites residents and visitors to a revitalized diversity of services. New development provides a variety of affordable living options with reliable urban services. Visionary land use and public facilities planning have guided growth and provided for a sustainable quality of life that reflects deliberate choices made from within the community.

In 2020 Tillamook City enjoys an enhanced livability with traditional character themes recognized and respected. The Schools and Education programs in the community have evolved to provide vital adaptive opportunities for all its citizens. Community Health Services have kept pace and anticipated the needs of residents in a proactive manner. Leadership has kept a keen eye on the highest and best use for lands within their jurisdiction so that compatible living, smart development and clean industry serve all community residents. The residents have come to realize and enjoy healthy environmental amenities and sustainable natural resource practices in the City.

The City has a vital and recognizable identity highlighted by Tillamook City Gateways, which establishes Community Identity and welcomes visitors and residents alike.

The following ten scenarios best depict the preferred future envisioned by the Tillamook City Task Force in their exercise in communication unity for the year 2020.

TILLAMOOK CITY 2020

VISIONING 97/98: A NEW SENSE OF COMMUNITY

COMMUNICATION IN UNITY

AD HOC ENTERPRISE IN SEEKING COMMON GROUND, COMMON PERCEPTIONS, & COMMON IDEAS ABOUT COMMUNITY FUTURE

The Tillamook City Task Force with guest participants forged the following preferred scenarios to comprise the City's Vision Statement. The statement serves as a catalyst for community residents, business owners and governments in crafting the future of Tillamook City.

SCENARIO 1: Compact Residential Development

Attributes

- Implement quality elements of compact residential development.
- Housing types are varied in size and price to facilitate the kind of mix of people found in the City of Tillamook - the mix also means grown children won't have to move so far away to start a home.
- Neighborhood densities and housing square footages are prescribed in a manner, which encourages affordable options for all.
- Houses occupy small lots clustered around public spaces such as parks or playgrounds.
- Walking is encouraged by side-walks, street trees, front porches, narrow roads that slow down cars, and most importantly, commercial and recreational areas are located a short walk from most houses.
- Street grids replace isolated cul-de-sacs and the broader roads that connect them.
- Garages retreat to the rear of lot or alley.

SCENARIO 2: A Revitalized Tillamook City Downtown

Attributes

- The Downtown Vision is a revitalized City Center that serves as: A Gateway of Commerce supporting residents and tourists in a viable economic and cultural manner.
- A downtown development plan with implementation strategy is 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.
- The leadership focusing on the downtown development will place ongoing emphasis on restoration and remodeling, where appropriate.
- A set of design review standards (to be incorporated in the updated Tillamook City Land Development Code) may compliment early efforts and provide continuity of purpose in terms of color schemes, architectural and design elements and public open space.

SCENARIO 3: Community Growth & Development

Attributes

- Adequate serviceable lands for Tillamook0 City's Urban Growth Boundary.

Sub-Attributes

- Coordinated water service provision for UGB.
 - Planned sewer distribution for entire UGB.
 - City Plan for sewer & water service outside current City limits.
 - Provision of Annexation Plan for Tillamook City.
 - Provision of Sewer Master Plan for Tillamook City.
 - Coordinated Sewer & Water Plan in Tillamook City Public Facility Plan.
 - Coordinated Capital Improvement Projects List.
- Adopt Urban Services Agreement.

SCENARIO 4: Community Character & Livability

Attributes

- Community cultural celebrations focusing on History and traditions -- fairs, festivals, heritage events.
- Safe, involved neighborhoods.

Sub-Attributes

Family life-based neighborhoods; Pedestrian walkways, bikeways; Activity involved schools; Caring neighbors on watch; Special events, including school, church, and cultural programs engaging families and neighbors, interacting in community minded ways

- Family Based Community

Sub-Attributes

Family-waged jobs; Affordable housing; Excellent schools; Strong religious institutions; Efficient government services; Family-oriented activities and events; Healthy and high quality natural environments.

- Viable Business Communities

Sub-Attributes

Effective tourism / resident market mix plan in place and applied; Integrated downtown / north, west and south business market sectors; Stable watershed environment; Effective Watershed Flood Control Plan creation and implementation; Effective business market diversity in place.

SCENARIO 5: Schools & Education

Attributes:

- *Develop community connections / promote community service interaction and involvement in schools.*
- *Become a community that supports education.*
- *Enhance life skills of all community members.*
- *Ensure that School Facility Planning is incorporated in Land Use Planning.*
- *Enhance the living environment of the community.*
- *Make the community a living classroom by encouraging school-to-work opportunities for our students.*
- *Encourage understanding and appreciation of the natural environment.*
- *Provide leadership in the economic, cultural, and intellectual evolution of our community.*
- *Establish personal / community development and growth.*
- *Foster collaborative effort in the educational community, north, central, south.*
- *Foster improved educational facilities.*
- *Provide an environment for innovation and intellectual pursuits.*
- *Foster educational and cultural diversity.*
- *Focus on educational goals (statewide), knowledge and information to shape a rapidly changing society.*
- *Foster life long learning to acquire knowledge and life skills to effectively participate in the workforce, community and society at large.*
- *Educate people for anticipated jobs.*

SCENARIO 6: Community Health & Well Being

Attributes

- *Safe and secure community.*
- *Prevention and control of crime.*
- *High quality, accessible, affordable physical health care.*
- *Encourage healthy lifestyles.*
- *Active older adults.*
- *Adequate housing and care for special-need citizens.*
- *Focus on prevention and wellness in the community.*
- *Support healthy families.*
- *Quality Social Services.*
- *Zero tolerance for domestic violence with Action Strategies guided by - Prevention -- Prosecution -- Intervention*
- *Primary service center for the County.*
- *High quality, accessible, affordable mental health care.*
- *Preventive healthcare for children and adults.*
- *Drug-free community.*
- *Foster a low teen pregnancy rate.*

- Foster coordinated teen programs.
- Ensure the water quality in Tillamook City.

SCENARIO 7: Community Valuing -- Cultural Assignments

Attributes

- Maintain a small town atmosphere.
- Develop and preserve City Center to retain a small, friendly, relaxed, and welcoming environment.
- Encourage pride in general appearance of community - neighborhood and park programs to maintain a clean and litter-free community; landscaping, lighting, and signage programs to beautify; enhance community security.
- Provide a diverse set of community programs, activities and facilities that enhance community values -- pride, family values, traditional enterprise.
- Recognize and preserve community heritage: historic buildings and other features preserved and renovated; conduct a touring program to visit sites of community heritage.

Valuing Checklist

Tillamook City honors and values.....

Small town-atmosphere; Rural, agricultural heritage and traditions; Pride in community public image; Well-kept homes strong family units; Spirit of community volunteerism; Fiscal accountability; Strong educational programs; Strong spiritual values; Encourage social and cultural diversity; Balanced and managed growth; Responsible stewardship of the environment; Physically safe community; Promote cultural appreciation of the arts; Leadership role in the county; Ensure the water quality in Tillamook City

SCENARIO 8: Highest and Best Use for the Future of Tillamook City

Attributes

- Emphasize long-term allocation of uses within Tillamook City and its Urban Growth Boundary.
- Seek and preserve use compatibility objectives, which recognize livability as the highest goal.
- Support the long-term distribution of compatible uses for efficient and effective infrastructure provision.
- Coordinate and support Tillamook County land use policy directing wise allocation of uses near and within Tillamook City's Urban Growth Boundary.
- Support the efficient use of lands within residential zones.

SCENARIO 9: Environment & Natural Resources

Attributes

- *Healthy city water supply.*
- *Respect for the natural environment as the basis for all life and livelihood.*
- *Careful stewardship of the natural environment.*
- *Protect and enhance the major natural areas and open spaces.*
- *Ensure air quality in Tillamook City.*
- *Ensure that open space and recreational opportunities are available in residential areas.*
- *Preserve and enhance significant waterways and wetlands in and around Tillamook City.*
- *Preserve riparian lands as natural areas in Tillamook City's Urban Growth Boundary.*
- *Emphasize alternative links which connect the City parks, waterways and wetlands with small town residential development.*
- *Implement a vegetation community plan for the City business district neighborhoods, streets and roadways.*
- *Continue to support a comprehensive residential, retail and commercial waste reduction and recycling program.*
- *Emphasize and implement a Clean Industry program in Tillamook City to minimize pollution, conserve energy, and reduce waste.*
- *Encourage industry priorities, which recognize ecologically sensitive attitudes and practices.*
- *Disaster resistant community (flooding, earthquakes, volcanoes).*

SCENARIO 10: Tillamook City Gateways

- **Trask River Bridge**
- **Wilson River Bridge**
- **Port of Tillamook Bay RR Bridge on Highway 6**
- **South Highway 101 Divider Island at Main & Pacific**

Attributes

- *Focus on gateway identities to enhance Tillamook City Entrances.*
- *Enhance Gateways image by distinctive signage, lighting & landscaping.*
- *Update City entry signage for each Gateway.*
- *Coordinate with Tillamook City service clubs to acquire restroom site and develop facilities on Highway 6 (at County line or at the falls and place porta-potties in pull-off fountain area) (Approach ODOT to put restrooms at County line (Highway 6) storage site at crest.*
- *Update and include current population signs for each Gateway.*
- *Coordinate with Tillamook City service clubs to acquire restroom site and develop facilities on Highway 6 (at County line) or at the falls and place temporary porta-potties in pull off fountain area -Update and include welcome signage for each Gateway.*
- *Develop and include appropriate commerce signage for each Gateway that ID's downtown commercial district.*

- Tillamook City has a distinctive identity heralded by its well-recognized four gateways.

TILLAMOOK CITY VISION STATEMENT ACTION PLAN 2020

APPENDIX A

The City Volunteer Action Plan Committees comprised of Task Force, Guest Participates, and City Staff defined action strategies for each future scenario. By participating on chosen committees in the crafting of action strategies a broad representation of public and private activists furthered their commitment to a unified private and public effort to Tillamook's future.

The following action plans are presented as points of unity forged in consensus. These action plan strategies provide a focused agenda for future action committees in their effort to identify actions and associated resources, which are achievable by community initiative.

SCENARIO 1: Compact Residential Development Action Plan

Attributes

--Implement quality elements of compact residential development

Action Strategy 1: Develop ordinance provisions to facilitate redevelopment in the residential zones immediately west of the downtown commercial zone.

--Housing types are varied in size and price to facilitate the kind of mix of people found in the City of Tillamook -- the mix also means grown children won't have to move so far away to start a home.

Action Strategy 1: Create Compact Residential Development Overlay in a manner that provides for multiple housing types (square footages) available for different markets (e.g., low-income).

--Neighborhood densities and housing square footages are prescribed in a manner, which encourages affordable options for all

Action Strategy 1: Establish Land Use Zone to permit higher densities and smaller square foot ratios (smaller houses).

Action Strategy 2: Establish ordinance provisions to limit on-street parking.

Action Strategy 3: Establish development standards to encourage interior block parking (alley-ways behind houses).

--Houses occupy small lots clustered around public spaces such as parks or playgrounds

Action Strategy 1: Zone for compact development near parks and playgrounds.

--Walking is encouraged by side-walks, street trees, front porches, narrow roads that slow down cars, and most importantly, commercial and recreational areas are located a short walk from most houses

Action Strategy 1: Create development standards, which includes the following requirements: maintain home owners association, sidewalks, street trees, front porches, narrow roads and open space.

--Street grids replace isolated cul-de-sacs and the broader roads that connect them

Action Strategy 1: Development standards to require alternate through streets in development with cul-de-sacs.

--Garages retreat to the rear of lot or alley

Action Strategy 1: Create development standard requiring off street, interior lot, parking for narrow streets.

SCENARIO 2: A Revitalized Tillamook City Downtown Action Plan

Attributes

--The Downtown Vision is a revitalized City Center that serves as: A Gateway of Commerce supporting residents and tourists in a viable economic and cultural manner.

Action Strategy 1: Downtown stakeholders shall strive to build a better revitalization network. Stakeholders include, but are not limited to: the Resident Shopper, the Resident Non-Shopper, City Service Organizations, Tillamook Chamber of Commerce, Tillamook City Council, Tillamook City Administration, Tillamook County Commissioners, Tillamook County Administration, Tillamook Downtown Association, utility providers, and others.

Action Strategy 2: The Downtown (Central Commercial Core) business mix should effectively support residential markets first and tourism markets second and be the backbone as a business and service center for the City and the area.

Action Strategy 3: Blend and coordinate stakeholders involvement for the Downtown's future. Stakeholders include, but are not limited to: the Resident Shopper, the Resident Non-Shopper, City Service Organizations, Tillamook Chamber of Commerce, Tillamook City Council, Tillamook City Administration, Tillamook County Commissioners, Tillamook County Administration, Tillamook Downtown Association, utility providers, and others.

--A downtown development plan with implementation strategy is to guide the creation of a viable business organization, a structured 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.

Action Strategy 1: The City government and utility providers shall actively support and participate in the creation of a viable business mix and a pedestrian-friendly and livable City Center (to include underground power lines).

Action Strategy 2: The City government shall encourage economic diversity through business recruitment that is specific and value-driven by quality and service.

--The leadership focusing on the downtown development will place emphasis on restoration and then remodeling, where appropriate.

Action Strategy 1: The Downtown Master Plan for the built environment will include a staging plan for restoring key structures and a remodeling plan for upgrading structures by defined development standards.

Action Strategy 2: The Downtown Development Plan will include the creation of restoration and remodeling standards to guide a staging plan.

Action Strategy 3: The Downtown Development Plan for the built environment will include the development of an era design program to provide guidance during the restorative and remodeling effort.

Action Strategy 4: This Downtown Development Plan will have periodic review.

--A set of design review standards (to be incorporated in the updated Tillamook City Land Development Code) may compliment early efforts and provide continuity of purpose in terms of color schemes, architectural and design elements and public open space.

Action Strategy 1: Institute a design review committee in Tillamook City. The Design Review Committee shall be determined by the downtown stakeholders.

Action Strategy 2: There shall be design consistency (standards) in design review of the Commercial District.

Action Strategy 3: Develop an incentive program for meeting standards (Tillamook City Economic Development Loan Fund).

SCENARIO 3: Community Growth & Development Action Plan

Attributes

-Adequate serviceable lands for Tillamook City's Urban Growth Boundary

Sub Attributes

- Coordinated water service provision for UGB*
- Planned sewer distribution for entire UGB*
- City Plan for sewer & water service outside current City limits*
- Provision of Annexation Plan for Tillamook City*
- Provision of Sewer Master Plan for Tillamook City*
- Coordinated Sewer & Water Plan in Tillamook City Public Facility Plan*
- Coordinated Capital Improvement Projects List*

Action Strategy 1: Identify alternative opportunities and means to finance public facilities projects and public improvement projects within Tillamook and the Urban Growth Boundary area; Identify stakeholders involved; Prepare a definition of terms, e.g., serviceable lands, LID, UGB.

Action Strategy 2: Present the product of Action Strategy 1 to the Tillamook City Council and to the stakeholders.

Action Strategy 3: Develop a Water and Sewer Master Plan for public facilities planning to be in place by year 2000 / 2004.

Utilize the guide: **S**pecific
Measurable
Attainable
Reasonable
Timely

-Adopt Urban Services Agreement

Action Strategy 1: Develop a Coordinated Capital Improvements Projects list.

Action Strategy 2: Improve the relationship between the City and County of Tillamook to further the development of urban services.

Action Strategy 3: Provide for a provision of a coordinated agreement between the City and the County to achieve an Urban Services Agreement.

SCENARIO 4: Community Character & Livability Action Plan

Attributes

--Community cultural celebrations focusing on Heritage valuing and History/traditions -- fairs, festivals, heritage events

Action Strategy 1: Foster (recognize and promote) special events, including schools, churches, cultural and language programs as well as Dual Language Programs and American Indian Heritage (Wilson Elementary School) events, June Dairy, International Day and October Fest.

--Safe, involved neighborhoods

Sub Attributes

Family life-based neighborhoods; Pedestrian walkways, bikeways; Activity involved schools; Caring neighbors on watch; Special events, including school, church and cultural programs engaging families and neighbors, interacting in community minded ways

Action Strategy 1: Identify neighborhoods and identify / survey values held by the residents by defining what neighborhood means to them.

Action Strategy 2: Maintain housing mix and its diversity.

Action Strategy 3: Blend downtown with immediate residential mix. Develop and maintain service mix that reinforces family life. Implement neighborhood policing within the community, encouraging involvement of a community resource officer.

Action Strategy 4: Encourage upkeep of all residential areas by promoting and encouraging upkeep of residential property throughout the entire city through Recognition and Award Programs; promote and encourage enforcement of existing laws and ordinances.

--Family Based Community

Sub Attributes

Family-waged jobs; Affordable housing; Excellent schools; Strong religious institutions; Efficient government services; Family-oriented activities, events; Healthy and high quality natural environments; healthy recreational activities for youth.

Action Strategy 1: Locate adult entertainment away from downtown through zoning.

Action Strategy 2: Promote and support uses within residential areas which promote activities with adults and children.

Action Strategy 3: Promote and support downtown family focused events, such as festivals, Joy Nights, open concert nights, family reunions and intergenerational activities.

Action Strategy 4: Foster family based block party events with City

Action Strategy 5: Foster development of a skate board park

-Viable Business Communities

Sub Attributes

Effective resident / tourism market mix plan in place and applied; Integrated downtown / north/east/west business market sectors; Stable watershed environment; Effective Watershed Flood Control Plan creation and implementation; Effective business diversity in place.

Action Strategy 1: Identify an effective residential / tourism market mix plan that uses what we have now as a base and continues from there.

Action Strategy 2: Support diverse business mix through a City business licensing process and enhance that mix in various geographic districts.

Action Strategy 3: Create a viable business community within the downtown by promoting and encouraging upkeep of business property throughout the entire city, downtown, north and east. Promote and encourage enforcement of existing laws and ordinances.

Action Strategy 4: Foster an infill and development strategy for commercial (Central Commercial Area) uses (coordinated business districts) with diverse complimentary, solicited businesses.

SCENARIO 5: Schools & Education Action Plan

Attributes:

--Develop community connections / promote community service interaction and involvement.

Action Strategy 1: Establish outreach committee to create a Citywide volunteer network service organization.

Action Strategy 2: Coordinate the service organizations to achieve community interaction and involvement in education programs.

--Become a community that supports education.

Action Strategy 1: Foster community values that emphasize achievement in continuing education through city sponsored recognition programs.

Action Strategy 2: Develop and conduct cooperative (educational programs for young adults, senior citizens and business/government enterprises.

Action Strategy 3: foster and develop community involvement/service projects as part of classroom curricula.

--Enhance life skills of all community members.

Action Strategy 1: Improve community awareness and support programs and activities through workshops, brochures and other marketing and promotional strategies.

Action Strategy 2: Encourage through proactive coordination Tillamook City, Tillamook Bay Community College and School District #9 to work together to improve community awareness.

--Ensure that School Facility Planning is incorporated in Land Use Planning.

Action Strategy 1: Review existing Land Use Planning guidelines.

Action Strategy 2: Make available and ensure land to be set aside for schools and recreation.

Action Strategy 3: Request City Manager to be on District #9 Facility Committee.

--Enhance the living environment of the community.

Action Strategy 1: Improve community living environment through educational awareness and support programs, and quality of life through workshops, brochures and other marketing and promotional strategies.

Action Strategy 2: Enhance the life skills of community members for educational and personal interest.

--Make the community a living classroom by encouraging school-to-work opportunities for our students.

Action Strategy 1: Encourage businesses to provide more student placement opportunities.

Action Strategy 2: Encourage City to provide more student placement opportunities.

--Encourage understanding and appreciation of the natural environment.

Action Strategy 1: Maintain and expand the partnership with area agencies and educational programs to further awareness and valuing of the natural environment.

Action Strategy 2: Encourage and promote environmental science and technology (automated mapping and information acquisition) and programs and training.

--Provide leadership in the economic, cultural, and intellectual evolution of our community

Action Strategy 1: Develop and maintain a continuing needs assessment for college and high school curricula programs that interprets and leads community cultural growth.

Action Strategy 2: Develop and support city government sponsored lifelong learning/skills in conjunction with city educational programs.

--Establish personal / community development and growth.

Action Strategy 1: Foster and support through city government sponsored educational awareness opportunities personal/community government and growth.

Action Strategy 2: Foster continuing education programs, which enhance personal/ community development and growth.

--Foster collaborative effort in the educational community, north, central, south.

Action Strategy 1: Provide awareness opportunities such as Career Days, invite citizens to sit in on city government (youth participation), teen court.

Action Strategy 2: Promote existing programs, services, courses and the Tillamook Educational Consortium in a countywide collaboration.

--Foster improved educational facilities.

Action Strategy 1: Request City Manager to be on District #9 Facility Committee.

Action Strategy 2. Foster integrated services throughout the facility system.

--Provide an environment for innovation and intellectual pursuits.

Action Strategy 1: Sponsor recognition programs, which highlight innovation and intellectual accomplishment community-wide.

Action Strategy 2: Encourage a valuing system that includes recognition of education as a core value.

--Foster educational and cultural diversity.

Action Strategy 1: Continue to foster and promote existing multi cultural programs throughout all educational levels (e.g.; bilingual k-12, and ESL).

Action Strategy 2: Develop and promote multi-cultural history and other diverse cultural awareness opportunities.

--Focus on educational goals (statewide), knowledge and information to shape a rapidly changing society.

Action Strategy 1: Encourage and promote statewide educational goals that further acceptance of change and adaptation to change

Action Strategy 2: Encourage and promote educational goals, which highlight the role of technology in changing community.

--Foster life long learning to acquire knowledge and life skills to effectively participate in the workforce, community and society at large.

Action Strategy 1: Develop and foster programs that focus on current job needs and anticipate future growth.

Action Strategy 2: Coordinate with area agencies to provide skill pools to meet the changing program missions.

-Educate people for anticipated jobs.

Action Strategy 1: Develop future job market surveys program for continued opportunities for career choice.

Action Strategy 2: Develop evolving educational programs and course articulation to stay abreast of changing industry and technology.

SCENARIO 6: Community Health & Well Being Action Plan

Attributes

--Encourage healthy lifestyles.

Action Strategy 1: Channel wise choices in lifestyles by creating healthy lifestyle activities and educational components that show the benefits of these programs for all ages.

Action Strategy 2: Develop individual accountability and responsibility behavior programs.

--Active older adults.

Action Strategy 1: Promote and further existing programs in Tillamook County Health Department and Tillamook County General Hospital.

Action Strategy 2: Encourage groups to target older adults to get involved and recruit membership in exercise and cultural activities.

--Adequate housing and care for special-need citizens.

Action Strategy 1: Provide special housing needs involving medical treatment.

Action Strategy 2: Amend Comprehensive Plan Policy under Housing State Planning Goal and support these facilities.

Action Strategy 3: Amend Zoning Ordinance to allow for special-need housing and care and revise those ordinance provisions that block these uses. Do not implement ordinances that discriminate, by zoning, special-need citizens housing paying particular attention to the safety and security of the community.

Action Strategy 4: Inventory and redefine special-need housing for the next decade.

--Focus on prevention and wellness in the community.

Action Strategy 1: Encourage health groups and organizations to target older adults involvement and recruit membership in exercise and wellness cultural activities.

--Support healthy families

Action Strategy 1: Promote nurturing and caring by all community members by supporting and furthering the success of healthy family programs already in place such as, the Tillamook County General Hospital's Healthy Families and Head Start.

Action Strategy 2: Identify areas in the existing healthy family programs that are not already addressed, and develop programs actions to meet the new needs.

--Primary service center for the County.

Action Strategy 1: Provide continuing means for countywide access to health services.

--Safe and secure community.

Action Strategy 1: Develop and support volunteer and community police law enforcement programs.

Action Strategy 2: Encourage and support neighborhood watch and report programs community wide.

--Prevention and control of crime.

Action Strategy 1: Develop and support volunteer and community police law enforcement programs.

Action Strategy 2: Encourage and support neighborhood watch and report programs community wide.

--High quality, accessible, affordable physical health care.

Action Strategy 1: Develop and promote Health Care Program integration.

Action Strategy 2: Develop alternative means for diversifying service provision, which reaches all community sectors and financial means.

Action Strategy 3: Articulate and maintain high standards program for all patient population services in the community.

--High quality, accessible, affordable mental health care.

Action Strategy 1: Develop and promote Health care Program integration.

Action Strategy 2: Develop alternative means for diversifying service provision, which reaches all community sectors and financial means.

Action Strategy 3: Articulate and maintain high standards program for all patient populations services in the community.

--Preventive healthcare for children and adults.

Action Strategy 1: Develop and apply preventative health awareness programs for family practice counseling.

Action Strategy 2: Develop and apply community wide preventive health care awareness message program that is common to all age classes.

--Quality Social Services.

Action Strategy 1: Accept responsibility for planning, financing and implementing direction for social services programs.

Action Strategy 2: Inventory and redefine community social service needs for the next decade.

Action Strategy 3: Convene social services agencies in the needs assessment.

Action Strategy 4: Evaluate and where necessary redesign service delivery features of existing programs to update service program relevance.

Action Strategy 5: The City should exercise its role in social services.

--Zero tolerance for domestic violence.

Action Strategies guided by Prevention -- Prosecution -- Intervention

Action Strategy 1: Establish a coordinated response by a committed partnership of, but not limited to: CARE, Inc., private health care providers, Tillamook Bay Community College, Tillamook County Domestic Violence Council, Tillamook County General Hospital, Tillamook County Health Department, Tillamook Family Counseling Center, Women's Crisis Center.

The committed partnership will:

Provide an educational strategy for the partnership to be successful and work within the community;

Provide a safety net support system as a follow-up response to victims.

Action Strategy 2: Encourage the City of Tillamook to issue a resolution for the City to be declared to have **Zero Tolerance for: Domestic Violence.**

--Drug-free community

Action Strategy 1: Promote and support efforts towards a Drug-Free Workplace Program within the community.

Action Strategy 2: Develop alternatives to drug and alcohol use and abuse, such as drug-free social occasions and in-city drug-free recreation areas.

--Foster a low teen pregnancy rate.

Action Strategy 1: Diversify programs to effect rate.

Action Strategy 2: Promote abstinence based programs beginning in the sixth grade.

--Foster coordinated teen programs.

Action Strategy 1: Research and develop undefined areas that meet the needs of all youth in the City of Tillamook.

Action Strategy 2: Identify and articulate teen program needs.

--Ensure the water quality in Tillamook City.

Action Strategy 1: Form a consensus among jurisdictional interests and stakeholders on quality measures and standards.

Action Strategy 2: Formulate and adopt water standards that protect the community residents and businesses as well as jurisdictional priorities.

SCENARIO 7: Community Valuing -- Cultural Assignments Action Plan

Attributes

--Maintain a small town atmosphere

Action Strategy 1: Promote a zoning administration, which will maintain a small-town atmosphere no matter the population size.

Action Strategy 2: Encourage cultural events related to the rural, agricultural heritage and traditions of this community.

Action Strategy 3: Foster a climate, which promotes a physically safe environment, that is pedestrian-friendly.

--Develop and preserve City Center to retain a small, friendly, relaxed, and welcoming environment

Action Strategy 1: The City of Tillamook is to provide leadership and coordination in developing public use, focal-point areas within the City Center.

Action Strategy 2: Promote partnerships between civic local and business groups and local government that will enhance a welcoming environment and a more visual pleasing downtown through a recognition / reward program and nuisance ordinances.

--Encourage pride in general appearance of community -- neighborhood and park programs to maintain a clean and litter-free community; landscaping, lighting, and signage programs to beautify; enhance community security.

Action Strategy 1: Develop a Community Clean and Litter-Free promotional program.

--Provide a diverse set of community programs, activities and facilities that enhance community values -- pride, family values, traditional enterprise.

Action Strategy 1: Identify community programs and report in the local media and actively promote our town's activities and events.

Action Strategy 2: Develop community value demonstration program.

--Recognize and preserve community heritage: historic buildings and other features preserved and renovated; conduct a touring program to visit sites of community heritage.

Action Strategy 1: Support the downtown revitalization effort.

Action Strategy 2: Develop and conduct a touring program to visit sites of community heritage.

Action Strategy 3: Identify and inventory the community heritage sites.

Action Strategy 4: Inventory and develop Hoquarton Slough (wetland) interpretive boardwalk (i.e., Rosenberg Park).

Action Strategy 5: Creation of a nature park in Hoquarton Slough East.

Action Strategy 6: Encourage cultural events that are related to the rural, agricultural heritage and traditions of this community.

Action Strategy 7: Identify and preserve, with legal language, our historic buildings, e.g., grain silo/elevator.

Valuing Checklist

Tillamook City honors and values.....

Small town-atmosphere; Rural, agricultural heritage and traditions; Pride in community public image; Well-kept homes and businesses; Respect for fellow community members; Strong work ethic for adults and youth; Independence of mind; Healthy and strong family units; Spirit of community volunteerism; Fiscal accountability; Strong educational programs; Strong spiritual values; Encourage cultural diversity; Balanced and managed growth; Responsible stewardship of the environment; Physically safe community; Promote cultural appreciation of the arts; Leadership role in the county; Ensure the water quality in Tillamook City

SCENARIO 8: Highest and Best Use for the Future of Tillamook City Action Plan

Attributes

--Emphasize long-term allocation of uses within Tillamook City and its Urban Growth Boundary.

Action Strategy 1: Conduct twenty-year population projections and zoning build able lands study.

Action Strategy 2: Develop zoning plans to meet the twenty-year time frame.

Action Strategy 3: Develop zoning Comprehensive Plan Policy to account for cumulative effect on water shed.

Action Strategy 4: Conduct a Sewer Master (Facilities) Plan of Tillamook and the UGB.

--Seek and preserve use compatibility objectives which recognize livability as the highest goal.

Action Strategy 1: Support and promote zoning administration that incorporates clustering compatible uses.

--Support the long-term distribution of uses which clusters compatible uses for efficient and effective infrastructure provision.

Action Strategy 1: Conduct sewer and water master plan studies to efficiently allocate infrastructure.

Action Strategy 2: Develop and adopt Comprehensive Plan Policy which coordinates land use distribution for cost effective infrastructure provision.

--Coordinate and support Tillamook County land use policy directing wise allocation of uses near and within Tillamook City's Urban Growth Boundary.

Action Strategy 1: Tillamook City Management fosters a continuing coordinating role with Tillamook County.

Action Strategy 2: Promote, and support an urban services agreement between the City and County of Tillamook.

--Support the efficient use of lands within residential zones.

Action Strategy 1: Create and implement infill and redevelopment Comprehensive Plan policies for Tillamook City and UGB (fully utilize vacant, dilapidated housing stock).

Action Strategy 2: Develop compact development overlay zones.

SCENARIO 9: Environment & Natural Resources Action Plan

Attributes

--Ensure the safety of the city water supply.

Action Strategy 1: Develop and implement a Watershed Health Plan and well-head protection plan.

Action Strategy 2: Implement the highest standards to ensure the safety of the City water supply.

--Respect for the natural environment as the basis for all life and livelihood.

Action Strategy 1: Develop and implement awareness and education program for the natural environment for school aged children, K through 12th grades.

Action Strategy 2: Develop and implement awareness and education program for the natural environment for adults as a lifelong learning program.

--Careful stewardship of the natural environment.

Action Strategy 1. Develop a new subcommittee of the Watershed Council, which will address City issues.

Action Strategy 2: Implement Comprehensive Conservation Master Plan (CCMP) identified actions -- Comprehensive Policy and Ordinance . Prepare and implement storm water run-off ordinance.

--Protect and enhance the major natural areas and open spaces.

Action Strategy 1: Develop and implement an Open Space and Natural Areas policy of the Comprehensive Plan under Goal 5 Accommodations.

Action Strategy 2: Develop and Implement a Recreational Master Plan for significant waterways (Hoquarton Slough) in Tillamook City and UGB.

--Conserve open space lands.

Action Strategy 1: Update the inventory of Open Space and Park lands in Tillamook City.

Action Strategy 2: *Rezone by overlay for conservation of designated lands.*

--Ensure air quality in Tillamook City.

Action Strategy 1: *Protect the air shed by maintaining National Standards.*

Action Strategy 2: *Support the Mead Project and the development of other waste processing.*

--Ensure that open space and recreational opportunities are available in residential areas.

Action Strategy 1: *Develop and Implement a Recreational Master Plan for significant waterways in Tillamook City and UGB.*

--Preserve and enhance significant waterways and wetlands in and around Tillamook City.

Action Strategy 1: *Develop and Implement a Recreational Master Plan for significant waterways (Dougherty, Hall, Hoquarton and Lower Trask watershed) in Tillamook City and UGB.*

Action Strategy 2: *Apply for and secure Healthy Streams Grant to support the development of Riparian Plan/Policy/ and Ordinances for Tillamook City UGB.*

Action Strategy 3: *Inventory and develop a Riparian Plan and Ordinance for Tillamook City and within the Urban Growth Boundary.*

--Preserve riparian lands as natural areas in Tillamook City's Urban Growth Boundary.

Action Strategy 1: *Inventory and develop a Riparian Plan and Ordinance for Tillamook City and within the Urban Growth Boundary.*

--Emphasize alternative pedestrian links, which connect the City parks, waterways and wetlands with small town residential development.

Action Strategy 1: *Inventory and develop a circulation plan connecting the City parks, waterways and wetlands.*

--Implement a vegetation community plan for the City business district, residential neighborhoods, streets and roadways.

Action Strategy 1: *Inventory and develop a community landscape plan for the City and the UGB.*

Action Strategy 2: *Prepare and implement a voluntary landscape plan for the community.*

Action Strategy 3: *Encourage development use of certain tree forms.*

Action Strategy 4: *Promote street trees in all developments, shoulder to shoulder (tree forms).*

Action Strategy 5: *Promote community services and school*

Action Strategy 6: *Coordinate with state, local and other agencies on species selection.*

--Continue to support a comprehensive residential, retail and commercial waste reduction and recycling program.

Action Strategy 1: Develop a City Sanitary franchised recycling station.

Action Strategy 2: Support commercial and non-profit recycling.

Action Strategy 3: Coordinate the City recycling effort with service groups.

--Emphasize and implement a □ Clean Industry□ program in Tillamook City to minimize aesthetic and environmental pollution, conserve energy, and reduce waste.

Action Strategy 1: Establish a sub-committee to develop a Clean Industry Program.

Action Strategy 2: Designate a Clean Industry Awareness Day.

--Encourage industry priorities, which recognize ecologically sensitive attitudes and practices.

Action Strategy 1: Develop an ecology awareness program for Tillamook.

--Disaster resistant community (flooding, earthquakes, volcanoes).

Action Strategy 1: Create and plan for emergency response.

Action Strategy 2: Educate residents as to response practices.

Action Strategy 3: Institute Disaster Response Day for the community once a year.

SCENARIO 10: Tillamook City Gateways Action Plan

- **Trask River Bridge**
- **Wilson River Bridge**
- **Port of Tillamook Bay RR Bridge on Highway 6**
- **South Highway 101 Divider Island at Main & Pacific**

Attributes

--Focus on gateway identities to enhance Tillamook City Entrance.

Action Strategy 1: Place signage at City entrance features.

Action Strategy 2: Clean up landscaping on terrain around entrance features.

Action Strategy 3: Slow traffic down.

--Create a distinctive entrance identity to the City via its Gateways.

Action Strategy 1: Create a theme plan for the City Gateways.

Action Strategy 2: Focus on pride among residents, then tourism in a theme plan.

Action Strategy 3: Incorporate a coordinated colors scheme and planting specification in the entrance theme plan.

--Enhance Gateways image by distinctive signage, lighting & landscaping.

Action Strategy 1: A Gateways subcommittee will develop a theme image for distinctive signage, with theme signage, lighting, and landscaping.

--Update City entry signage for each Gateway.

Action Strategy 1: Coordinate entry signage with theme signage and lighting.

Action Strategy 2: Secure signage (Highway 26 and 6) at this intersection for Tillamook City.

Action Strategy 3: Select and install signage in other coastal communities for Tillamook City.

--Update and include current population signs for each Gateway.

Action Strategy 1: Update current population signs for each Gateway.

--Coordinate with Tillamook City service clubs to acquire restroom site and develop facilities on Highway 6 (at County line) or at the falls and place temporary porta-potties in pull off fountain area.

Action Strategy 1: Approach ODOT to put restrooms at County line (storage site at crest/county line).

Action Strategy 2: Request placement of temporary restroom site at Falls and in pull-off fountain area.

--Update and include welcome signage for each Gateway.

Action Strategy 1: Evaluate and select a welcome sign style/design to be included in a coordination plan.

Action Strategy 2: Gateway subcommittee to prepare a coordination plan for all themes, signage, landscaping and lighting.

--Develop and include appropriate commerce signage for each Gateway that identifies downtown Gateway commercial district.

Action Strategy 1: Develop a coordinated sign plan for City entrance Gateways and commercial district gateway.

--Tillamook City must have a distinctive identity heralded by its well-recognized four Gateways.

Action Strategy 1: Coordination of local government, County Government Service groups and business association, in the identity plan formulation.

Action Strategy 2: Prepare artist renderings (sketch) by Art Club, children, of alternative physical designs representing the coordinated Gateway identity.

Action Strategy 3: Closer coordination with ODOT on their maintenance of Highway 101 bridges.

Action Strategy 3: Look at funding for subcommittee coordination.

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Appendix XXIV - CPAC, Citizen Advisory Boards, Committees, Commission Bylaws, Vision Committee Bylaws, & Planning Commission Bylaws, and programs

DRAFT

Appendix XXV – City Council Strategic Plan

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Appendix [XXVI](#) - Development Ordinance

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Appendix XXVII - Implementing Ordinances

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Appendix XXVIII - Historical Site Inventory within the Tillamook Area

EARLY TILLAMOOK

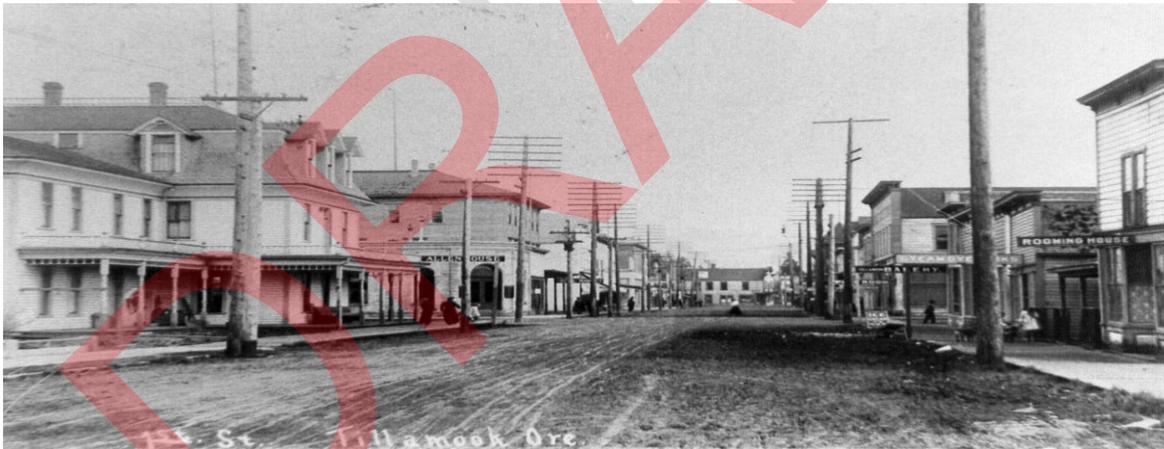
West



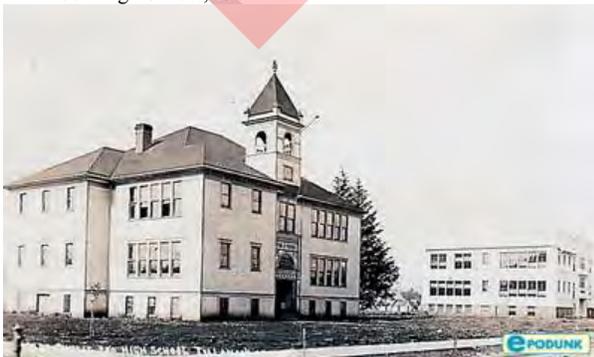
East



View of Tillamook looking east on First Street in 1900s

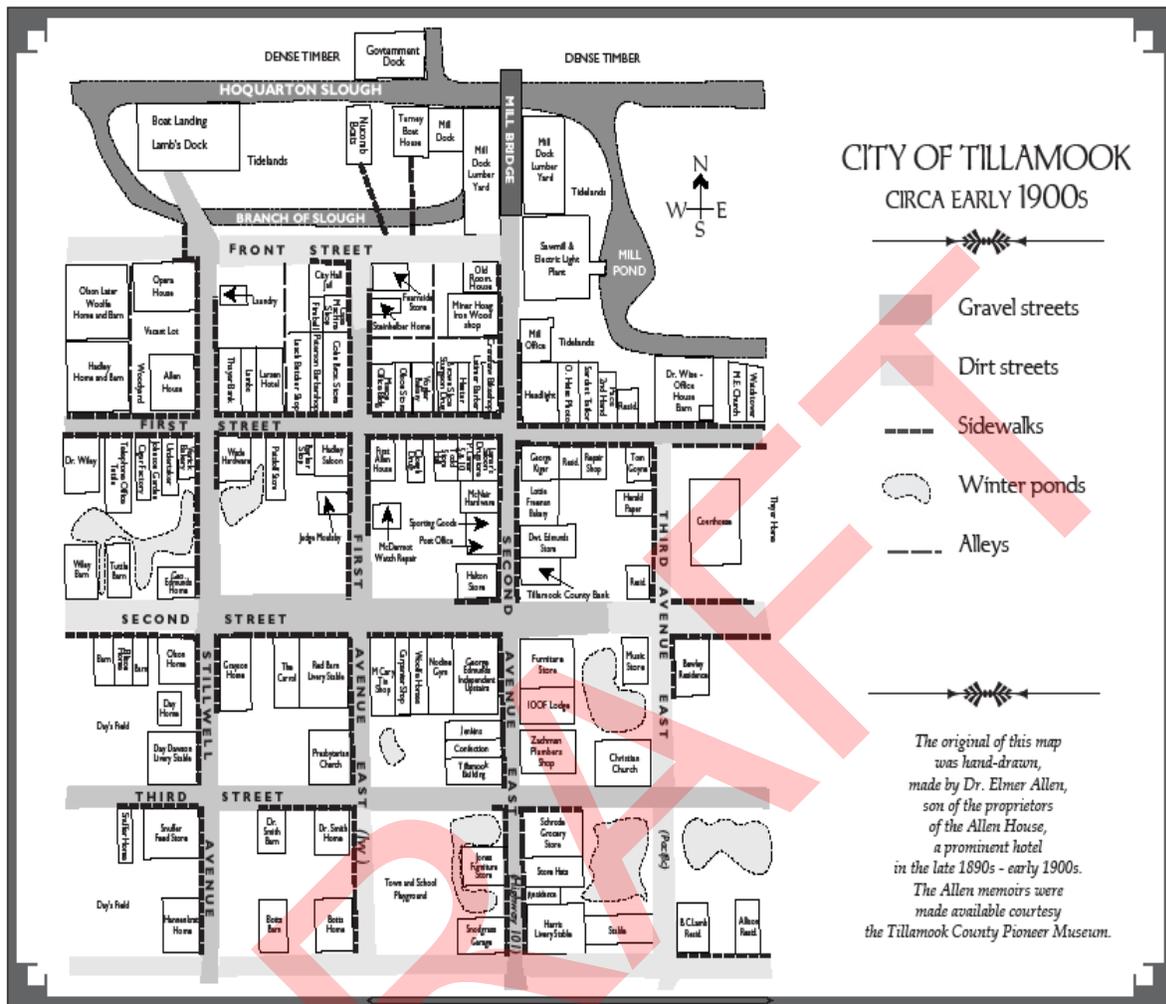


Tillamook High School, 1900



Waiting for the parade 1900





Tillamook was called “Hoquarton” by the Indians who lived there before white settlers came. During the 1880s, all business in Tillamook was carried out along streets where boats carrying supplies could land to load and unload cargo. The Highway 101 bridge crossing the slough was built in 1931 by the Clackamas Construction company.

The table below describes Tillamook’s historic sites and structures:

Tillamook’s Historic Sites and Structures		
NAME	LOCATION	DESCRIPTION
Fairgrounds Exhibit Hall	4603 Third Street	A two-story wooden structure located on the Old Wilson River Highway (Third Street), two miles east of town. Constructed in 1925, it still serves as an exhibition hall for Fair events. The structure has been enlarged over the years and remains as one of the most formal structures on coastal fairgrounds.
Naval Air Station	HWY 101, two (2) miles south of town	Home of the Tillamook Air Museum
Old Tillamook County Courthouse	2106 Second Street	A two-story stone masonry structure located between First and Second Streets. Constructed in 1905/06, it originally served as the County Courthouse. It now is under the ownership of the Tillamook County Historical Society and houses a museum devoted to the history of Tillamook County.

Old Trout Cemetery	Corner of Wilson River Loop and Third Street	
Tillamook County Courthouse	201 Laurel Avenue	A two-story brick structure constructed in 1950, it continues to serve as the County Courthouse. The Lucia Wiley Mural and the Building of the Morning Star is painted on the west wall of the lobby.
Old Tillamook Post Office	210 Laurel Avenue	A one-story brick structure constructed in 1940. It is presently used as the Tillamook City Hall. Originally it was the Central County Postal Distribution Center. The Lucia Wiley Fresco painting depicting native trade with explorers is found on the north wall of the business lobby.
Old Tillamook Bank	1802 First Street	A one-story masonry structure constructed in 1894, it serves as commercial oyster supply shop. It is an example of late 19th century architecture.
United Brethren Church	Corner of Fourth Street and Madrona Avenue	A one-story wooden structure constructed in 1897, it serves as St. Peters Lutheran Church. The church is one of the oldest in Tillamook, and except for the replacement of its tower and spire, remains in almost original condition.

There are a number of additional buildings of historic importance than just those listed above. These include the following to name just a small number of them: the Masonic Building at the northeast corner of Second Street and Ivy Avenue completed in 1914; the Kelly Building at the SW corner of Second Street and Main Avenue completed in 1925; the Alderman Building at the NW corner of Second Street and Main Avenue, built in 1932; the First National Building at the NE corner of Second Street and Main Avenue, the Odd Fellows Building at the SE corner of Second Street and Main Avenue, built in 1916; the Tillamook Hotel between Second Street and Third Street and Main Avenue and Pacific Avenue, completed in 1941; the C.B. Hadley House on the SE corner of Third Street and Laurel Avenue (as shown in the photograph above), built in 1892; and the United Brethren Church at the SE corner of 4th and Madrona, constructed in 1897-99. These historic structures and many more are listed and described further in the Appendix. Tillamook County Historical Society has published a seven-page document showing early photographs of Tillamook and interesting facts about its pioneers. Click on the image to download a PDF of the document, or go to the Tillamook County Pioneer Museum Web site at <http://www.tcpm.org/> and click on TCHS.

WHERE IVY INTERSECTS FRONT STREET AND THE HOQUARTON SLOUGH



G.F. Fearnside's Famous Floating Store - in 1892, Mr. Fearnside was the proud owner of a boots, shoes and clothing store built on a scow. When business became a little "slack" at one town, he floated down to the next.

THAYER BANK BUILDING

1802 First St, Tillamook
 Constructed in 1894, it now serves as Pearl Point Oyster, a commercial oyster supply shop. The



structure has been altered over the years, but remains in fair condition as an example of late 19th century architecture. A one-story masonry sandstone structure with construction delayed due to experimenting with use of native stone from various quarries of Tillamook Bay. Mr. Thayer insisted on using Tillamook productions and Tillamook labor. The local stone was of excellent quality and by being exposed to the atmosphere, became very hard and durable, while still being easy to work. The foundation is massive and solid, enclosing a spacious basement. A vault rests on a concrete foundation about 15 feet square and over ten feet from the base of the vault floor. Absolutely fireproof, its walls are 32 inches thick with intervening air chambers and lined with chilled steel, as near burglar proof as vaults are made. Nearly all materials are Tillamook county products with only the lime, cement and iron in the structure were shipped from abroad. The redwood of California forests was from logs and lumber that drifted in on the “ever hospitable shores of Tillamook.” Most of this information from an article in the Tillamook Headlight, 1895. Claude and Estelle Thayer moved to Tillamook shortly after they were married. They were aware the town was in need of both a bank (begun about 1887) and a lawyer, needs that they were able to help satisfy. The criteria for bank loans was “If he has manure on his boots, give him the money.” The bank was said to never have lost a dollar on bad investments or risky loans.

MASONIC BUILDING Plaque

The first recorded attempt to establish a Masonic Lodge in Tillamook County was in 1865 by Joseph R. Edwards and others. The first lodge meetings were held in Edwards’ barn, later on, inside his house. In 1913, the members bought two lots on 2nd Street to erect a new building. Hiding under the siding is a lovely brick structure.



The lodge members moved in January of 1914 and have occupied that site until the present. Lodge activities take place on the second floor of the building, while first floor tenants have included the U.S. Post Office, Tillamook Cheese and Dairy, and a Montgomery Ward Department Store. Today the Headlight Herald weekly newspaper and several small retail shops occupy the first floor. Note the old Chandler & Price printing press on display in the Headlight Herald windows. Once the home of Sanders Iron Works, where logging trucks were brought to be repaired. After hours, the owner would bring out the bottle and the truckers and he would have a few “snorts.”

KELLY BUILDING

SW corner of 2nd street and Main Ave. completed in August, 1925. The original tenants included a sporting goods store and a cigar store with a soft drink and card parlor. Today it is home to Anderson’s Florist.

ALDERMAN BUILDING

NW corner of Main and 2nd St., built in 1932, quite extravagant considering that was in the Depression era, once held the offices of Macinerny Jewelers, an optometrist and a barbershop. A hair salon of some sort existed there until the mid 1990s.

Where the Sugar Bean Cafe sits today was once the home of the Smokehouse Tavern and Smokehouse Confectionery, a wooden building that boasted a bowling alley in the basement. Remnants of the bowling alley are still there. The building to the north of Alderman was once home to Buel's Hardware store and Clough's Drugs.

View of Tillamook looking north on Main Avenue in 1950's (Tillamook Hotel on right)



TILLAMOOK HOTEL

The first part to be built included the Rendezvous Bar. In 1912, a new owner added on the hotel portion; in 1941, a woman bought the building and extended it to 2nd St. When the hotel first opened, the cost of a room was \$10 a night, girls included. The site of the Mexican Shop once housed a bank vault; Sunflower Flats was once a jewelry store.



C.B. HADLEY HOUSE

C.B. Hadley owned the Grand Central Saloon & Billiard Parlors. Located on Stillwell Avenue, it was one of the best appointed and thoroughly equipped establishments of its kind in the state in 1892, boasting electric lighting. The Hadley home, shown above, has gone through many changes and is today the La

Mexicana Restaurant.

UNITED BRETHREN CHURCH

4th and Madrona

A one-story wooden structure constructed in 1897-99, it now serves as St Peter Lutheran Church. One of the oldest churches in Tillamook, the builder was Gust Freeman, an emigrant from Sweden who followed plans commonly found in that

country. He borrowed \$600 in January of 1896, to construct the church. Mr. Freeman hand-hewed the beams and John Swenson did beautiful carvings. The tower and spire blew off in a windstorm several years ago and were replaced. Extensive changes have occurred on the inside; the carvings are no longer there. According to the current pastor, the outer walls of the structure are the only remaining parts of the original. The building has gone through three different denominations: Baptist, Mormon and Lutheran. A resident hermit who sold Revlon products lived in the structure for some time; long enough that the Lutheran church had to get a quick claim deed from him. The Tillamook County Historical Society installed a plaque there in 1999, celebrating its 100th anniversary of its dedication.

HIGHWAY 101/MAIN STREET (FORMERLY FIRST AVENUE) & 3RD

Today the Pancake House, originally Ford's Drugstore & Soda Fountain occupied this location on Main St.. That building had the first elevator in Tillamook County. In 1936, the Dudes Coliseum was featuring the movie "Mississippi," starring W.C. Fields and the lesser known Bing Crosby and Joan Bennett. Cost: Adults 10¢, kids under twelve, 5¢. Today Tillamook Music, originally this spot was home to a livery stable, later a radio repair shop and an insurance agency.



FIRST NATIONAL BUILDING
on Main Avenue between 1st and 2nd was first intended to be the First National Bank, although it was never used as such, the bank instead moving across the street to the IOOF building. However, there was a lively establishment upstairs, complete with an oak dance floor and rumored to host ladies-of-the-evening.

ODD FELLOWS BUILDING

Built in 1916, the second floor of the building has been always been occupied by the Odd Fellows (IOOF). The space was shared with the Tillamook County Creamery from 1920 to the mid 1950s. The first floor has been occupied by a bank and several retail stores. In summer of 2006, restoration to its original state began. *(IOOF is one of the largest fraternal and benevolent organizations in the U.S. Founded in England, the members organized a system to provide aid and comfort to their fellow members in times of misfortune.)*



FIRST TILLAMOOK COUNTY COURTHOUSE • 1887

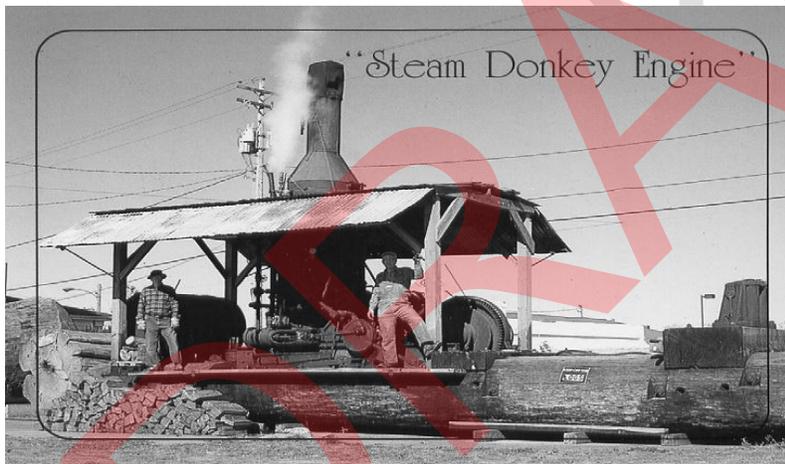
In 1887, the pioneers built a wooden courthouse to conduct the business of Tillamook County.

After the building was devastated by fire in 1903, a grand new courthouse was erected on the same site in 1905.

1905 Tillamook Courthouse (Now Pioneer Museum) on the upper right.

SECOND TILLAMOOK COUNTY COURTHOUSE 1905

With the growth of the county and its inhabitants, larger accommodations were required and in 1932, the current Courthouse replaced the second. The Tillamook County Pioneer Association, wanting to preserve the history of Tillamook County and its inhabitants, spearheaded efforts to create a museum. Since 1935, the second courthouse has functioned as the **TILLAMOOK COUNTY PIONEER MUSEUM**, with three floors of artifacts displaying over 40,000 artifacts.



STEAM DONKEY On the east lawn of the museum is one of the few running steam donkeys left in the US. Fired up four or five times a year, its whistle is the official start for the annual June Dairy Parade. This engine was made by Puget Sound Iron Works, Tacoma, Washington. Used in early day logging

to power the highlines. Steam was generated by heat from wood, coal or oil fuel in the firebox and supplied to reciprocating engines.

THIRD TILLAMOOK COUNTY COURTHOUSE

Built in 1932, a Lucia Wiley mural, a true fresco, adorns the wall on the southern end of the building. An explanation is next to the artwork, explaining the methods used in fresco painting and why it is so unique. True frescoes are not plentiful, so here is a wonderful opportunity to see one up close.

OLD POST OFFICE (CITY HALL) - 210 Laurel Avenue Constructed in 1940, it was originally used as the Central County Postal Distribution Center. In May of 1985, the building was placed on the U.S.



Interior list of Depression-era style of architecture. The large mural inside depicting Native Americans present at Captain Robert Gray's 1788 landing at Tillamook Bay was designed and painted in 1942 by Lucia Wiley, originally from Tillamook. While working in the arts in Minnesota, Lucia won a national art contest with the prize being to paint a post office mural. Tillamook requested she paint the mural in their post office. She was one of the seven best-known fresco artists at the time. She also worked in the ghettos of New York as a teacher. In later years, she joined the Episcopal Order of Sisters and became known as Sister Lucia.



WHAT IS FRESCO? The Italian word *fresco* is used to describe the painting of a picture on fresh (damp) lime mortar or plaster. Fresh fresco painting applies wet color to wet plaster and dries to become a permanent part of the structure. When it dries, the white of the wet plaster gives the colors on the wall an exceptionally bright transparency, similar to the clarity

of watercolor on paper. About fresco painting: a quote by Lucia Wiley... *"I believe fresco is the most universal, simplest, the most direct, the most natural expression of the artist. Yet of all forms of painting, it demands the most of the artist. It calls from the painter the fullest giving of herself. It draws on every inch of her physical and mental and spiritual being, as she contemplates the same idea, the same motif, day after day, month after month, and then creates the fresco out of every ounce of herself. In addition to this, throughout the day the capacity of the plaster to assimilate color varies - it is a living changing thing. The painter must be sensitive to this constantly changing appetite and feed it accordingly. In my own studio practice, I like to call this ability-or gift-the "mothering principle." Painting a fresco uses this gift like no other artistic process."* -Lucia Wiley The procedure is described in great detail by Lucia Wiley herself on this website: <http://www.muralist.org/fresco/painting.html>

A.G. BEALS HOME 2316 3rd St. Arthur Generous Beals, age 18, headed West from Pennsylvania in February of 1891, with his brother Fred. Later he married a Pennsylvania girl, Grace L. Allen, and brought her and his mother back to Tillamook. Arthur ended up developing 12 dairy farms; operating five sawmills; operating the Tillamook City electric light system for several years; serving in the state legislature, sitting on the "Board of High Curricula" for many years and



was responsible for spearheading an effort to record and honor all those who served in WWII from Tillamook County. Those record books are on display at the Pioneer Museum. Contrary to his middle name, Mr. Beals had quite a reputation for not

wanting to part with money. So imagine his surprise when after offering \$75,000 to start up a YMCA, provided the town matched that amount, the town did.

HABERLACH HOUSE

Located at 2406 Third Street, the house was built for Carl Haberlach and family circa 1930. They originally lived on the site where the City Police building stands today. This home was considered THE house in town at the time, boasting a music room, reading room, large living room and a full basement. Constructed in a “California Spanish style”, it had a tiled roof, unusual for this area. Mr. Haberlach, an excellent salesman, was responsible for forming the first cooperative of ten cheese factories in 1909, thereby essentially forming the Tillamook County Creamery Association. He also pushed for consistent quality standards and was responsible through his marketing efforts for getting the award-winning Tillamook Cheeses known far and wide. Mrs. Haberlach is fondly remembered to this day for her maple cakes with maple frosting. Today the house is home to the law office of John Tuthill.

View of Tillamook looking south on Main Avenue in 1910's

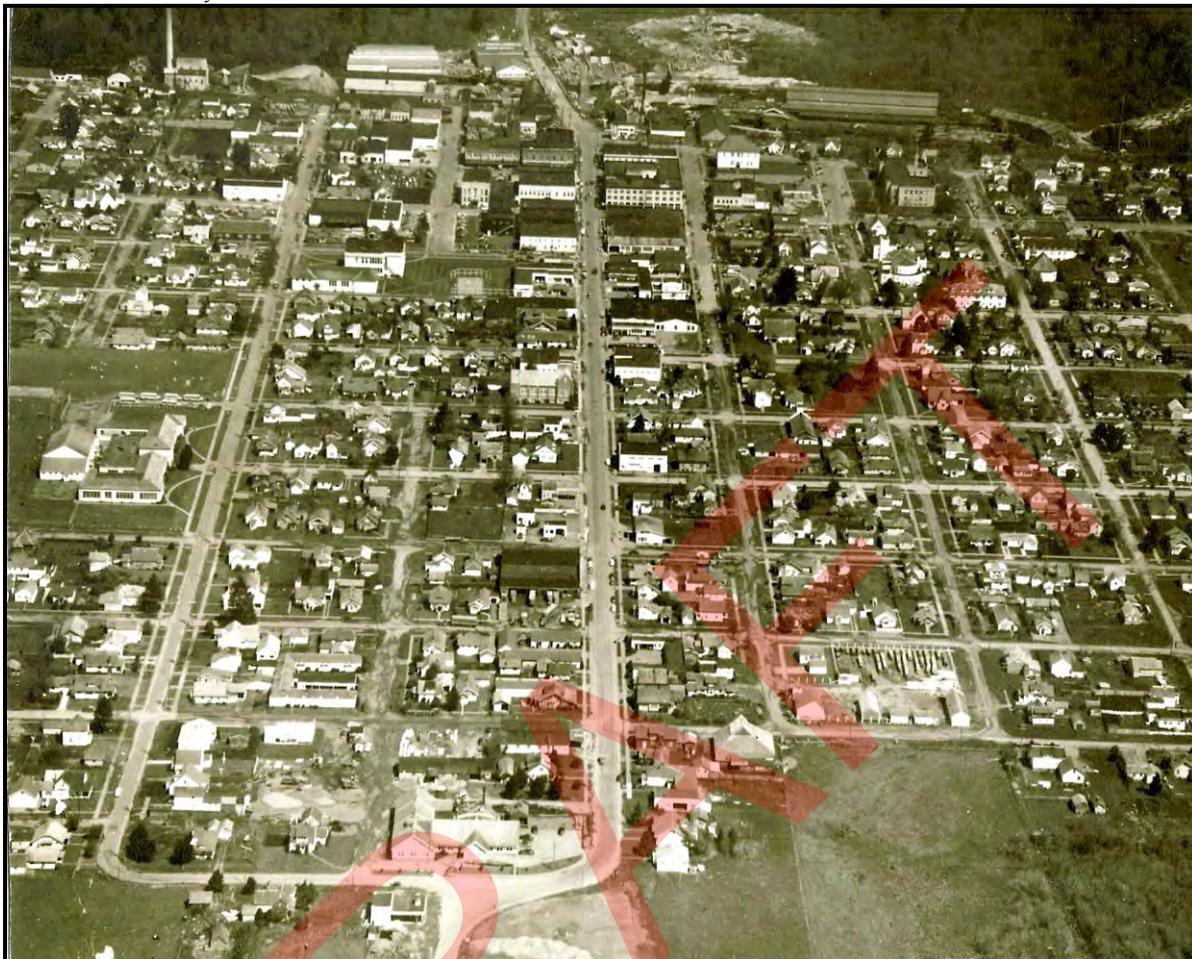


MAIN/HWY 101 BETWEEN 2ND & HWY 6

Where the Dance Studio and Optometrist businesses are today was once Lamar's Drugstore, home of the Chocolate Coke: a prized treat on a trip to town.

NEXT TO THE U.S. POST OFFICE

The Hoquarton House. 1889 One of the oldest remaining houses in Tillamook. In great disrepair after be owned by many families over the years, it is undergoing renovation to be the headquarters for the Hoquarton Slough project, an effort to preserve wetlands and history along the Slough. There is a walkway along the slough for approximately a quarter of a mile.



PRIVATE RESIDENCES THIRD STREET CAPTAIN GROAT HOME

2312 3rd St. Leaving Wick, Scotland, at age 15, Captain Groat ended up a sailor. While on a trip to New Zealand, an earthquake occurred on the island where they were to pick up cargo for England, so they picked up sugar for Portland. Arriving in Astoria in 1881, he took a fancy to the area, decided to stay and took out his first papers in 1882. In 1889, he took out his first Master's papers in the Merchant Service in San Francisco. Prior to his transfer to Tillamook, Captain Groat served with the Army Corps of Engineers in Portland as captain of the survey boat "General Wright."

The captain and his wife Lillian had one child, Eugenia, who died in the flu epidemic of 1917-18. Two nieces from Scotland were adopted and brought to Tillamook in 1914; making the voyage from Scotland on the "Lusitania." Niece Emma was a very popular teacher for many years in local schools and lived in the house Captain Groat built in 1916 until her death in the 1990s.



Captain John Groat

Mrs. John Groat, baby unknown



PRIVATE RESIDENCES FIRST STREET

Although today a major highway, this was a dirt road in the late 1890s and early 1900s, this area considered “out in the country.” The main access road from the east was Third Street, bringing settlers and travelers in from Yamhill via the Trask House. Until paving began in 1912, First Street was no more than a giant mud puddle during heavy winter rains. Emma Ward lived in the **CARLICH HOUSE**, today known as the **HOQUARTON HOUSE**, as a young woman in 1911. She remembered “...that was the street to live on.

Everyone in those days had a white picket fence around their house, probably to keep the cows out. When you came home with your boyfriend, you could hang on the gate.” Most of these homes are believed to have been built by Archie Broadhead, a “short, typical old pioneer.”

View east on *First Street*

2303 First Street - Italianate architecture with turrets, built in 1900s, now apartments. In the 1940s, “The Candy Lady” lived here - a very clever little old lady. Every Friday morning she passed out candy to the local gang of children. They were fiercely loyal as a result and made sure no one bothered her!



2305 First Street - a lovely plantation style home with vintage cars. There have been a couple of extensive renovations since this house was first constructed. On the east side of the property was a carriage house facing the street, later a garage used for storage. Doc Hayes, a well-respected and much beloved local doctor, married a girl from the South, hence the addition of the pillars out front. They had several lively children who are responsible for some interesting tales of the times, including when the Doc’s daughter kept a horse in the garage so the local powers that be wouldn’t know there was an illegal bit of livestock within the city limits. The house moved out of the Hayes family in the late 1990s.

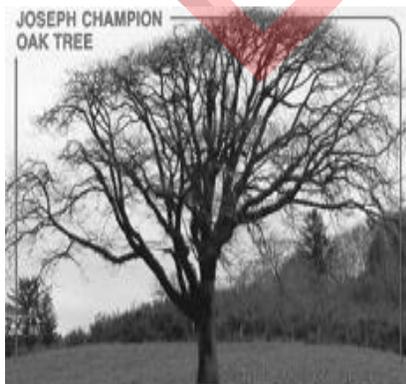
2309 First Street - an early to mid 1900s bungalow-style home, this was mainly a rental home through the years, providing shelter the hardworking blue-collar workers and their families.

2315 First Street - built in 1903, this home was originally owned by Henry Crenshaw, owner of King-Crenshaw Hardware. There was originally much more “fancywork” on the house, but a former descendent of Crenshaw’s who lived in the house said it was difficult to paint, so he and his brother tore much of it off. The yard

at one time boasted maple trees 36 inches in diameter. However, the Crenshaws tied their mules to the trees and the mules killed the trees by eating the bark. The local “gang of kids” loved Henry Crenshaw’s Model A Ford and after Mr. Crenshaw would get home from work, would patiently wait until he drove the car into his garage (complete with concave concrete to drain water to the street) and safely tucked it away for the night. Then the “gang” swarmed in their special entrance to the garage (unknown to the owner!) and played on the car. They loved that car. They also bedeviled a neighbor they called The Skinner Alive Man. A woodworker and gardener, he would warn them to stay out of his garden and away from his tools with the admonition “I’m the Skinner Alive Man!! I catch little kids and skin ‘em alive!” It worked most of the time. Tim Hayes, one of the doctor’s children, remembers an aggressive goat that lived across the street in a small pasture. When he and another neighborhood boy would be playing in that pasture, the goat kept a sharp eye tuned to them and if a bottom was presented to him would promptly ram into it. According to Tim, the goat was quick and quite accurate.

2403 First Street - built in 1896, this lovely old home believed to have been built and first owned by Archie Broadhead. The current owner has great hopes of restoring the building.

2502 First Street - Built in 1890, Henry and Eli Goodspeed took out a building loan for this \$3,000 home, intended to be the showplace of Tillamook. Into the 1970s, Goodspeed descendants still held the original deed to the land signed by President U.S. Grant. The staircase seen right inside the front door was brought around Cape Horn by ship. Today it is a diamond in the rough waiting to be bought and restored. The Coliseum Theater shows the latest movies at this location. Random Tillamook fact courtesy resident Louise Dean: *Blanche Stranahan used to walk over a plank road to Netarts to a one-room school house. Ralph Wright, a fellow student, was often making “flip cartoon book” showing motion of some object. He later grew up to become the “Head Man” for Walt Disney in England, best known for providing the gloomy, sullen voice of Eeyore from the popular Winnie the Pooh stories.* Mrs. Seaholm, a retired third grade schoolteacher, used to take her students on field trips to learn about trees and how to identify them.



The Joe Champion tree was a favorite. This non-native white oak is the only one on the west side of the Coast Range. Believed to have been planted in the mid 1850s by Joseph Champion (Tillamook’s first pioneer settler), from an acorn found in a bird’s stomach, this tree still stands today. In 1990, it’s height was 80’, circumference nearly 14’ and the limb spread 100’. This postcard can be found at the Tillamook County Pioneer Museum. The tree stump Joseph Champion first lived in is also on display at the museum.

Appendix XXIX – City of Tillamook Demographics

DP-1. Profile of General Demographic Characteristics: 2000
Data Set: [Census 2000 Summary File 1 \(SF 1\) 100-Percent Data](#)
Geographic Area: Tillamook city, Oregon

Subject	Number	Percent
Total population	1,976	100.0
SEX AND AGE		
Male	986	49.9
Female	990	50.1
Under 5 years	161	8.1
5 to 9 years	147	7.4
10 to 14 years	199	10.1
15 to 19 years	171	8.7
20 to 24 years	130	6.6
25 to 34 years	247	12.5
35 to 44 years	281	14.2
45 to 54 years	200	10.1
55 to 59 years	97	4.9
60 to 64 years	62	3.1
65 to 74 years	119	6.0
75 to 84 years	119	6.0
85 years and over	43	2.2
Median age (years)	32.3	(X)
18 years and over	1,360	68.8
Male	670	33.9
Female	690	34.9
21 years and over	1,269	64.2
62 years and over	313	15.8
65 years and over	281	14.2
Male	115	5.8

Female	166	8.4
RACE		
One race	1,914	96.9
White	1,630	82.5
Black or African American	3	0.2
American Indian and Alaska Native	27	1.4
Asian	15	0.8
Asian Indian	0	0.0
Chinese	0	0.0
Filipino	0	0.0
Japanese	15	0.8
Korean	0	0.0
Vietnamese	0	0.0
Other Asian ¹	0	0.0
Native Hawaiian and Other Pacific Islander	2	0.1
Native Hawaiian	0	0.0
Guamanian or Chamorro	0	0.0
Samoan	0	0.0
Other Pacific Islander ²	2	0.1
Some other race	237	12.0
Two or more races	62	3.1
<i>Race alone or in combination with one or more other races ³</i>		
White	1,682	85.1
Black or African American	14	0.7
American Indian and Alaska Native	50	2.5
Asian	31	1.6
Native Hawaiian and Other Pacific Islander	5	0.3
Some other race	259	13.1
HISPANIC OR LATINO AND RACE		
Total population	1,976	100.0
Hispanic or Latino (of any race)	491	24.8
Mexican	399	20.2
Puerto Rican	0	0.0
Cuban	2	0.1

Other Hispanic or Latino	90	4.6
Not Hispanic or Latino	1,485	75.2
White alone	1,401	70.9
RELATIONSHIP		
Total population	1,976	100.0
In households	1,859	94.1
Householder	658	33.3
Spouse	375	19.0
Child	672	34.0
Own child under 18 years	568	28.7
Other relatives	84	4.3
Under 18 years	41	2.1
Nonrelatives	70	3.5
Unmarried partner	28	1.4
In group quarters	117	5.9
Institutionalized population	117	5.9
Noninstitutionalized population	0	0.0
HOUSEHOLDS BY TYPE		
Total households	658	100.0
Family households (families)	488	74.2
With own children under 18 years	269	40.9
Married-couple family	375	57.0
With own children under 18 years	191	29.0
Female householder, no husband present	84	12.8
With own children under 18 years	60	9.1
Nonfamily households	170	25.8
Householder living alone	149	22.6
Householder 65 years and over	81	12.3
Households with individuals under 18 years	290	44.1
Households with individuals 65 years and over	182	27.7
Average household size	2.83	(X)
Average family size	3.32	(X)

Profile of General Demographic Characteristics: 2000
Geographic Area: City of Tillamook, Oregon

Subject	Number	Percent
Total population	4,352	100.0
SEX AND AGE		
Male	2,132	49.0
Female	2,220	51.0
Under 5 years	161	7.7
5 to 9 years	147	8.5
10 to 14 years	199	8.0
15 to 19 years	171	7.6
20 to 24 years	130	6.9
25 to 34 years	247	13.3
35 to 44 years	281	14.8
45 to 54 years	200	12.2
55 to 59 years	97	4.3
60 to 64 years	62	3.2
65 to 74 years	119	6.7
75 to 84 years	119	4.9
85 years and over	43	2.1
Median age (years)	33.3	(X)
18 years and over	3,080	70.8
Male	1,477	33.9
Female	1,603	36.8
21 years and over	2,921	67.1
62 years and over	668	15.3
65 years and over	594	13.6
Male	217	5.0
Female	377	8.7
RACE		
One race	4,275	98.2
White	4,028	92.6
Black or African American	7	0.2

Subject	Number	Percent
<i>American Indian and Alaska Native</i>	53	1.2
<i>Asian</i>	31	0.7
<i>Asian Indian</i>	0	0.0
<i>Chinese</i>	13	0.3
<i>Filipino</i>	12	0.3
<i>Japanese</i>	0	0.0
<i>Korean</i>	0	0.0
<i>Vietnamese</i>	6	0.1
<i>Other Asian</i> ¹	0	0.0
<i>Native Hawaiian and Other Pacific Islander</i>	7	0.2
<i>Native Hawaiian</i>	6	0.1
<i>Guamanian or Chamorro</i>	0	0.0
<i>Samoan</i>	0	0.0
<i>Other Pacific Islander</i> ²	1	0.0
<i>Some other race</i>	149	3.4
<i>Two or more races</i>	77	1.8
<i>Race alone or in combination with one or more other races</i> ³		
<i>White</i>	4,102	94.3
<i>Black or African American</i>	11	0.3
<i>American Indian and Alaska Native</i>	91	2.1
<i>Asian</i>	45	1.0
<i>Native Hawaiian and Other Pacific Islander</i>	17	0.4
<i>Some other race</i>	170	3.9
HISPANIC OR LATINO AND RACE		
<i>Total population</i>	1,976	100.0
<i>Hispanic or Latino (of any race)</i>	484	11.1
<i>Mexican</i>	410	9.4
<i>Puerto Rican</i>	6	0.1
<i>Cuban</i>	0	0.0
<i>Other Hispanic or Latino</i>	68	1.6
<i>Not Hispanic or Latino</i>	3,868	88.9
<i>White alone</i>	3,721	85.5
RELATIONSHIP		
<i>Total population</i>	4,352	100.0

Subject	Number	Percent
In households	4,333	99.6
Householder	1,758	40.4
Spouse	786	18.1
Child	1,329	30.5
Own child under 18 years	1,151	26.4
Other relatives	188	4.3
Under 18 years	58	1.3
Nonrelatives	272	6.3
Unmarried partner	107	2.5
In group quarters	19	0.4
Institutionalized population	0	0.0
Noninstitutionalized population	19	0.4
HOUSEHOLDS BY TYPE		
Total households	1,758	100.0
Family households (families)	1,106	62.9
With own children under 18 years	585	33.3
Married-couple family	786	44.7
With own children under 18 years	366	20.8
Female householder, no husband present	220	12.5
With own children under 18 years	159	9.0
Nonfamily households	652	37.1
Householder living alone	565	32.1
Householder 65 years and over	230	13.1
Households with individuals under 18 years	640	36.4
Households with individuals 65 years and over	455	25.9
Average household size	2.46	(X)
Average family size	3.08	(X)
HOUSING OCCUPANCY		
Total Housing Units	1,898	100.00
Occupied Housing Units	1,758	92.6
Vacant Housing Units	140	7.4
For Seasonal, recreational, or occasional use	13	0.7
Homeowner Vacancy Rate		2.5
Rental Vacancy Rate		7.7

<i>Subject</i>	<i>Number</i>	<i>Percent</i>
<i>HOUSING TENURE</i>		
<i>Owner-occupied Housing Units</i>	<i>892</i>	<i>50.7</i>
<i>Renter-occupied Housing Units</i>	<i>866</i>	<i>49.3</i>
<i>Average Household size of Owner-occupied units</i>	<i>2.5</i>	
<i>Average Household Size of renter-occupied units</i>	<i>22.43</i>	

DRAFT

Appendix XXX – City of Tillamook Housing

Table 11-1: Current Density and Mix of Housing Types, July 31, 2000 Source: U.S. , Table 2		
Type of Dwelling	Units	Percent
Single-family detached dwellings (site-built units and manufactured homes on individual lots)	1,222	63.8
Multifamily dwellings (duplexes, apartments and condominiums)	657	34.3
Mobile homes in parks	37	1.9
Total dwelling units	1,916	100
Net acres of land in residential use	158.97 acres	
Average net density, dwelling units per acre	4.27 units per acre	

Table 11-2: Mix of Housing Types in Tillamook, 1990 - 2000 Source: US Census, Table DP-4				
Type of Dwelling	2000		1990	
	Units	Percent	Units	Percent
Single-family detached (site-built dwellings)	442	60.5	436	69.5
Multifamily (duplexes, apartments, condominiums)	121	16.6	96	15.3
Manufactured homes	164	22.5	95	15.2
Boat, RV, van, etc. (counted as manufactured homes in 1990)	3	0.4		
Total dwelling units	730	100.0	627	100.0

Table 11-3: Housing and Vacancy Rates in Tillamook, 1990-2000
Source: US Census, Table QT-H1

	2000		1990	
	Units*	Percent	Units	Percent
Total dwelling units	724	100.0	627	100.0
Total occupied dwelling units	658	90.9	557	88.8
Owner-occupied units	416	63.2	357	64.1
Renter-occupied units	242	36.8	200	35.9
Total vacant units	66	9.1	70	11.2
Persons in households	1,859	94.1	1,400	93.9
Persons living in group quarters	117	5.9	91	6.1
Number of households	658		557	
Persons per household	2.83		2.51	
Persons per owner-occupied unit	2.77		2.44	
Persons per renter-occupied unit	2.92		2.64	
* Table DP-4 of the census reports Tillamook's "total housing units" in the year 2000 to be 730. Table QT-H1 the census reports "total housing units" to be 724.				

**Table 11- 4: New Units of Housing Needed in Tillamook by 2025,
By Housing Type**

	Units	Percent
Single-family detached (site-built)	169	55.0
Multifamily (duplexes, apartments, condominiums)	46	15.0
Manufactured homes	92	30.0
Manufactured homes in parks (35 % of manufactured units)	32	
Manufactured homes on individual lots (65 % of manufactured units)	60	
Total New Units Needed	307	100.0

Table 11- 5: Land Needed for Residential Development in Tillamook by 2025, By Housing Type

Housing Type	Units	Net Density*	Net Acres Needed	Gross Acres Needed
Site-built single-family detached	169	4	42.25	52.81
Multifamily	46	12	3.83	4.79
Manufactured homes in parks	32	9	3.56	4.44
Manufactured homes on lots	60	4	15.00	18.75
Total Units and Acres Needed	307	4.75	64.63	80.79

*A net density of 4 units per acre yields average lots sizes of about 10,000 square feet. "Gross acres" are determined by multiplying net acres by 1.25, thus allowing for public rights of way for streets, etc.

[QT-H1. General Housing Characteristics: 2000](#)

Data Set: [Census 2000 Summary File 1 \(SF 1\) 100-Percent Data](#)

Geographic Area: **Tillamook city, Oregon**

Subject	Number	Percent
OCCUPANCY STATUS		
Total housing units	724	100.0
Occupied housing units	658	90.9
Vacant housing units	66	9.1
TENURE		
Occupied housing units	658	100.0
Owner-occupied housing units	416	63.2
Renter-occupied housing units	242	36.8
VACANCY STATUS		
Vacant housing units	66	100.0
For rent	28	42.4
For sale only	5	7.6
Rented or sold, not occupied	6	9.1
For seasonal, recreational, or occasional use	5	7.6
For migratory workers	0	0.0

Subject	Number	Percent
Other vacant	22	33.3
RACE OF HOUSEHOLDER		
Occupied housing units	658	100.0
One race	643	97.7
White	578	87.8
Black or African American	0	0.0
American Indian and Alaska Native	7	1.1
Asian	10	1.5
Native Hawaiian and Other Pacific Islander	1	0.2
Some other race	47	7.1
Two or more races	15	2.3
HISPANIC OR LATINO HOUSEHOLDER AND RACE OF HOUSEHOLDER		
Occupied housing units	658	100.0
Hispanic or Latino (of any race)	104	15.8
Not Hispanic or Latino	554	84.2
White alone	525	79.8
AGE OF HOUSEHOLDER		
Occupied housing units	658	100.0
15 to 24 years	46	7.0
25 to 34 years	109	16.6
35 to 44 years	141	21.4
45 to 54 years	100	15.2
55 to 64 years	91	13.8
65 years and over	171	26.0
65 to 74 years	79	12.0
75 to 84 years	71	10.8
85 years and over	21	3.2

DP-4. Profile of Selected Housing Characteristics: 2000
 Data Set: [Census 2000 Summary File 3 \(SF 3\) - Sample Data](#)
 Geographic Area: **Tillamook city, Oregon**

Subject	Number	Percent
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Subject	Number	Percent
Total housing units	730	100.0
UNITS IN STRUCTURE		
1-unit, detached	442	60.5
1-unit, attached	6	0.8
2 units	30	4.1
3 or 4 units	16	2.2
5 to 9 units	40	5.5
10 to 19 units	7	1.0
20 or more units	22	3.0
Mobile home	164	22.5
Boat, RV, van, etc.	3	0.4
YEAR STRUCTURE BUILT		
1999 to March 2000	14	1.9
1995 to 1998	46	6.3
1990 to 1994	24	3.3
1980 to 1989	55	7.5
1970 to 1979	181	24.8
1960 to 1969	88	12.1
1940 to 1959	175	24.0
1939 or earlier	147	20.1
ROOMS		
1 room	14	1.9
2 rooms	47	6.4
3 rooms	83	11.4
4 rooms	132	18.1
5 rooms	196	26.8
6 rooms	108	14.8
7 rooms	92	12.6
8 rooms	33	4.5
9 or more rooms	25	3.4
Median (rooms)	5.0	(X)
Occupied Housing Units	659	100.0
YEAR HOUSEHOLDER MOVED INTO UNIT		
1999 to March 2000	164	24.9

Subject	Number	Percent
1995 to 1998	190	28.8
1990 to 1994	104	15.8
1980 to 1989	91	13.8
1970 to 1979	61	9.3
1969 or earlier	49	7.4
VEHICLES AVAILABLE		
None	56	8.5
1	225	34.1
2	231	35.1
3 or more	147	22.3
HOUSE HEATING FUEL		
Utility gas	240	36.4
Bottled, tank, or LP gas	5	0.8
Electricity	340	51.6
Fuel oil, kerosene, etc.	38	5.8
Coal or coke	0	0.0
Wood	31	4.7
Solar energy	0	0.0
Other fuel	5	0.8
No fuel used	0	0.0
SELECTED CHARACTERISTICS		
Lacking complete plumbing facilities	2	0.3
Lacking complete kitchen facilities	5	0.8
No telephone service	33	5.0
OCCUPANTS PER ROOM		
Occupied housing units	659	100.0
1.00 or less	566	85.9
1.01 to 1.50	48	7.3
1.51 or more	45	6.8
Specified owner-occupied units	295	100.0
VALUE		
Less than \$50,000	60	20.3
\$50,000 to \$99,999	193	65.4
\$100,000 to \$149,999	42	14.2

Subject	Number	Percent
\$150,000 to \$199,999	0	0.0
\$200,000 to \$299,999	0	0.0
\$300,000 to \$499,999	0	0.0
\$500,000 to \$999,999	0	0.0
\$1,000,000 or more	0	0.0
Median (dollars)	71,600	(X)
MORTGAGE STATUS AND SELECTED MONTHLY OWNER COSTS		
With a mortgage	178	60.3
Less than \$300	2	0.7
\$300 to \$499	38	12.9
\$500 to \$699	56	19.0
\$700 to \$999	54	18.3
\$1,000 to \$1,499	28	9.5
\$1,500 to \$1,999	0	0.0
\$2,000 or more	0	0.0
Median (dollars)	665	(X)
Not mortgaged	117	39.7
Median (dollars)	257	(X)
SELECTED MONTHLY COSTS, % OF HOUSEHOLD INCOME IN 1999		
Less than 15 percent	139	47.1
15 to 19 percent	31	10.5
20 to 24 percent	45	15.3
25 to 29 percent	14	4.7
30 to 34 percent	10	3.4
35 percent or more	55	18.6
Not computed	1	0.3
Specified renter-occupied units	239	100.0
GROSS RENT		
Less than \$200	21	8.8
\$200 to \$299	23	9.6
\$300 to \$499	106	44.4
\$500 to \$749	60	25.1
\$750 to \$999	6	2.5
\$1,000 to \$1,499	0	0.0

Subject	Number	Percent
\$1,500 or more	0	0.0
No cash rent	23	9.6
Median (dollars)	411	(X)
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999		
Less than 15 percent	53	22.2
15 to 19 percent	24	10.0
20 to 24 percent	25	10.5
25 to 29 percent	36	15.1
30 to 34 percent	21	8.8
35 percent or more	52	21.8
Not computed	28	11.7

TABLE 10: GEOGRAPHIC POPULATIONS

Within City Limits:

<u>Type of Residential Dwelling Unit</u>	<u>2000 Total Housing Units</u>	<u>2000 Household Size</u>	<u>Totals</u>	<u>1980 Total Housing Units</u>	<u>1980 Household Population Totals</u>	<u>% Population Change since 1980</u>
<u>Single-Family</u>	<u>1,222</u>	<u>2.27</u>	<u>2,776</u>	<u>1,272</u>	<u>3,129</u>	<u>- 11%</u>
<u>Multi-Family</u>	<u>657</u>	<u>2.27</u>	<u>1,492</u>	<u>504</u>	<u>821</u>	<u>+ 82%</u>
<u>Mobile Homes</u>	<u>37</u>	<u>2.27</u>	<u>84</u>	<u>23</u>	<u>42</u>	<u>+100%</u>
<u>Subtotal:</u>	<u>1,916</u>	<u>2.27</u>	<u>4,352</u>	<u>1,799</u>	<u>3,992</u>	<u>+ 9%</u>

Within Urban Growth Area:

<u>Type of Residential Dwelling Unit</u>	<u>2000 Total Housing Units</u>	<u>2000 Household Size</u>	<u>Totals</u>	<u>1980 Total Housing Units</u>	<u>1980 Household Population Totals</u>	<u>% Population Change since 1980</u>
<u>Single-Family</u>	<u>207</u>	<u>2.46</u>	<u>509</u>	<u>216</u>	<u>531</u>	<u>- 4%</u>
<u>Multi-Family</u>	<u>145</u>	<u>2.43</u>	<u>352</u>	<u>34</u>	<u>55</u>	<u>+540%</u>
<u>Mobile Homes</u>	<u>36</u>	<u>2.43</u>	<u>87</u>	<u>39</u>	<u>70</u>	<u>+ 24%</u>
<u>Subtotal:</u>	<u>388</u>	<u>2.44</u>	<u>948</u>	<u>289</u>	<u>656</u>	<u>+ 44%</u>
<u>Total:</u>			<u>5,300</u>		<u>4,648</u>	<u>+ 14%</u>

Appendix [XXXI](#) – Buildable Lands Inventory



Appendix XXXII – ESEE Analysis

1) Conflicting Uses, Activities and ESEE Consequences

The conflicting uses of adjacent properties to the Wilson River are derived from the existing Zoning designation. The property adjacent to this portion of the Wilson River that is within the City Limits and UGB on Highway 101 (south of the river) is zoned Highway Commercial (C-H).

The Highway Commercial Zone District allows for the following uses outright or conditionally:

Commercial Enterprises;
Accessory uses and buildings (such as incidental storage) appurtenant to a permitted or conditional use;
Government facilities;
Rest Stops or Waysides;
Buildings over 35 feet in height;
Apartments.

Conflicting uses in the Highway Commercial zone appear to be virtually all permitted and conditional uses and typical property improvements associated with commercial uses. In particular, structures, paving, and landscaping with lawns and non-native shrubs all conflict with protection of a riparian resource.

2) Determining Impact area for the significant resource site

Riparian areas are considered part of a much larger ecological system of wetlands, sloughs, stream corridors and the Wilson and Trask Rivers. The ecological value of any particular riparian area is affected by the degree of human intrusion and its connection with stream corridors and other natural resources. Riparian areas contribute directly to decreased downstream flooding potential to improved water quality (and in some places quantity), fish and wildlife habitat, stream productivity, and ground water recharge. Alteration of riparian areas at one location can have identifiable effects some distance up- and downstream of the altered site. Alteration of riparian areas in a way that decreases their ecological function can result in increased flooding downstream, increased water temperatures, increased turbidity, increased stream bank erosion and sedimentation, decreased nutrient inputs into the stream and a consequent decrease in stream productivity, increased stream channel instability, decrease in off-channel aquatic habitat, and the removal of vegetation that is needed to maintain channel structure and complexity.

Intact riparian areas associated with coastal lowland streams are characterized by vegetation communities that often have of several canopy layers; dense vegetation root systems that help hold soils in place; undercut banks; high-flow channels and wetlands; trees that hang over the water; and trees that have fallen into the water, but which may still be anchored to upland features or other trees. Riparian areas and their features can be drastically changed by high floods; the migration of a stream channel will destroy some riparian features along a reach, but will also provide for the regeneration of riparian vegetation in other areas.

When commercial development (including buildings, roads, and driveways, landscaping, storage, parking) occurs in, or nearby, riparian areas, it does not necessarily eliminate all fish and wildlife habitat, but changes the habitat in a way that decreases biodiversity, because only more aggressive and adaptable species can survive under changed ecological circumstances.

Commercial development in riparian areas replaces native vegetation with impervious surface area, and contributes to flooding; reduces groundwater recharge, and increases sediment and nutrient loading. The result is decreased water quantity and quality, and diminished fish and wildlife habitat. Commercial development does pose specific threats to riparian areas, including garbage and littering, disposal of sewage and industrial wastes, runoff from large parking lots, use of fertilizers and pesticides, fences and other structures which limit wildlife access, noise and glare.

The “impact areas” for the significant riparian resource are the parcels that border the Wilson River at the north end of Tillamook. The two sites involve three tax lots, all of which are in the “Highway Commercial” zone. -Two of the lots are developed - the Shilo Inn, east of the highway, north of Wilson River Loop Road, also known as Map # 1S 9W 19, Tax Lot 503, and the Best Western Inn west of the highway, north of Makinster Road, also known as Map # 1S 10W 24, Tax Lot 101. These two motels can be considered to be fully developed parcels. The parcel immediately west of the highway, north of Makinster Road, also known as Map # 1S 10W 24, Tax Lot 100, is about 2.5 acres, and is undeveloped.

What may appear to be a parcel between the Shilo Inn and the ice facility is actually part of the Highway 101 Right-of-Way. The parcels immediately east of the highway and north of the Highway 101 right-of-way, which include the ice facility and the paved ice facility parking lot, are outside of the City Limits and Urban Growth Boundary.

3) The ESEE Analysis

This supplemental ESEE analysis addresses how conflicting commercial uses may negatively affect significant riparian resource sites as well as how the riparian resource site may impact those uses. Conflicting uses in this instance, on north Highway 101 adjacent to the south side of the Wilson River, include all permitted or conditionally permitted uses allowed in the Highway Commercially zoned properties. The following chart shows the ESEE consequences of further development for this area.

- 4) It appears that both the resource site and the conflicting uses are important compared to each other, and based on the ESEE analysis below, the conflicting uses should be allowed in a limited way that protects the resource site to a desired extent.

Table 5-4: E.S.E.E. Analysis and Consequences

 FULLY ALLOWING CONFLICTING USES PROHIBITING CONFLICTING USES, LIMITING CONFLICTING USES (Permitting development while maintaining a riparian setback of 50 feet)
ECONOMIC CONSEQUENCES OF . . .	Full development of property. Increased property value, property tax revenues, and potential property use. Decreased uncertainty and design costs.	Restricted development of property. Potential for liability if it is found that prohibiting development of the property is an unconstitutional taking of private property without just compensation. . May marginally decrease public costs for storm water management, flood control, and federally mandated water quality improvement programs.	A 50-ft setback provides some protection of the Wilson River riparian area while permitting virtually full development of the parcel west of the highway.
SOCIAL CONSEQUENCES OF . . .	Unobstructed access to the Wilson River. Additional development costs might be reduced, assuming the riparian area would not be protected otherwise under State and Federal regulations. Riparian protections are not applied evenly to all riparian parcels in the City.	Obstructed access to the Wilson River by native vegetation. They can be used as open space for the employees and general public and act as a natural "undisturbed" landscaped area.	A 50-ft setback would be the same as that applied elsewhere in the City. The existing 50-ft setback would provide educational opportunities. The setback also provides opportunities for urban quiet and solitude, which is a positive social consequence.
ENVIRONMENTAL CONSEQUENCES OF . . .	Accelerated run-off from rooftops and impervious surfaces increases loads of silt and pollutants that enter river and increase rate of erosion. Fully allowing conflicting uses would provide less opportunity to restore full riparian function.	Reducing stormwater run-off from impervious surfaces on the property to the river lessens erosion of riverbanks and reduces downstream flooding. Although impractical considering the level of nearby development, would provide for restoration of full connection between the river and its floodplain and of full riparian function	The existing 50-ft setback allows for partial riparian protection while providing for existing amounts of development. Since there is a levee between the river and the developable portion of the properties in the impact area, the environmental effect on the river of a 75-ft riparian corridor would not likely be greater than those from a 50-ft corridor.
ENERGY CONSEQUENCES OF . . .	Negligible. In this instance, it appears that the consequences from such use would be too small to be noticeable	Negligible. In this instance, it appears that the consequences from such use would be too small to be noticeable	Negligible. In this instance, it appears that the consequences from such use would be too small to be noticeable

Appendix XXXIII – Estuary Management Unit Segments

The following Estuary Management Unit Segments are found within the Tillamook UGB.

MANAGEMENT UNIT 1) 35EC1

CATEGORY: Area needed for maintenance or enhancement of biological productivity.

HABITATS

Habitat Classification: subtidal unconsolidated bottom (1.1)

Animals Present: Birds: nesting, feeding, and resting in marshes and riparian areas adjacent to the lower portion of this management unit; Fish: Starry Flounder, salmonids.

Significant Biological Functions: Fish feeding. Passage of salmonids.

HISTORICAL ALTERATIONS: The lower reach of this management unit was dredged in 1972 by the U.S. Army Corps of Engineers for flood control purposes. Dikes have been constructed along the banks of this management unit removing large areas of tidal marsh from the estuary. A small boat wharf associated with a boat rental and repair shop is located on the river at 101.

NAVIGATION AND PUBLIC ACCESS TO THE WATER: Boat access is available at a private facility adjacent to the Highway 101 bridge. Salmon fishing is the primary use of this management unit.

MANAGEMENT UNIT 2) 36EC1 (Estuary Conservation 1)

CATEGORY: Area needed for maintenance or enhancement of biological productivity.

HABITATS

Habitat Classification: subtidal unconsolidated bottom (1.1)

Animals Present: Birds: nesting in riparian area adjacent to the lower portion of this management unit.

Significant Biological Functions: Bird use in conjunction with adjacent riparian areas.

HISTORICAL ALTERATIONS: Dikes have been constructed along the lower portions of this management unit. Fill and piling have been placed for the Highway 101 crossing.

NAVIGATION AND PUBLIC ACCESS TO THE WATER

MANAGEMENT UNIT 3) 40EC1 (Estuary Conservation 1)

CATEGORY: Area needed for maintenance or enhancement of biological productivity. Area needed for recreational use.

HABITATS

Habitat Classification: Sub tidal unconsolidated bottom (1.1) Intertidal shore (2.1) Tidal marsh (2.5.12)

Animals Present: Birds: nesting in marshes and riparian areas adjacent to the lower portions of this management. Fish: Starry flounder

Significant Biological Functions: Fish feeding. Bird Nesting in adjacent marshes and riparian areas.

HISTORICAL ALTERATIONS: Diking has occurred along significant stretches of this management unit contributing to the loss of large areas of tidal marsh from the estuary. Fill and piling were placed for crossings of Highway 101 and the Southern Pacific Railroad. Fill and a bulkhead were placed in Hoquarton Slough for a public boat ramp and park. Another fill was placed further down stream. Miscellaneous piling was placed in this management unit. The lower reach of the management unit was dredged in 1972 by the U.S. Army Corps of Engineers for flood control purposes.

NAVIGATION AND PUBLIC ACCESS TO THE WATER: Tillamook County public boat ramp near Highway 101.

MANAGEMENT UNIT 4) 41EC1 (Estuary Conservation 1)

CATEGORY: Area needed for maintenance or enhancement of biological productivity. Tracts of significant habitat smaller or of less biological importance than those in natural management units.

HABITATS

Habitat Classification: Tidal marsh (2.5.12, 2.5.13, 2.5.14)

Animals Present: Birds: Feeding, nesting and resting area.

HISTORICAL ALTERATIONS: This management unit prior to man-made alteration was partly forested and partly emergent wetland. It was converted to agricultural use, then diked and dredged to create log ponds. A portion of the area was filled for a mill. Subsequently the dike breached and established estuarine connection.

NAVIGATION AND PUBLIC ACCESS TO THE WATER

MANAGEMENT UNIT 5) 43EC1 (Estuary Conservation 1)

CATEGORY: Area needed for recreational and aesthetic uses. Area needed for recreational use.

HABITATS

Habitat Classification: Subtidal unconsolidated bottom (1.1)

Animals Present: Fish: Salmonids

Significant Biological Functions: Salmonid passage.

HISTORICAL ALTERATIONS: Filling for dikes along the banks of this management unit has removed areas from the estuary.

NAVIGATION AND PUBLIC ACCESS TO THE WATER: Tillamook City boat ramp