

# Population and Employment Land Supply Assumptions

For Thurston County



**Final Report**  
**Thurston Regional Planning Council**  
**April 2019**



**THURSTON REGIONAL PLANNING COUNCIL (TRPC)** is a 22-member intergovernmental board made up of local governmental jurisdictions within Thurston County, plus the Confederated Tribes of the Chehalis Reservation and the Nisqually Indian Tribe. The Council was established in 1967 under RCW 36.70.060, which authorized creation of regional planning councils.

TRPC's mission is to **“Provide Visionary Leadership on Regional Plans, Policies, and Issues.”**

**To Support this Mission:**

- A. Support **regional transportation** planning consistent with state and federal funding requirements.
- B. Address **growth management, environmental quality, economic opportunity**, and other topics determined by the Council.
- C. **Assemble and analyze data** that support local and regional decision making
- D. Act as a **“convener”** to build regional **consensus** on issues through information and citizen involvement.
- E. Build **intergovernmental consensus** on regional plans, policies, and issues, and advocate local implementation.

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Thurston Regional Planning Council has been providing population and employment forecasts for Thurston County since the late 1960s.

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## Summary

The Thurston Regional Planning Council (TRPC) develops updated population and employment forecasts every three to five years. These forecasts are used for transportation, sewer, water, land use, school, and other local governmental planning purposes. They are also used by the private sector for market studies and business planning. They address both the county level and the neighborhood level. TRPC has been preparing these forecasts since the late 1960s. This report documents the development of the 2017 residential capacity estimates to support the forecast update.

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# Introduction

Since the late 1970s the Thurston Regional Planning Council has provided estimates of the buildable land supply in Thurston County. Understanding the land supply gives indications on where projected growth can and is likely to locate, and how much land is set aside for other uses such as environmental protection, parks and recreation, agriculture, and forestry.

During the 1970s and 1980s, Thurston County was one of the fastest growing counties in Washington State.

In 1990 the State Growth Management Act (GMA) was passed requiring local cities, towns, and the County to develop detailed plans on how they planned to accommodate growth. These are called comprehensive plans. At the same time the seven cities and towns and Thurston County developed countywide planning policies that laid out how Thurston County was to grow as a region. Under these policies, Thurston Regional Planning Council was asked to review land supply and planned densities to ensure that the urban areas were large enough to accommodate 20 years of projected growth.

The State legislature added a monitoring and evaluation provision to the GMA in 1997. This provision is often referred to as the “Buildable Lands Program.” It affects seven western Washington counties (Clark, King, Kitsap, Pierce, Snohomish, and Thurston, with Whatcom added in 2017) and the cities and towns within them. Thurston Regional Planning Council was asked to develop the Buildable Lands Report for Thurston County, based on its long history of monitoring land supply. Three reports have been issued, in 2002, 2007, and 2014.

The Buildable Lands Program in Thurston County must answer three key growth-related questions. The first is whether residential development in the urban growth areas is occurring at the densities envisioned in local comprehensive plans. The second is whether there is adequate land supply in the urban growth areas for anticipated future growth in population and employment. Third is whether regional and jurisdictional targets – if applicable – have been achieved.

This report documents the assumptions that were used in developing the land supply estimates for Population and Employment Forecast for Thurston County. This is not the Buildable Lands Report and does not contain any findings related to Buildable Lands. It does contain many similar data sets and assumptions used in the 2014 Buildable Lands Report.

It is anticipated that a Buildable Lands Report will be issued in mid-2021, depending on funding availability.

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# Background

The land supply estimates support the allocation of the population and employment forecast to areas within Thurston County such as planning areas, cities, towns, school districts, and activity centers and corridors.

## Relationship to the Population Forecast

The basic assumption of the Population Allocation model is that housing market behavior can be simulated by maintaining reasonable relationships between supply and demand.

This simply means that current conditions, market preference, and available land supply all have an influence on where housing (and population) locates within Thurston County. By gaining a reasonable understanding of that relationship, future housing patterns within Thurston County can be forecast.

A buildout factor related to land availability is used when determining where future residential growth is likely to locate, and to shift growth shares as planning areas become full. It is a simple ratio of projected *demand* for dwellings versus available *capacity* for dwellings.

## Relationship to the Employment Forecast

Employment Allocations are far more complex than Population Allocations. The location of future jobs is dependent on many factors including: land supply, redevelopable lands, availability of infrastructure, transportation network, parcel size, and the type of job.

## General Assumptions

There are many assumptions applied in determining land supply and residential capacity. Some assumptions are detailed and explicit, such as how zoning densities are applied to determine capacity. Others are general and implicit, but also have major importance in determining the outcome. They are as follows:

1. All assumptions are consistent with the adopted Comprehensive Plans, Development Regulations, and Capital Facility plans of Thurston County's local jurisdictions current to April 1, 2017.
2. There is general agreement that the availability of water rights is a major issue affecting residential, commercial, and industrial development potential in the Thurston County region, in both urban and rural areas.
3. Based on capital facilities and water planning efforts by local jurisdictions, the analysis assumes that local cities and towns will be able to provide water and other capital facilities services to much of the area they have designated as urban growth areas.
4. Much of the rural residential water supply is met through exempt wells. The model assumes that this pattern will continue in the future. While legislative action in response to the Hirst Decision allows continued drilling of exempt wells there remains uncertainty about future water supply.
5. The model makes explicit assumptions as to the availability of wastewater treatment facilities in Bucoda and Rainier during the planning horizon.

6. The current land use pattern will have an influence on the future land use pattern in Thurston County. It is the combination of zoning, market factors, and existing patterns that will determine the future land use pattern in Thurston County.
7. Zoning densities achieved in the future are assumed to be similar to those for projects that are currently in the development pipeline.

# Land Supply Overview

## Description

Land supply is the amount of vacant, partially-used, and redevelopable (under-utilized) land that under current rules and regulations can be developed for homes, apartments, condominiums, and other types of living arrangements including dormitories and senior living facilities, or commercial or industrial uses.

## Why is this Important to Measure?

Residential land supply is one determinant of where future growth will locate. Thurston County has been one of the fastest growing counties in Washington for the last thirty years. Thurston County and each city and town have developed visions on how they plan to grow over the next twenty years. These visions are laid out in their Comprehensive Plans. The forecast provides an opportunity to evaluate if the rules and regulations each jurisdiction has in place will result in the amount, type, and placement of growth they expect and hope to receive.

## How is this Measured?

Residential land supply is measured by first taking an inventory of all the land, buildings, and other types of uses that are on the ground in 2017. After that, a series of assumptions is applied to determine how and if the land can be developed in the future. These assumptions include how many homes per acre can be placed on a piece of land, when a piece of land can be considered fully developed or partially-used, and how much to take out of the land supply for environmentally sensitive areas. These assumptions must be based on the policies and regulations adopted by local cities and towns and Thurston County.

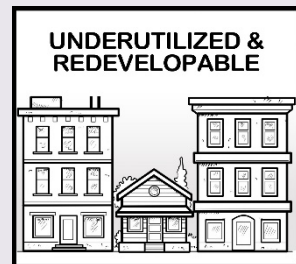
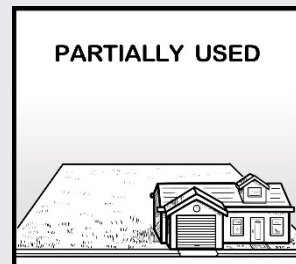
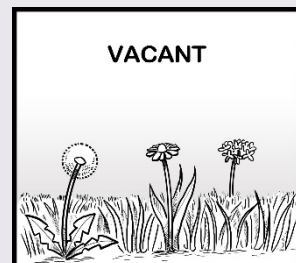
## What about Environmentally Sensitive Areas?

Environmentally sensitive areas and their associated buffers are not included in the available land supply.

## What is the Product?

The land supply analysis produces estimates of capacity for housing units in three types: single-family, multifamily, and manufactured homes. For commercial and industrial lands, it produces estimates of land available for development or redevelopment.

### Potential Candidates for Redevelopment



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# Capacity for Future Development

## Types of Potential Residential Development Capacity

Potential residential development capacity comes in many shapes and forms in Thurston County. Examples are shown in Table 1. Potential capacity is the number of residential units (single-family homes, apartments, condominiums, duplexes, manufactured homes, etc.) that could potentially be developed on any given piece of land in Thurston County under current adopted land use regulations, after accounting for land set aside for critical areas. It is an estimate under “average” conditions. There are many pieces of land in Thurston County that are already developed or are not suitable for residential development. These lands are not considered to have potential residential development capacity.

In addition, there are some types of residential development capacity that are estimated on an areawide basis based on past trends such as accessory dwelling units and family member units.

Some of the types of potential residential capacity used in this report are described below.

Note that estimates of potential residential development capacity are used for general planning purposes only based on regional data sets. Actual development capacity is determined through the regulatory processes at local jurisdictions and is conducted at a site-specific level.

**Table 1: Types of Residential Capacity**

**Recently Permitted**

This category accounts for lots under construction at the time the land use inventory was developed.

*A permit for a single-family home was issued on this parcel in May 2017. Construction will begin shortly.*



**Subdivision Lots**

Empty lots in subdivision approved since 1970.

*These 19 parcels were platted as part of the Chestnut Village subdivision. No permit has been issued on them yet.*



**Planned Projects**

Residential development applications submitted to local jurisdictions that have are in the process of being reviewed.

*An application for a 118-lot subdivision on these two lots called “The Hutch” has been submitted to the City of Yelm for approval. Once approved the plat will be recorded with the County auditor.*



**Master Planned Communities**

On many of the larger pieces of urban buildable land in Thurston County, the cities and developers work together to develop a master plan, to combine opportunities for employment, parks, and housing, and in many cases schools.

*The Mill Pond Subdivision in Olympia is an example of a mixed-use master planned community. Phase 1 has been completed.*



### Vacant Single Lots

There is an inventory of vacant lots that were not platted through the subdivision process. Many of these are in the rural county.

*The four parcels shown here are not part of a recent plat. They have capacity of one single-family home each. While two adjacent parcels have been developed, they have not.*



### Vacant Subdividable Land

Vacant land has no commercial, industrial, or residential structures on it at the present time but has capacity of multiple single-family homes or a multifamily structure.

*This vacant lot has capacity for an estimated 65 units. It could be developed as single-family homes, multifamily units, or a combination of both.*



### Partially-used Subdividable Land

Land has an existing structure. Under current zoning it could potentially be subdivided to support multiple single-family homes or support multifamily development. The existing structure may either be preserved or demolished.

*This 2-acre lot has an existing home. Under current zoning it could accommodate additional units.*



### Redevelopment

Redevelopment refers to when an existing use is removed or renovated to make way for a more intensive use in a commercial or mixed-use zoning district. In general, this occurs where buildings have a low value compared to the land value. The new use does not have to be similar to the original use of the property.

*This building in downtown Olympia was redeveloped as a mixed-use building with 19 apartments and multiple businesses.*



### Family Member Units

Family member units are a second residence permitted on a lot with an existing home, with the caveat that the second residence must be used by a family member. They are intended to be temporary structures, usually manufactured homes. Family member units are permissible in rural Thurston County.

*This family member unit in rural Thurston County was permitted in 2016.*



### Accessory Dwellings

An accessory dwelling unit is a small second residence permitted on a lot with an existing home. It may or may not be attached to the primary residence.

*This accessory dwelling in Lacey was added in 2014. It is attached to the primary dwelling.*



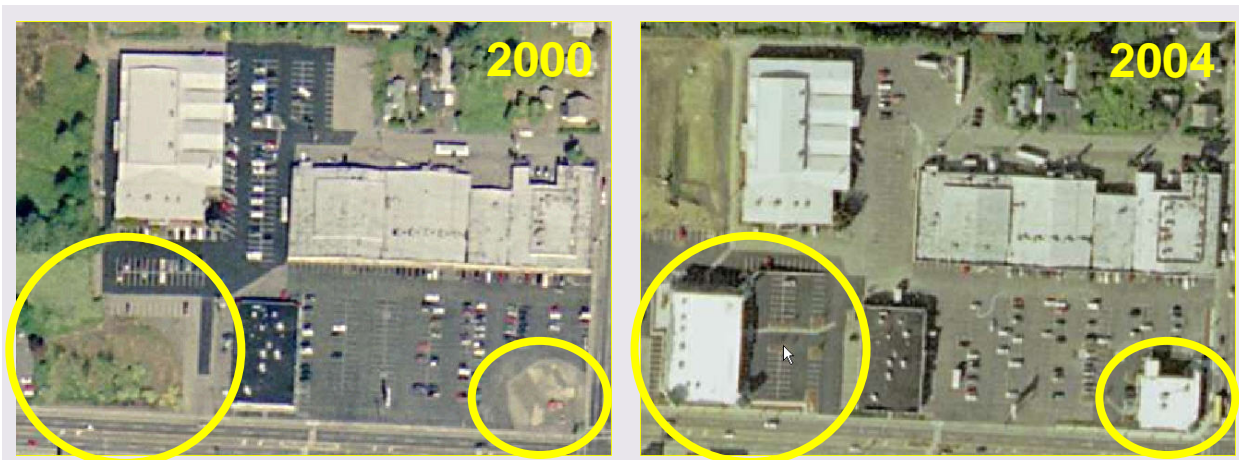


## Commercial and Industrial Land Supply

Commercial and industrial land supply is identified by comparing existing land use and zoning. Vacant or partially-used lands in commercial and industrial zoning districts, and a portion of the land in mixed-use zoning districts, is included in the estimate of commercial/industrial land supply.

Redevelopable land is a small but growing part of our developable land base. Most of the redevelopment potential in Thurston County's urban areas is for commercial and industrial uses. Sometimes parking lots are removed to make way for additional commercial buildings, or other times old, outdated buildings are removed and new ones built in their place.

Redevelopment usually takes place when land prices rise at a greater rate than building values, especially as vacant land becomes increasingly scarce.



Before and after photos of commercial redevelopment along the Harrison Avenue Corridor.

Just as commercial buildings can be redeveloped into residential buildings, the opposite can occur. Single homes in commercial areas are often converted to businesses or torn down and redeveloped into commercial uses.

## Distinguishing between Partially-used and Developed Lands

Land suitable for development or buildable land is grouped into three general categories: (1) vacant land, (2) partially-used land, and (3) redevelopable land, after critical areas and buffers (lakes, wetlands, streams, etc., and associated buffer areas) are removed.

**Vacant Parcels:** Parcels of land that have no structures or have buildings with very little value, or have no designated use (for example, parks or open space have a designated use and are therefore considered developed).

**Partially-used land:** Partially-used parcels are those occupied by a use, but which contain enough land to be further subdivided without rezoning. For instance, a single house on a 10-acre parcel where urban densities are allowed is partially-used.

The following generalized assumptions are used in differentiating between developed and partially-used residential parcels:

- Partially-used parcels containing more than three residential units (manufactured home parks and apartment complexes) are assessed on an individual basis.
- For all other residential parcels, the existing home will require, on average, an area consistent with Table 1. If a parcel's assessed building value is low (below \$100,000 in the incorporated area and below \$50,000 elsewhere), the minimum lot size is used. Low-value buildings are more likely to be demolished if the parcel is redeveloped.

<b>Table 1: Minimum Space Requirements for Existing Homes</b>	
<b>Generalized Zoning</b>	<b>Existing Homes: Minimum Space Requirements</b>
<b>Cities</b> Moderate- to high-density urban zoning (more than 6 units per acre) and mixed-use zoning	0.20 acres. In most cases the existing home is optimally placed on one side of a 'double or triple lot' and matching the overall fabric of the surrounding neighborhood. Examples of this are in the Garfield Neighborhood in West Olympia.
<b>Cities</b> Low-density urban zoning	0.33 acres. The existing home is not optimally placed, but the land values and development opportunities generally result in no more than a third of an acre being given to the existing home. A third of an acre is ample room for a home on a septic system – although connection to sewer would be required if the property were to further develop.
<b>Unincorporated Urban Areas</b>	1 acre. The existing home is not optimally placed and will likely require room for a well and septic system – although a connection to sewer and municipal water would be required if the property were to further redevelop.
<b>Rural Zoning</b>	The existing home is assumed to require an area of at least one acre but as this is much lower than rural zoning densities it does not really come into play. Therefore, the existing home is assigned an area relative to zoning. For instance, in the 1 unit per 5 acres zoning district the existing home is given an area of 5 acres.
<b>Low-value Properties</b> Assessed building value is less than \$50,000	Minimum lot size – the inverse of the zone's density assumption – is used. For these parcels it is assumed that any existing structures are demolished

If a tax parcel contains one or more commercial or industrial structure, it is evaluated to determine if it is fully developed or partially-used. In general, tax parcels that appear fully developed on aerial photos have a building-to-area relationship of more than 3,000 square feet per acre. This means that on a one-acre parcel, if the commercial or industrial building is 3,000 square feet or more, then the parcel will be considered fully developed. One residential unit in a commercial or industrial zoning district (such as a high-density corridor) will be the equivalent of 3,000 square feet. These homes are often converted to small businesses.

If the same one-acre parcel contains less than 3,000 square feet of commercial or industrial space, then it is considered partially-used. If the existing buildings are 1,500 square feet, then they are assumed to have a half-acre footprint. The remaining half acre of the parcel is considered buildable.

**Redevelopable Land:** Land on which development has already occurred but on which, due to present or expected market forces, there exists the strong likelihood that existing development will be converted (e.g., torn down and replaced) to more intensive uses during the planning period.

Based on the market conditions in Thurston County, redevelopable land is only identified in mixed-use, commercial, and industrial zoning districts. Redevelopable land can be developed for future residential, commercial, or industrial activity. Residential redevelopment capacity is exclusively assigned to multifamily (apartments and condominium) types of development.

Commercial and industrial redevelopment potential is evaluated by comparing building value to land value.

<b>Table 2: Assessment of Commercial/Industrial built lands for development and redevelopment potential.</b>			
<b>Category</b>	<b>Building area to Parcel Area ratio (sq. ft. building to acres)</b>	<b>Building Value to Land Value</b>	<b>Model Assumption: Percent of Land Assigned as Redevelopable</b>
Partially-Used Commercial/Industrial lands	<3,000 bldg. sq. ft./acre	n/a	Portion assigned as buildable; remainder assessed for redevelopment potential.
Very High Redevelopment	>3,000 bldg. sq. ft./acre	0.0 to 0.5	100%
High Redevelopment	>3,000 bldg. sq. ft./acre	0.5 to 1.0	75%
Medium Redevelopment	>3,000 bldg. sq. ft./acre	to 2.0	50%
Low Redevelopment Potential	>3,000 bldg. sq. ft./acre	> 2.0	10%
Note: Implicit assumptions are made for large redevelopment parcels such as the Tumwater Brewery and Port of Olympia Commercial/Industrial Lands.			

Residential homes in mixed use zoning districts are considered redevelopable only if they are not: (1) condominiums; (2) 5 or more units (apartment complexes); (3) within manufactured home parks; and (4) within subdivisions platted in the last 30 years. Additionally, homes must be in in mixed-use or commercial zoning districts where the conversion of residential homes to commercial buildings is likely to occur.

## Critical Areas

Since the Growth Management Act (GMA) was adopted in the early 1990s, a step in establishing comprehensive plans and development regulations included designating and protecting critical areas. The GMA recognizes the importance of these critical areas in supporting and protecting human life and safety, and in contributing to the high quality of life in Washington State.

Critical areas include the following areas and ecosystems: wetlands, areas with a critical recharging effect on aquifers used for potable water, fish and wildlife, habitat conservation areas, frequently flooded areas, and geologically hazardous areas. All critical areas must be designated and their functions and values protected using the best available scientific information.

Locally adopted criteria are used to determine the presence or absence of critical areas during land development permit application reviews. In Thurston County, many critical areas are mapped through a geographic information system and these data layers are available for general planning purposes, such as the land supply analysis used in the Population and Employment Forecast Allocations.

For estimating buildable land supply at the countywide level, the critical areas and associated buffers shown in **Table 3** were removed before reporting the residential and commercial land supply. These assumptions are meant to best model the individual critical area ordinances adopted by the County and the cities and towns within Thurston County by April 1, 2017, given the limitations of individual data sets. For instance, as wetlands have not been assigned “types,” a general buffer is applied to wetlands rather than a more specific buffer that is specified in development codes. These assumptions are for general planning purposes only and should not be assumed to reflect development capacity at the individual project level where more detailed criteria apply.

### **Endangered and Threatened Species Listings**

Four species were listed under the federal Endangered Species Act since the last forecast update (Table 5). Several jurisdictions – including Thurston County, Tumwater (in partnership with the Port of Olympia), and Joint Base Lewis-McChord – are developing Habitat Conservation Plans that will provide property owners affected by the listing with options for mitigating the impacts of new development. One of these options is anticipated to be a mitigation bank, a fund that property owners can pay into that will be used to purchase critical habitat for conservation. The conserved land will offset impacts of development by affected property owners.

Three of the listed species – the Mazama pocket gopher, Taylor’s checkerspot butterfly, and Streaked horned lark – are primarily found in prairie habitats. Thurston County, in conjunction with U.S. Fish and Wildlife, identified groups of soils preferred by the pocket gophers, the species with the most extensive range. To estimate the effects of the listings on capacity in the unincorporated County, TRPC added ten percent of the “more preferred” soil area not otherwise identified in Table 4 to each parcel’s critical area acreage. Only the “more preferred” soils were included as these are the properties most likely to be preserved as mitigation sites and remain undeveloped (Table 6).



**Table 3: Critical Area and Buffer Deductions used in the Analysis**

Critical Areas Buffer Widths Deducted from Buildable Land Supply								
Critical Area Type	Lacey	Olympia	Tumwater	Yelm	Rainier	Tenino	Bucoda	Uninc. County <sup>A</sup>
<b>100-Year Flood Plain</b>	Yes	No	Yes	Yes	Yes <sup>B</sup>	Yes <sup>B</sup>	<sup>C</sup>	Yes
<b>High Groundwater</b>	No	No	No	Yes	No	No	Yes	Yes
Buffer width	-	-	-	-	-	-	-	50
<b>Marine Shoreline</b>	Yes	as	No	No	No	No	No	Yes
Buffer width	150	mapped	-	-	-	-	-	150 <sup>D</sup>
<b>Lakes</b>	Yes	as	as	No	No	No	No	Yes
Buffer width	50 <sup>E</sup>	wetlands	wetlands	-	-	-	-	50
<b>Ponds (1,000 ft<sup>2</sup>-19.9 ac)</b>	as	as	as	as	as	as	as	Yes
Buffer width	wetlands	wetlands	wetlands	wetlands	wetlands	wetlands	wetlands	100
<b>Wetlands<sup>H</sup></b>	200	210	300	150	200	200	200	200
Applies to wetlands over:	1,000 ft <sup>2</sup>	1,000 ft <sup>2</sup>	1,000 ft <sup>2</sup>	No min.	No min.	No min.	No min.	22,000 ft <sup>2</sup>
<b>Steep Slopes (40%)</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes <sup>F</sup>
<b>Oak Stands<sup>G</sup></b>	Yes	No	No	Yes	Yes	Yes	Yes	Yes
<b>USFW Critical Habitat<sup>J</sup></b>	-	-	-	-	-	-	-	Yes
<b>Streams</b>	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Type S buffer width	250	250	250	-	-	150	150	250
Type F buffer width	250	250	200	150	-	-	100	200 <sup>I</sup>
Type N buffer width	250	200	100	150	-	-	50	150 <sup>I</sup>
Type U buffer width	-	150	-	-	-	-	-	100

Notes: Table represents buffer distances used in modeling. All values are in feet. "No" indicates the feature is not present or not regulated by the jurisdiction. Average distances are used where regulations allow a range of buffer distances or setbacks.

- A. Buffers apply to UGA only. In the rural county, critical areas (excluding buffers) are removed when calculating density in the RRR 1/5 and RR 1/5 zones. For other rural zones, neither critical areas nor their buffers are removed when calculating density. No development is permitted in buffer area. Sufficient buildable area must be available outside of a critical area and its buffer for each dwelling unit in order to achieve maximum permitted density.
- B. Buffer of 50 feet or 2 feet above baseline flood elevation, whichever is less.
- C. Can build but at 2-foot minimum above ordinary high-water mark; 50% of buffer can be used for density calculations
- D. 250 feet for natural and conservancy, 50 feet for other types of shorelines; used an average of 150 feet.
- E. Regulations include wide range of buffers and setbacks.
- F. Regulations include buffer of 50 feet top and toe of slope.
- G. On a case-by-case basis depending on the stand (removed dominant stands for the analysis)
- H. Wetland typing not possible. An average buffer is used for jurisdictions that regulate based on wetland type. In Olympia buffers range from 50 to 280 feet. In Thurston County, buffers range from 50 to 300 feet.
- I. Actual buffer widths for Types F and N streams vary based on specific stream characteristics (150 to 200 feet and 150 to 225 feet, respectively).
- J. Critical habitat identified by the U.S. Fish and Wildlife Service for the Mazama pocket gopher, Taylor's checkerspot, Oregon spotted frog, and Streak horned lark.

<b>Table 5: Species listed under the federal Endangered Species Act.</b>	
<b>Species</b>	<b>Status</b>
Mazama pocket gopher	Threatened (2014)
Oregon spotted frog	Threatened (2014)
Taylor's checkerspot butterfly	Endangered (2013)
Streaked horned lark	Endangered (2013)

<b>Table 6: Mazama Pocket Gopher Soils added to Parcel's Total Critical Areas.</b>		
<b>Preference</b>	<b>Soil Type</b>	<b>Percent of Soil Area Added to Parcel's Critical Areas</b>
More Preferred	Nisqually loamy fine sand, 0 to 3 % slopes Nisqually loamy fine sand, 3 to 15 % slopes Spanaway-Nisqually complex, 2 to 10% slopes Cagey loamy sand Indianola loamy sand, 0 to 3% slopes Spanaway gravelly sandy loam, 0 to 3% slopes Spanaway gravelly sandy loam, 3 to 15% slopes	10% Excluding critical areas identified in Table 3
Less Preferred	Alderwood gravelly sandy loam, 0 to 3% slopes Alderwood gravelly sandy loam, 3 to 15% slopes Everett very gravelly sandy loam, 0 to 3% slopes Everett very gravelly sandy loam, 3 to 15% slopes Indianola loamy sand, 3 to 15% slopes Kaposin silt loam, 3 to 15% slopes McKenna gravelly silt loam, 0 to 5% slopes Norma fine sandy loam Norma silt loam Spana gravelly loam Spanaway stony sandy loam, 0 to 3% slopes Spanaway stony sandy loam, 3 to 15% slopes Yelm fine sandy loam, 0 to 3% slopes Yelm fine sandy loam, 3 to 15% slopes	0% Excluding critical areas identified in Table 3

# Estimating Development Capacity

Development capacity is reported as the number of residential units (houses, condos, apartments) or commercial, industrial, or institutional square feet that can be accommodated on buildable land.

## Single Lots versus Subdividable Lots

The following general assumptions are made when estimating residential development capacity:

1. In the cities and urban growth areas, parcels that have been legally subdivided through the long plat process since 1970 are assumed to have a capacity as indicated on the plat map. For the most part this means each vacant residential lot in these subdivisions will be assigned a capacity of one home. In a few instances duplexes to fourplexes were planned for the lots. In these subdivisions, lots with one or more homes on them are considered developed, with no room for further development.
2. Lots that are less than one and a half acres in size, with a home built recently (2010 or later) or with homes with a value greater than \$250,000, are considered fully developed.
3. In the rural county, under health code standards, existing lots must meet a minimum size threshold of 12,500 square feet of buildable land (this area cannot include critical areas or critical area buffers) to be considered buildable for purposes other than recreation.
4. Any other vacant legal lots that are smaller than indicated in **Table 4** are unlikely to be further subdivided and are assigned a capacity of one home.

Table 4: Assumptions for Minimum Lot Size Requirements for Subdividable lots	
Area and Generalized Zoning	Minimum Lot Size to be Considered Subdividable
<b>Cities</b> Moderate to high-density urban zoning (more than 6 units per acre) and mixed-use zoning.	0.25 acres (any vacant lots smaller than a quarter acre are assumed to have a capacity of one home)
<b>Cities</b> Low-density urban zoning	0.33 acre minimum (any vacant lots smaller than a half acre are assumed to have a capacity of one home)
<b>Unincorporated Urban Areas</b>	1 acre minimum (any vacant lots smaller than one acre are assumed to have a capacity of one home)
<b>Rural Zoning</b>	Vacant lots must be able to accommodate 2 or more units to be considered subdividable <ul style="list-style-type: none"><li>• 1 unit per 5 acre zoning – 10 acre minimum</li><li>• 1 unit per 10 acre zoning – 20 acre minimum</li></ul>

## **Planned and Proposed Projects**

Any lots (vacant, partially-used or redevelopable) where a developer has submitted an application for development to city or county staff will be assigned the planned development capacity.

All master planned communities, urban villages, and urban centers will be given a development capacity (both residential and commercial) based on the proposed master plan.

## **Institutional Lands**

Any vacant or partially-used institutional lands (owned by a school, college, church, cemetery, or local or state government) will be assumed to develop based on the ownership. These lands will not be assigned any new residential capacity, with the exception of dorms and jails. For example, on The Evergreen State College campus it is assumed that there may be new college buildings or dorms, but that the land will not be used for general commercial or residential development.

## **Redevelopment**

Fully developed or partially-used residential parcels in residential zoning districts will not be considered redevelopable. The assumption will be that the original home remains in place over the planning period, taking up a footprint as indicated in **Table 1**. Redevelopment potential is only assessed for parcels in mixed use or industrial zoning districts.

## **Subdividable Lands**

If a vacant or partially-used parcel does not fall into any of the categories above, it is evaluated to see if it can be further subdivided based on zoning and parcel size.

### **Density Assumption**

The model includes a residential density estimate for each zoning district. This estimate is developed based on the range of allowable densities, the actual densities being achieved in each zoning district, and calibration against proposed development projects. It is measured as the number of units per total buildable acres.

### **Smaller Subdividable Lots (referred to as short plat subdivisions)**

Short plat subdivisions are subdivisions that, because of the small number of lots created do not require public streets or other public facilities such as storm water ponds. Capacity is determined by taking total buildable acres and multiplying by density (units per acre).

### **Multifamily and Mixed Use**

Multifamily and mixed-use projects do not go through a typical subdivision process. While they do require parking, internal streets, and other public facilities such as stormwater ponds, these features are included as part of the site design rather than on separate lots. Capacity is determined by taking: total buildable acres and multiplying by density (units per acre; see Diagram 1).

### Residential Single-family Attached or Detached – Larger Subdividable Lots – Urban Areas

Large plat subdivisions are a major division of land. At the time land is divided, roads, rights-of-way, open space and tree tracts and stormwater facilities are laid out. To account for these public spaces, a density reduction factor is applied to the base density in the model, as shown in **Table 5**. See Diagram 2 for example.

Table 5: Assumptions for Deductions for Long Plat Subdivisions							
Jurisdiction	Open Space/Tree Tract, (whatever is greater)			Storm- water Facility	Roads & Rights- of-Way	Total (whatever is greater)	
Lacey	10%	or	10% plus critical*	10%	20%	40%	or 40% plus critical*
Tumwater	10%	or	5% plus critical*	10%	20%	40%	or 35% plus critical*
Olympia	5%	or	critical*	10%	25%	40%	or 35% plus critical*
Yelm	5%	or	critical*	5%	22%	32%	or 27% plus critical*
Bucoda	-			-	-	40%	or 40% plus critical*
Rainier	-			-	-	40%	or 40% plus critical*
Tenino	-			-	-	35%	or 35% plus critical*
Unincorporated Growth Areas	5%	or	2.5% plus critical*	10%	22%	37%	or 34.5% plus critical*
* Critical areas and critical area buffers as estimated in the GIS.							
Note: part or all the open space or tree tract requirement may be met in critical area buffers, or partial density can be applied, depending on the jurisdiction.							

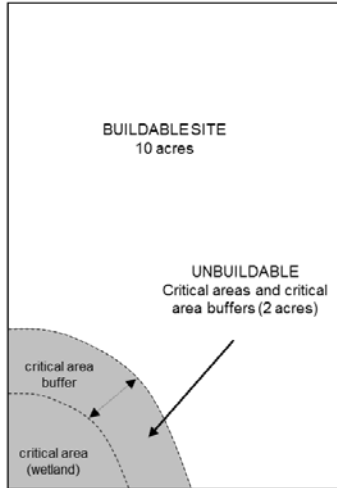
### Rural Areas

Capacity for rural subdividable lands is determined by taking total buildable acres and multiplying by density (units per acre). Buildable acres do not include critical area and associated buffers.

**Diagram 1: Estimating Development Capacity on Vacant or Partially-used Land**

### Multifamily and Mixed Use

#### Original 12 Acre Site



#### DEVELOPMENT CAPACITY

##### 1) Calculate Buildable Site Area by deducting:

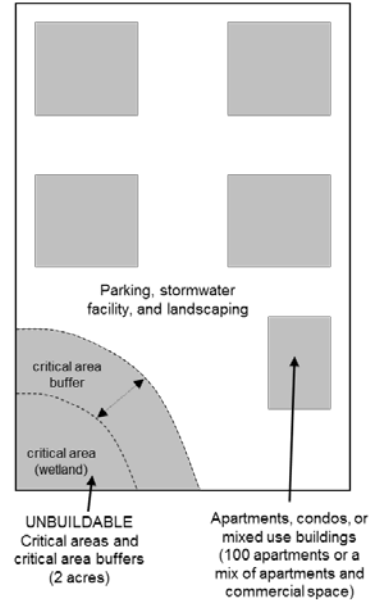
- ☐ Critical Areas
- ☐ Critical Area Buffers
- ☐ Developed land (if site is partially-used)

##### 2) Multiply buildable site area by density:

Assume average density is 10 units per acre

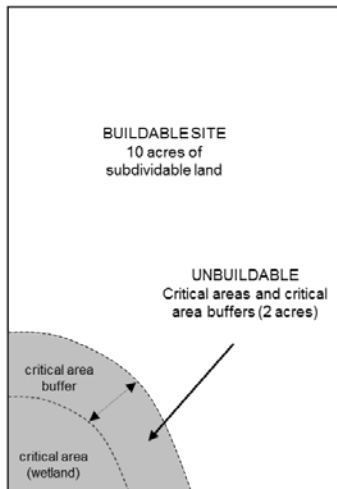
$$10 \text{ buildable acres} * 10 \text{ units per acres} = 100 \text{ units}$$

#### Developed 12 Acre Site



### Single-Family

#### Original 12 Acre Site



#### DEVELOPMENT CAPACITY

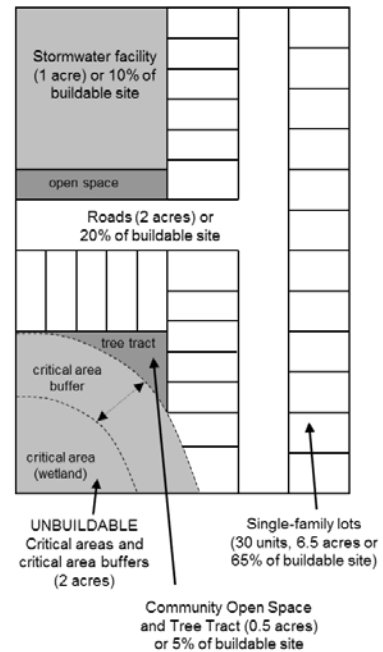
##### 1) Calculate residential acres by taking total site area and deducting:

- ☐ Critical Areas
- ☐ Critical Area Buffers
- ☐ Open Space and/or Tree Tract \*\*
- ☐ Stormwater Facility
- ☐ Roads and Rights-of-Way
- ☐ Developed land (if site is partially-used)

##### 2) Then multiply remaining acres by density to get number of units

\*\* Part or all of the open space or tree tract requirement may be met in critical area buffers or partial density transfer can be applied depending on the jurisdiction

#### Subdivided 12 Acre Site



## **Replacements, Accessory Dwellings, Family Member Units**

Capacity for new family member units, accessory dwelling units, and changes in housing type (replacement of manufactured homes by single-family homes) is constrained by market demand. The specific assumptions for these types of units are in the population forecast allocation documentation.

## **Group Quarters**

Group quarters are allowed in both residential and commercial zoning districts. Some group quarters will be located on institutional or government-owned tax parcels such as new dorms and jails. Others, such as nursing homes, will be found throughout the county. Group quarters make up around 1.4 percent of the total population in 2017. This is estimated to rise slightly to 1.7 percent by 2045 as the baby-boom generation ages and there is increased need for nursing homes.

## **Assumption for Schools, Churches, Parks and other Public Facilities in Residential Zoning Districts**

### **Overview**

Schools, churches, and parks are often located in residential zoning districts close to the population they serve. In the Lacey, Olympia, and Tumwater region it is estimated that these uses take up just over 10 percent of the developed land outside of industrial zoning districts. Percentages are more variable in the south County cities and towns, where one large high school can tip the balance. It is not always possible to plan ahead for the next 20 to 30 years on the exact location of new schools, churches and parks and other allowable non-residential uses in urban areas. Some school districts such as the North Thurston Public Schools (serving the Lacey area) have acquired many school sites already to plan for future growth. Most others purchase sites as they need them.

Most park plans call for the need for new parks, but specific locations are not identified. Olympia has recently entered a phase of park acquisition, fueled by an inflow of dedicated parks money from the newly created Metropolitan Park District.

Churches also tend to locate in residential areas. Over the years sites for churches tend to be getting larger and locating further out from the urban core. The factors used in the land supply analysis are shown in **Table 6**.

### **Site-Specific Deductions**

Site specific deductions are taken where vacant or partially-used land is already identified for future public facilities in residential zoning districts. All park land – developed parks or land set aside for future parks – have been deducted from the land inventory.

<b>Table 6: Factor for Non-Residential Uses in Residential Zoning Districts</b>	
<b>Type of Capacity</b>	<b>Non-Residential Use Deduction in addition to road and open space deductions taken in subdivisions</b>
<b>Subdividable Urban Land</b>	10%
<b>Subdividable Rural Land</b>	1%
<b>Mixed-use Residential Capacity</b> Note: The mixed-use zoning districts assume a proportion on non-residential and residential uses, so no further deductions are necessary.	0%
<b>Redevelopment Capacity</b> Note: This type of capacity assumes a proportion on non-residential and residential uses, so no further deductions are necessary	0%
<b>Platted Single-family Home and Duplex Lots</b>	0%
<b>Planned Projects</b> The number of units in these projects is already established and needs no further reduction	0%



## **Mixed Use Percentages**

Some of the zoning districts in Thurston County allow for, or encourage, a mix of commercial and residential uses. The model distributes the buildable and redevelopable land into residential and commercial portions, based on a mixed-use assumption factor. This factor varies from low (2% residential) in mainly commercial zoning districts, to fairly high in Urban Villages and mixed-use Master Planned Communities. The factor is developed based on past trends and proposed projects.

## **Capacity Estimates by Type of Housing**

Zoning districts generally allow for a mixture of single-family, multifamily, and manufactured housing types. In general, the higher the density range allowed in a zoning district, the higher the percentage of multifamily housing expected. The model assumption is based both on expected demand for housing, and the type of housing that has been achieved in the zoning district in the last decade.

Details on this assumption can be found in Appendix 1.

## **Assumptions Report**

Appendix 2 lays out the detailed assumptions used in the estimates of land supply.

## **Wastewater Treatment in Bucoda and Rainier**

Urban services are not currently available everywhere throughout all the urban areas. In particular, Rainier and Bucoda do not currently have sewer or wastewater treatment facilities. This limits the density of development to allow for a septic system and drain field. The model makes an implicit assumption that Rainier will have sewer service by the 2030-2035 planning horizon, and Bucoda and the Urban Growth Areas of Rainier, Tenino, and Yelm will have sewer by 2035-2040.

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# Calibration of Assumptions

In order to ensure that the various assumptions used in developing the land supply estimate lead to reasonable results, two methods of proofing the input data and assumptions are provided, a calibration report, and set of supporting maps. Together, these ensure an open and comprehensive stakeholder review of both assumptions and outputs.

## Calibration Reports

To ensure that the model accurately estimates residential capacity, TRPC performs a model calibration. TRPC worked with jurisdictions' staff to develop a list of residential projects that have been recently approved or are in the development pipeline. TRPC received information on over 120 residential projects that have been recently approved, have application under review, or are in the pre-submission phase. Of these, 66 were used for calibration. Projects were not used if they had significant non-residential components, poorly mapped critical areas, or were phase of a larger development.

Modeled residential capacity is compared to the number of units proposed for each project. Model parameters can then be adjusted until modeled capacity closely matches planned development. Because some zones may have few, if any projects, in the development pipeline, zones are grouped into categories with similar densities. Under current model assumptions, modeled estimates are 7.3 percent less than what has been submitted or approved for pipeline projects. The model is least accurate in Master Planned Community zones and most accurate in low-density urban zones. Table 8 has a summary of calibration results by generalized zoning category.

Appendix 3 provides detailed information on the projects included in model calibration by jurisdiction.

Table 8: Model Calibration Results by Generalized Zoning Category.				
Density Category	Planned Units	Model Estimate	Difference	Percent Difference
High Multifamily	1,790	1,590	-200	-11.2%
Master Planned Community	140	165	25	17.9%
Moderate Multifamily	694	563	-131	-18.9%
Mixed Residential	1,312	1,315	3	0.2%
Medium	243	228	-15	-6.2%
Medium - Low / Sensitive	30	31	1	3.3%
Low	72	80	8	11.1%
Rural 1 du per 5 acres	78	67	-11	-14.1%
<b>Total</b>	<b>4,359</b>	<b>4,039</b>	<b>-320</b>	<b>-7.3%</b>

## Supporting Maps

A three-map series is available for various geographies in Thurston County, covering the following topics:

1. 2017 Current Land Use
2. 2017 Residential Development Potential
3. 2017 Commercial, Industrial and Mixed-Use Development Potential

Maps are available at <https://www.trpc.org/236>.

# Other Considerations

## Buildable Lands Program

The Buildable Lands program in Thurston County answers two key growth-related questions. The first is whether residential development in the urban growth areas is occurring at the densities envisioned in Local Comprehensive Plans. The second is whether there is adequate land supply in the urban growth areas for anticipated future growth in population and employment. The next Buildable Lands report is officially due by mid-2021. It is likely to rely heavily on the data and assumptions used in the land supply estimates and population and employment forecast allocations update. The County has the responsibility of undertaking a review of the Urban Growth Area. In the past the County has relied on the Buildable Lands report to inform this review.

## Urban Growth Area Review

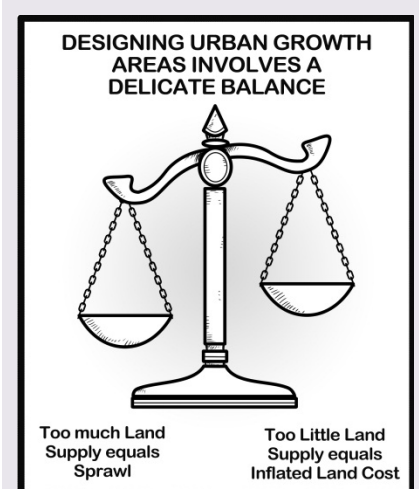
Under the State's Growth Management Act, the County is required to review the urban growth areas every ten years. The following is the some of the criteria for the review:

*“(d) Based upon the growth management planning population projection selected by the county from within the range provided by the office of financial management, and based on a county-wide employment forecast developed by the county at its discretion, the urban growth areas shall include areas and densities sufficient to permit the urban growth that is projected to occur in the county for the succeeding twenty-year period.*

*(e) The urban growth area may not exceed the areas necessary to accommodate the growth management planning projections, plus a reasonable land market supply factor, or market factor. In determining this market factor, counties and cities may consider local circumstances. Cities and counties have discretion in their comprehensive plans to make many choices about accommodating growth. Each urban growth area shall permit urban densities and shall include greenbelt and open space areas.”*

*Source: WAC 365-196-310 – Urban Growth Areas*

In short, the county is not only directed to review the growth area to ensure that there is adequate land supply to accommodate projected growth (the Buildable Lands Program) but must also ensure that the land supply does not exceed the area necessary to accommodate projected growth.



From: *Issues in Designating Urban Growth Areas*, State of Washington Department of Community Development (1992).

## Market Factor Discussion

### Overview

The market factor used in the previous Urban Growth Area evaluation (2007/2008) and Buildable Lands Report was a range between 0 and 25 percent.

Market factors account for “vagaries of the real estate market supply.” (RCW 36.70A.110(2)), and at a minimum take into account that not all land suitable for development will be available for development in the 20-year planning horizon. Some land owners will not choose to put their vacant or partially-used land on the market or redevelop developed properties.

In 2007 Thurston County and the cities and towns began working together in a joint planning effort to develop suitable market factors for each jurisdiction and the adjacent unincorporated urban growth area.

When defining suitable market factors, Thurston County and local cities and towns took into account the various factors that TRPC already includes in the analysis that relate to development inefficiencies and could be considered potential market factors. These factors are outlined on the following pages.

*“The buildable lands analysis assesses many of the potential market factors and incorporates them into the figures for land supply and demand that it produces. This analysis appears to take the place of a market factor.”*

*“Since the number used in the comprehensive plan update to determine residential land supply in the Thurston County UGAs was derived from the buildable lands analysis, any market factor must be based on factors that were not already incorporated into the determination of residential land supply.”*

*Western Washington Growth Management Hearings Board, 1000 Friends of Washington v Thurston County, Case #05-2-0002 Final Decision and Order, July 20, 2005.*

New market factors are anticipated to be developed for the 2021 Buildable Lands Report and will be consistent with updated program guidance from the Washington State Department of Commerce.

### Potential Market Factor Elements or Development Inefficiencies Incorporated into TRPC's Analysis

#### 1. Minimum space requirements for existing homes on partially-used land

Example: An existing home in a single-family zoning district is allotted 0.33 acres (about 14,400 sq. ft.) out of the remaining property, even though new plats typically use about 5,000-6,000 sq. ft. per home.

Comment: This accounts for the inefficiency from having to build around an existing structure.

#### 2. Proportion of area in mixed use districts assumed available for redevelopment

Example: Assume only 5 percent of the land in a particular mixed-use zoning district might redevelop to residential use (see Appendices 1 and 2.)

Comment: This acknowledges that in mixed use areas most redevelopment will be to a higher intensity of commercial development, rather than to new residences.

3. Minimum parcel size (by zoning category) to be considered subdividable

Example: A parcel in an unincorporated growth area (and not on municipal water) must be at least one acre in size to be assumed available for subdivision during the forecast time horizon.

Comment: This acknowledges that a) environmental health standards limit lots to one acre when onsite sewage disposal and water are used, b) infill development is more difficult, and c) most such parcels have owners who prefer to live on such larger lots and have no further development intentions during the forecast time horizon.

4. No further subdivision of long plats approved since 1970

Example: The Seasons, platted in the 1980s, includes a number of two-acre lots, which are assumed will not be further subdivided during the forecast time horizon.

Comment: This acknowledges that recent plats normally have private restrictions that prevent further subdivision, even though current zoning might allow it.

5. General deduction for non-residential uses in residential districts (e.g., schools, churches, parks, day care centers, etc.)

Example: Seven percent of the developable land area in the single-family zoning districts of cities and unincorporated urban growth areas is assumed to be used for non-residential uses.

Comment: This recognizes that some residential land will be used for typical non-residential land uses common to neighborhoods and must be accounted for.

6. Truncation of potential dwellings to whole numbers per parcel

Example: A hypothetical parcel has 3.85 developable residential acres after deducting for critical areas, buffers, tree tracts, stormwater facilities, roads, etc. In a typical single-family zoning district, this might be multiplied times a net density of 4.6 units per acre to theoretically allow 17.71 dwellings. This would be rounded down to 17.

Comment: This procedure recognizes some of the inefficiencies in laying out a subdivision on smaller sites versus larger ones, since the amount truncated will be more consequential on smaller sites.

## **Market Factor Elements**

1. Proportion of residentially developable land area that will not be on the market during 20-year planning horizon

Example: A random survey conducted for Snohomish County asked several hundred property-owners whether their land might be available for development within 5, 10, 15, or 20 years. The survey found that 21% of respondents would be unlikely or very unlikely to make their property available for development in the next 20 years.

Comment: A corresponding assumption should be developed for Thurston County. Different assumptions might be appropriate for different parts of the County.

2. Added margin for small towns and cities to recognize greater fluctuation in their growth rates and potential access to sewer

Example: Rainier was a sleepy town of less than 400 from 1950 to 1970, after which it exploded 133% to 891 in 1980. Things were calm again in the 1980s, but from 1990 to 2000 it leaped another 51%.

Comment: Small towns and cities have long periods of stability punctuated by explosive growth. This is because a modest-sized subdivision represents a large percentage of the total housing. In addition, both Bucoda and Rainier may have a sewer in the planning horizon. When/if that happens leads to further potential fluctuations in their growth rates.

## **Elements That Are Not “Market Factors” as Defined by GMA but Merit Evaluation and Discussion as Part of the Buildable Lands Analysis**

### **1. Access to Municipal Sewer and Water**

Example: Urban services are not currently available everywhere throughout all the urban areas. In particular, of the South County towns, only Yelm and Tenino have sewer, and none of them extend water service outside the city limits. Availability of sewer and water determines potential density. If development occurs at densities constrained by lack of municipal sewer and/or water, the potential capacity of the urban areas will be reduced.

Comment: The Buildable Lands analysis uses the adopted sewer and water service plans of the jurisdictions to identify where and when municipal sewer and water will be made available. These plans all commit to serving their respective urban areas over the 20-year planning time horizon. A recent Central Puget Sound Growth Management Hearings Board case, while not applicable to Thurston County, offers a relevant analysis of the GMA requirements (*Kitsap Citizens for Responsible Planning v Kitsap County*, Case 06-3-0007, FDO July 26, 2006). In that case, The Central Board ruled that the GMA requires that jurisdictions must plan to develop urban areas in an urban manner, providing urban services to enable it. Thus, urban areas should not include lands that cannot be provided urban services within 20 years.

### **2. Varying costs to extend water or sewer**

Example: Some parts of the urban areas will be costly to serve with water or sewer, such as outlying areas that might require multiple pump stations or other factors raising costs well above what the current housing market can bear.

Comment: This is a legitimate issue and may be an appropriate basis for adjusting UGA boundaries. If excessive costs imply that certain areas cannot reasonably be urbanized within the 20-year planning time horizon, they should not be included in the UGA. This may imply a need to reduce the size of the UGA accordingly, or it may imply a need to shift the UGA to add different areas instead, where services can be provided more cost-effectively.

### **3. Availability of Water Rights**

Example: Local cities and towns were reaching the limits of their water rights by the end of the last decade. Lacey had to temporarily deny access to municipal water service to new subdivisions proposed for the unincorporated Lacey UGA. Also, in rural areas the water rights exemption for six or fewer houses per parcel could limit the potential capacity of rural areas.



Comment: By working together, the Cities resolved some of the issues relating to water rights availability for the urban areas. This is likely to be an ongoing concern – where cities will increasingly look to strategies other than new water rights (such as increased conservation) to be able to supply water to a growing population.

#### 4. Varying levels of Impact Fees

Example: Different jurisdictions have different levels of development impact exactions, whether through impact fees, SEPA mitigation fees, transportation benefit districts, or other means. By substantially influencing costs, this can influence the location of new development.

Comment: This is a valid observation. These differentials have been in place for more than a decade and are well reflected in market trends already. Since the growth allocations are deliberately based in large measure on observed market trends (i.e., building permit trends collected by TRPC annually since 1986), these factors are already incorporated into the TRPC forecast allocation and buildable lands modeling. The TRPC modeling process combines trend analysis based on building permits to determine future demand (e.g., how much of the recent growth has gone to Lacey and/or its UGA) with the buildable lands analysis to determine future supply (e.g., how much more growth Lacey and/or its UGA can accommodate). This modeling approach assumes that the jurisdictions in which it is currently more expensive to develop will remain more expensive, etc.; and that this will continue to affect growth rates in those jurisdictions similar to today.

## Excess Capacity

### What is Excess Capacity?

Excess capacity is the amount of Total Capacity (supply) in a given area, minus the amount of capacity expected to be used or built (demand) within the planning horizon.

If, for instance, a planning area had the capacity for 1,000 dwellings, and 700 units are expected to be built within the planning period of say, 20 years, then the excess capacity is 300 units.

### Why is it Important?

Excess Capacity was compared to the Market Factor range determined by Thurston County in the 2007/2008 Urban Growth Area review.

### What is Percent Excess Capacity?

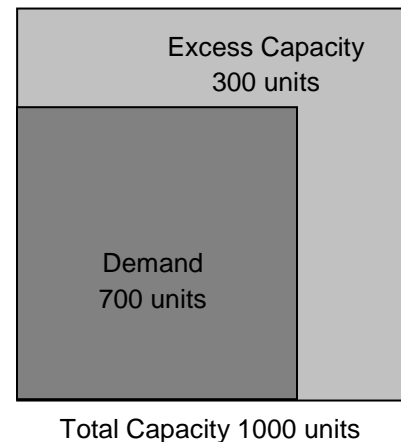
Instead of expressing Excess Capacity in terms of dwelling units or acres, it is shown relative to how much is expected to be used in the planning horizon.

Using the example above, the Excess Capacity (300 units) divided by how many units are expected (700 units) is the percent excess – or 43 percent. This means that there is enough capacity to accommodate demand, plus 43 percent extra.

### When will Excess Capacity be Reported?

A table of reporting Excess Capacity will be developed as part of the Buildable Lands Program due in 2021.

### Example



# Appendices

**Appendix 1: Type of Housing Assumptions by Zoning District**

**Appendix 2: Zoning Assumptions by Jurisdiction**

**Appendix 3: Detailed Calibration Report by Jurisdiction**



# Appendix 1

## Type of Housing Assumption by Jurisdiction

### *Town of Bucoda*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<u>Low</u>							
Commercial	70	0	30	33	33	33	3
Multifamily Residential	50	50	0	0	0	100	1
Single-Family/Duplex Residential	85	5	10	48	9	43	23
<u>Non-Residential</u>							
Industrial	0	0	0	-	-	-	-
Parks/Public Uses	0	0	0	-	-	-	-

### *City of Lacey*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<u>High Multifamily</u>							
Central Business District 4	0	100	0	2	98	0	63
Central Business District 5	0	100	0	0	99	1	401
Central Business District 6	0	100	0	-	-	-	-
Central Business District 7	0	100	0	-	-	-	-
Community Office District	5	93	2	10	90	0	446
High Density Residential	5	93	2	54	46	0	1475
Mixed Use High Density Corridor	5	93	2	1	98	1	598
Woodland District	0	100	0	0	100	0	101
<u>Master Planned Community</u>							
Village (Urban) Center	100	0	0	100	0	0	86
<u>Moderate Multifamily</u>							
Hawks Prairie Business District (Business/Commercial)	0	100	0	-	-	-	-
Hawks Prairie Business District (Commercial)	0	100	0	-	-	-	-
Moderate Density Residential	50	48	2	83	15	2	1826
<u>Mixed Residential</u>							
Low Density Residential (LD 3-6)	90	8	2	95	5	0	2303
Mixed Use Moderate Density Corridor	20	78	2	0	100	0	28
<u>Medium</u>							
Low Density Residential (LD 0-4)	98	2	0	99	1	1	1166

## Type of Housing Assumption by Jurisdiction

### *City of Lacey*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<u>Medium - Low / Sensitive</u>							
Shoreline Residential	98	2	0	93	7	0	14
<u>Low</u>							
Lacey Historic Neighborhood	100	0	0	88	0	12	8
Natural	98	2	0	100	0	0	2
Urban Conservancy	98	2	0	100	0	0	1
<u>Non-Residential</u>							
Aquatic	0	0	0	100	0	0	1
Cemetery	0	0	0	-	-	-	-
Community Commercial District	0	0	0	-	-	-	-
General Commercial	0	0	0	0	0	100	2
Light Industrial	0	0	0	-	-	-	-
Light Industrial/Commercial	0	0	0	-	-	-	-
Mineral Extraction	0	0	0	-	-	-	-
Neighborhood Commercial	0	0	0	-	-	-	-
Open Space (Institutional)	0	0	0	25	2	74	57
Open Space (Park)	0	0	0	-	-	-	-
Open Space (School)	0	0	0	-	-	-	-
Saint Martin's University	0	0	0	-	-	-	-

### *Unincorporated Growth Area of Lacey*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<u>High Multifamily</u>							
Central Business District 6	0	100	0	-	-	-	-
High Density Residential	5	93	2	20	80	0	442
Mixed Use High Density Corridor	5	93	2	0	99	1	393
<u>Master Planned Community</u>							
Village (Urban) Center	50	45	5	100	0	0	195
<u>Moderate Multifamily</u>							
Mixed Use Moderate Density Corridor	20	78	2	2	97	2	61
Moderate Density Residential	50	48	2	70	17	13	424
<u>Mixed Residential</u>							
Low Density Residential (LD 3-6)	90	8	2	88	3	9	1172
McAllister Geologically Sensitive Area	93	2	5	93	1	7	365

## Type of Housing Assumption by Jurisdiction

### *Unincorporated Growth Area of Lacey*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>Medium</b>							
Low Density Residential (LD 0-4)	98	2	0	90	2	7	617
<b>Rural - 1du per 5acres</b>							
Agriculture	90	5	5	-	-	-	-
<b>Non-Residential</b>							
Lake	0	0	0	-	-	-	-
Light Industrial	0	0	0	-	-	-	-
Mineral Extraction	0	0	0	-	-	-	-
Neighborhood Commercial	0	0	0	-	-	-	-
Open Space (Institutional)	0	0	0	-	-	-	-
Open Space (Park)	0	0	0	-	-	-	-
Open Space (School)	0	0	0	-	-	-	-

### *City of Olympia*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>High Multifamily</b>							
Downtown Business	0	100	0	0	100	0	419
High Density Corridor-4	0	100	0	0	100	0	166
High Rise Multifamily	0	100	0	-	-	-	-
Medical Service	0	100	0	0	100	0	104
Planned Unit Development	0	100	0	2	98	0	102
Professional Office/Residential Multifamily	0	100	0	1	99	0	483
Residential Mixed Use	0	100	0	0	100	0	29
Residential Multifamily (RM-18)	8	90	2	24	75	0	213
Residential Multifamily (RM-24)	0	98	2	0	100	0	737
Urban Residential	0	100	0	0	100	0	32
Urban Waterfront	0	100	0	0	100	0	128
Urban Waterfront - Housing	0	100	0	0	100	0	140
<b>Master Planned Community</b>							
Neighborhood Village	70	30	0	74	26	0	358
Urban Village	18	82	0	31	69	0	325
<b>Moderate Multifamily</b>							
General Commercial	0	100	0	-	-	-	-
Mixed Residential (MR-10-18)	40	60	0	44	54	2	41

## Type of Housing Assumption by Jurisdiction

### *City of Olympia*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>Mixed Residential</b>							
High Density Corridor-1	0	100	0	-	-	-	-
High Density Corridor-2	0	100	0	-	-	-	-
High Density Corridor-3	0	100	0	-	-	-	-
Manufactured Housing Park	0	0	100	-	-	-	-
Neighborhood Retail	10	90	0	100	0	0	1
Residential (R-6-12)	67	30	3	92	8	0	429
<b>Medium</b>							
Residential (R-4-8 within 600' of Transit)	73	27	0	96	3	0	234
Residential (R-4-8)	75	25	0	95	5	1	597
<b>Medium - Low / Sensitive</b>							
Residential Low Impact	100	0	0	86	14	0	810
Single-Family Residential (Chambers Basin)	100	0	0	100	0	0	4
<b>Low</b>							
Residential (R-4)	90	0	10	100	0	0	5
<b>Rural - 1du per 5acres</b>							
Residential (R 1/5)	90	8	2	100	0	0	1
<b>Non-Residential</b>							
Auto Services	0	0	0	-	-	-	-
Capitol Campus / Commercial Service-High Density	0	0	0	-	-	-	-
Industrial	0	0	0	-	-	-	-
Light Industrial/Commercial	0	0	0	-	-	-	-

### *Unincorporated Growth Area of Olympia*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>High Multifamily</b>							
Residential Multifamily (RM-18)	13	85	2	0	100	0	198
<b>Moderate Multifamily</b>							
Community Oriented Shopping Center	30	70	0	71	29	0	38



## Type of Housing Assumption by Jurisdiction

### *Unincorporated Growth Area of Olympia*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>Mixed Residential</b>							
Mixed Residential (MR-7-13)	60	40	0	-	-	-	-
Neighborhood Retail	10	90	0	0	100	0	2
Residential (R-6-12)	67	30	3	98	2	0	218
<b>Medium</b>							
Residential (R-4-8 within 600' of Transit)	73	27	0	98	0	2	146
Residential (R-4-8)	75	25	0	88	11	1	533
<b>Medium - Low / Sensitive</b>							
Residential Low Impact	100	0	0	66	34	0	305
<b>Low</b>							
Residential (R-4)	90	0	10	98	0	2	81
<b>Rural - 1du per 5acres</b>							
Residential (R 1/5)	90	5	5	94	2	4	47
<b>Non-Residential</b>							
Light Industrial/Commercial	0	0	0	-	-	-	-

### *City of Rainier*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>Low</b>							
Core Commercial	0	100	0	100	0	0	3
Highway Commercial	0	100	0	-	-	-	-
Residential (Existing Neighborhood) 0.25	90	0	10	99	0	1	137
Residential (Existing Neighborhood) 0.35	90	0	10	100	0	0	27
Residential (Existing Neighborhood) 1.00	90	0	10	91	0	9	11
Residential 6-8	80	10	10	86	0	14	94
Residential 8-25	80	20	0	41	59	0	27
Service Commercial	0	100	0	20	20	60	10

## Type of Housing Assumption by Jurisdiction

### *City of Rainier*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>Non-Residential</b>							
Forestland	0	0	0	-	-	-	-
Industrial	0	0	0	-	-	-	-
Public Facility	0	0	0	50	0	50	2
Trails/Open Space/Parks	0	0	0	-	-	-	-

### *Unincorporated Growth Area of Rainier*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>Low</b>							
Neighborhood Convenience Commercial	100	0	0	-	-	-	-
<b>Rural - 1du per 5acres</b>							
Rural Residential/Resource 1/5	85	5	10	70	0	30	10

### *City of Tenino*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>Master Planned Community</b>							
West Tenino	70	30	0	-	-	-	-
<b>Moderate Multifamily</b>							
Commercial 1	0	100	0	-	-	-	-
Commercial 2	0	100	0	0	100	0	15
Commercial 3	0	100	0	100	0	0	1
Multifamily Residential	55	40	5	-	-	-	-
<b>Mixed Residential</b>							
Professional Office Overlay	70	30	0	100	0	0	3
Single Family/Duplex Residential	80	10	10	80	0	20	10
Single-Family Residential	90	0	10	81	3	16	128
<b>Medium - Low / Sensitive</b>							
Single-Family Residential-Environmentally Sensitive	90	0	10	0	0	100	3
<b>Non-Residential</b>							
Industrial	0	0	0	-	-	-	-
Parks/Open Space	0	0	0	100	0	0	1

## Type of Housing Assumption by Jurisdiction

### *Unincorporated Growth Area of Tenino*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<u>Rural - 1du per 5acres</u>							
Rural Residential/Resource 1/5	85	5	10	100	0	0	1

### *City of Tumwater*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<u>High Multifamily</u>							
Brewery District	0	100	0	0	100	0	2
Capitol Boulevard Community	0	100	0	12	38	50	8
Mixed Use	0	95	5	0	100	0	40
Multifamily High Density Residential	0	100	0	0	100	0	411
Town Center Multifamily Residential	0	100	0	-	-	-	-
<u>Moderate Multifamily</u>							
Community Services	0	100	0	-	-	-	-
General Commercial	0	100	0	0	0	100	11
Multifamily Medium Density Residential	50	48	2	83	17	0	560
Town Center Mixed Use	0	100	0	-	-	-	-
<u>Mixed Residential</u>							
Manufactured Home Park	0	0	100	7	2	92	60
Single-Family Medium Density Residential	60	35	5	86	14	0	1123
<u>Medium</u>							
Single-Family Low Density Residential	85	5	10	100	0	0	909
<u>Medium - Low / Sensitive</u>							
Residential/Sensitive Resource	90	0	10	67	0	33	143
<u>Non-Residential</u>							
Airport Related Industry	0	0	0	-	-	-	-
Greenbelt	0	0	0	-	-	-	-
Heavy Industrial	0	0	0	-	-	-	-
Historic Commercial	0	0	0	-	-	-	-
Light Industrial	0	0	0	57	0	43	7
Neighborhood Commercial	0	0	0	-	-	-	-
Open Space	0	0	0	100	0	0	3
Town Center Civic	0	0	0	-	-	-	-
Town Center Professional Office	0	0	0	-	-	-	-

## Type of Housing Assumption by Jurisdiction

### *Unincorporated Growth Area of Tumwater*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<u>Moderate Multifamily</u>							
Commercial Development	0	100	0	0	0	100	1
Multifamily Medium Density Residential	50	48	2	12	7	81	43
<u>Mixed Residential</u>							
Single-Family Medium Density Residential	75	15	10	100	0	0	6
<u>Medium</u>							
Single-Family Low Density Residential	85	5	10	72	7	21	57
<u>Medium - Low / Sensitive</u>							
Residential/Sensitive Resource	90	0	10	67	17	17	6
<u>Non-Residential</u>							
Business Park	0	0	0	-	-	-	-
General Commercial	0	0	0	-	-	-	-
Greenbelt	0	0	0	0	0	100	1
Heavy Industrial	0	0	0	-	-	-	-
Light Industrial	0	0	0	18	0	82	17
Neighborhood Commercial	0	0	0	-	-	-	-
Open Space	0	0	0	50	0	50	2

### *City of Yelm*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<u>High Multifamily</u>							
High Density Residential (R-14)	48	50	2	59	40	1	178
<u>Master Planned Community</u>							
Master Planned Community	50	50	0	88	0	12	393
<u>Mixed Residential</u>							
Central Business District	30	70	0	50	50	0	12
Commercial	0	100	0	2	95	3	154
Heavy Commercial	0	100	0	0	99	1	109
Large Lot Commercial	0	100	0	0	0	100	1
Moderate Density Residential (R-6)	60	38	2	98	2	0	658
<u>Medium</u>							
Low Density Residential (R-4)	90	8	2	96	2	2	636

## Type of Housing Assumption by Jurisdiction

### *City of Yelm*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>Low</b>							
Arterial Commercial	0	100	0	-	-	-	-
<b>Non-Residential</b>							
Industrial	0	0	0	-	-	-	-
Institutional District	0	0	0	100	0	0	2
Parks/Open Space	0	0	0	100	0	0	1

### *Unincorporated Growth Area of Yelm*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>Low</b>							
Arterial Commercial	0	100	0	-	-	-	-
<b>Rural - 1du per 5acres</b>							
Rural Residential 1/5	85	5	10	47	0	53	77
<b>Non-Residential</b>							
Light Industrial	0	0	0	0	0	100	2

### *Grand Mound Unincorporated Growth Area*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>Mixed Residential</b>							
Arterial Commercial	0	100	0	0	0	100	3
Residential (R 4-16/1)	40	55	5	0	0	100	8
<b>Medium</b>							
Residential (R 3-6/1)	73	25	2	75	18	7	214
<b>Non-Residential</b>							
Light Industrial	0	0	0	-	-	-	-
Planned Industrial Park	0	0	0	0	0	100	1

## Type of Housing Assumption by Jurisdiction

### *Confederated Tribes of the Chehalis Reservation*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<u>Tribal</u>							
Confederated Tribes of the Chehalis Reservation	0	0	0	50	0	50	2

### *Nisqually Indian Reservation*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<u>Tribal</u>							
Nisqually Indian Reservation	0	0	0	70	29	1	80

### *Rural County*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<u>Rural - LAMRID</u>							
Residential LAMIRD (1/1)	85	5	10	78	3	19	845
Residential LAMIRD (1/2)	85	5	10	71	0	29	288
Residential LAMIRD (2/1)	85	5	10	82	0	18	1295
<u>Rural - 1du per 5acres</u>							
McAllister Geologically Sensitive Area	85	0	15	85	0	15	459
Rural Residential (RR 1/5)	85	0	15	68	1	31	97
Rural Residential/Resource (RRR 1/5)	85	0	15	81	0	18	6060
Urban Reserve 1/5	85	0	15	91	0	9	215
<u>Rural - 1du per 10acres</u>							
Rural 1/10	85	0	15	66	0	34	140
<u>Rural - 1du per 20acres</u>							
Long-Term Agriculture	85	0	15	69	0	31	62
Rural 1/20	85	0	15	59	0	41	111

## Type of Housing Assumption by Jurisdiction

### *Rural County*

Generalized Zone Type, Zoning District	Model Assumption			Units Permitted, 2000 - 2017			
	% SF	% MF	% MH	%SF	% MF	% MH	Number
<b>Non-Residential</b>							
Highway Commercial	0	0	0	-	-	-	-
Long-Term Forestry	0	0	0	33	0	67	15
Military Reservation	0	0	0	-	-	-	-
Neighborhood Convenience Commercial	0	0	0	-	-	-	-
Nisqually Agriculture	0	0	0	100	0	0	2
Public Preserves	0	0	0	71	0	29	7
Rural Commercial Center	0	0	0	59	0	41	32
Rural Resource/Industrial	0	0	0	-	-	-	-





## Appendix 2

### Zoning Assumptions by Jurisdiction

#### *Town of Bucoda*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Low</u>					
Commercial	25% residential	N/A	N/A	2	21,800
Commercial (with sewer)	25% residential	N/A	N/A	10	4,400
Multifamily Residential	N/A	40% to 40% plus critical areas	1.2	2	21,800
Multifamily Residential (with sewer)	N/A	40% to 40% plus critical areas	6	10	4,400
Single-Family/Duplex Residential	N/A	40% to 40% plus critical areas	1.2	2	21,800
Single-Family/Duplex Residential (with sewer)	N/A	40% to 40% plus critical areas	4.8	8	5,400
<u>Non-Residential</u>					
Industrial	N/A	N/A	N/A	N/A	N/A
Parks/Public Uses	N/A	N/A	N/A	N/A	N/A

#### *City of Lacey*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>High Multifamily</u>					
Central Business District 4	10% residential	N/A	N/A	20	2,200
Central Business District 5	10% residential	N/A	N/A	20	2,200
Central Business District 6	10% residential	N/A	N/A	20	2,200
Central Business District 7	10% residential	N/A	N/A	20	2,200
Community Office District	5% residential	N/A	N/A	20	2,200
High Density Residential	N/A	N/A	N/A	20	2,200
Mixed Use High Density Corridor	60% residential	N/A	N/A	20	2,200
Woodland District	40% residential	N/A	N/A	50	900
<u>Master Planned Community</u>					
Village (Urban) Center	60% residential	N/A	N/A	8.33	5,200

## Zoning Assumptions by Jurisdiction

### City of Lacey

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Moderate Multifamily</u>					
Hawks Prairie Business District (Business/Commercial)	2% residential	N/A	N/A	12.5	3,500
Hawks Prairie Business District (Commercial)	2% residential	N/A	N/A	12.5	3,500
Moderate Density Residential	N/A	40% to 40% plus critical areas	7.5	12.5	3,500
<u>Mixed Residential</u>					
Low Density Residential (LD 3-6)	N/A	40% to 40% plus critical areas	5	8.33	5,200
Mixed Use Moderate Density Corridor	50% residential	N/A	N/A	8.33	5,200
<u>Medium</u>					
Low Density Residential (LD 0-4)	N/A	40% to 40% plus critical areas	3.75	6.25	7,000
<u>Medium - Low / Sensitive</u>					
Shoreline Residential	N/A	40% to 40% plus critical areas	2.4	4	10,900
<u>Low</u>					
Lacey Historic Neighborhood	N/A	40% to 40% plus critical areas	1.2	2	21,800
Natural	N/A	40% to 40% plus critical areas	0.06	0.1	435,600
Urban Conservancy	N/A	40% to 40% plus critical areas	0.6	1	43,600
<u>Non-Residential</u>					
Aquatic	N/A	N/A	N/A	N/A	N/A
Cemetery	N/A	N/A	N/A	N/A	N/A
Community Commercial District	N/A	N/A	N/A	N/A	N/A
General Commercial	N/A	N/A	N/A	N/A	N/A
Light Industrial	N/A	N/A	N/A	N/A	N/A
Light Industrial/Commercial	N/A	N/A	N/A	N/A	N/A
Mineral Extraction	N/A	N/A	N/A	N/A	N/A
Neighborhood Commercial	N/A	N/A	N/A	N/A	N/A
Open Space (Institutional)	N/A	N/A	N/A	N/A	N/A
Open Space (Park)	N/A	N/A	N/A	N/A	N/A
Open Space (School)	N/A	N/A	N/A	N/A	N/A
Saint Martin's University	N/A	N/A	N/A	N/A	N/A

## Zoning Assumptions by Jurisdiction

### *Unincorporated Growth Area of Lacey*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>High Multifamily</u>					
Central Business District 6	10% residential	N/A	N/A	20	2,200
High Density Residential	N/A	N/A	N/A	20	2,200
Mixed Use High Density Corridor	60% residential	N/A	N/A	20	2,200
<u>Master Planned Community</u>					
Village (Urban) Center	75% residential	N/A	N/A	8.33	5,200
<u>Moderate Multifamily</u>					
Mixed Use Moderate Density Corridor	50% residential	N/A	N/A	12.5	3,500
Moderate Density Residential	N/A	37% to 34.5% plus critical areas	6.3	10	4,400
<u>Mixed Residential</u>					
Low Density Residential (LD 3-6)	N/A	37% to 34.5% plus critical areas	5.25	8.33	5,200
McAllister Geologically Sensitive Area	N/A	37% to 34.5% plus critical areas	5.25	8.33	5,200
<u>Medium</u>					
Low Density Residential (LD 0-4)	N/A	37% to 34.5% plus critical areas	3.94	6.25	7,000
<u>Rural - 1 du per 5 acres</u>					
Agriculture	N/A	37% to 34.5% plus critical areas	0.13	0.2	217,800
<u>Non-Residential</u>					
Lake	N/A	N/A	N/A	N/A	N/A
Light Industrial	N/A	N/A	N/A	N/A	N/A
Mineral Extraction	N/A	N/A	N/A	N/A	N/A
Neighborhood Commercial	N/A	N/A	N/A	N/A	N/A
Open Space (Institutional)	N/A	N/A	N/A	N/A	N/A
Open Space (Park)	N/A	N/A	N/A	N/A	N/A
Open Space (School)	N/A	N/A	N/A	N/A	N/A

## Zoning Assumptions by Jurisdiction

### City of Olympia

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<b><u>High Multifamily</u></b>					
Downtown Business	60% residential	N/A	N/A	100	400
High Density Corridor-4	20% residential	N/A	N/A	100	400
High Rise Multifamily	95% residential	N/A	N/A	100	400
Medical Service	40% residential	N/A	N/A	20	2,200
Planned Unit Development	50% residential	N/A	N/A	20	2,200
Professional Office/Residential Multifamily	55% residential	N/A	N/A	20	2,200
Residential Mixed Use	50% residential	N/A	N/A	100	400
Residential Multifamily (RM-18)	N/A	40% to 35% plus critical areas	12	20	2,200
Residential Multifamily (RM-24)	N/A	N/A	N/A	20	2,200
Urban Residential	95% residential	N/A	N/A	100	400
Urban Waterfront	40% residential	N/A	N/A	100	400
Urban Waterfront - Housing	80% residential	N/A	N/A	100	400
<b><u>Master Planned Community</u></b>					
Neighborhood Village	85% residential	N/A	N/A	12.5	3,500
Urban Village	75% residential	N/A	N/A	12.5	3,500
<b><u>Moderate Multifamily</u></b>					
General Commercial	2% residential	N/A	N/A	12.5	3,500
Mixed Residential (MR-10-18)	N/A	40% to 35% plus critical areas	6	10	4,400
<b><u>Mixed Residential</u></b>					
High Density Corridor-1	5% residential	N/A	N/A	8.33	5,200
High Density Corridor-2	5% residential	N/A	N/A	8.33	5,200
High Density Corridor-3	15% residential	N/A	N/A	8.33	5,200
Manufactured Housing Park	N/A	40% to 35% plus critical areas	5	8.33	5,200
Neighborhood Retail	10% residential	N/A	N/A	7.14	6,100
Residential (R-6-12)	N/A	40% to 35% plus critical areas	5.45	9.09	4,800
<b><u>Medium</u></b>					
Residential (R-4-8 within 600' of Transit)	N/A	40% to 35% plus critical areas	4.29	7.14	6,100
Residential (R-4-8)	N/A	40% to 35% plus critical areas	4	6.67	6,500

## Zoning Assumptions by Jurisdiction

### *City of Olympia*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Medium - Low / Sensitive</u>					
Residential Low Impact	N/A	40% to 35% plus critical areas	2.4	4	10,900
Single-Family Residential (Chambers Basin)	N/A	40% to 35% plus critical areas	2.4	4	10,900
<u>Low</u>					
Residential (R-4)	N/A	40% to 35% plus critical areas	1.2	2	21,800
<u>Rural - 1 du per 5 acres</u>					
Residential (R 1/5)	N/A	40% to 35% plus critical areas	0.12	0.2	217,800
<u>Non-Residential</u>					
Auto Services	N/A	N/A	N/A	N/A	N/A
Capitol Campus / Commercial Service-High Density	N/A	N/A	N/A	N/A	N/A
Industrial	N/A	N/A	N/A	N/A	N/A
Light Industrial/Commercial	N/A	N/A	N/A	N/A	N/A

### *Unincorporated Growth Area of Olympia*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>High Multifamily</u>					
Residential Multifamily (RM-18)	N/A	37% to 34.5% plus critical areas	12.6	20	2,200
<u>Moderate Multifamily</u>					
Community Oriented Shopping Center	25% residential	N/A	N/A	12.5	3,500
<u>Mixed Residential</u>					
Mixed Residential (MR-7-13)	N/A	37% to 34.5% plus critical areas	5.25	8.33	5,200
Neighborhood Retail	10% residential	N/A	N/A	7.14	6,100
Residential (R-6-12)	N/A	37% to 34.5% plus critical areas	5.73	9.09	4,800

## Zoning Assumptions by Jurisdiction

### *Unincorporated Growth Area of Olympia*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Medium</u>					
Residential (R-4-8 within 600' of Transit)	N/A	40% to 35% plus critical areas	4.29	7.14	6,100
Residential (R-4-8)	N/A	37% to 34.5% plus critical areas	4.2	6.67	6,500
<u>Medium - Low / Sensitive</u>					
Residential Low Impact	N/A	37% to 34.5% plus critical areas	2.52	4	10,900
<u>Low</u>					
Residential (R-4)	N/A	37% to 34.5% plus critical areas	1.26	2	21,800
<u>Rural - 1du per 5acres</u>					
Residential (R 1/5)	N/A	37% to 34.5% plus critical areas	0.13	0.2	217,800
<u>Non-Residential</u>					
Light Industrial/Commercial	N/A	N/A	N/A	N/A	N/A

## Zoning Assumptions by Jurisdiction

### *City of Rainier*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Low</u>					
Core Commercial	25% residential	N/A	N/A	2	21,800
Core Commercial (with sewer)	25% residential	N/A	N/A	14.08	3,100
Highway Commercial	25% residential	N/A	N/A	2	21,800
Highway Commercial (with sewer)	25% residential	N/A	N/A	14.08	3,100
Residential (Existing Neighborhood) 0.25	N/A	30% to 30% plus critical areas	2.12	3.03	14,400
Residential (Existing Neighborhood) 0.35	N/A	30% to 30% plus critical areas	2	2.86	15,200
Residential (Existing Neighborhood) 1.00	N/A	N/A	N/A	1	43,600
Residential 6-8	N/A	30% to 30% plus critical areas	2.12	3.03	14,400
Residential 6-8 (with sewer)	N/A	30% to 30% plus critical areas	4.38	6.25	7,000
Residential 8-25	N/A	30% to 30% plus critical areas	2.12	3.03	14,400
Residential 8-25 (with sewer)	N/A	30% to 30% plus critical areas	7	10	4,400
Service Commercial	10% residential	N/A	N/A	2	21,800
Service Commercial (with sewer)	10% residential	N/A	N/A	14.08	3,100
<u>Non-Residential</u>					
Forestland	N/A	N/A	N/A	N/A	N/A
Industrial	N/A	N/A	N/A	N/A	N/A
Public Facility	N/A	N/A	N/A	N/A	N/A
Trails/Open Space/Parks	N/A	N/A	N/A	N/A	N/A

### *Unincorporated Growth Area of Rainier*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Low</u>					
Neighborhood Convenience Commercial	25% residential	N/A	N/A	2	21,800
Neighborhood Convenience Commercial (with sewer)	25% residential	N/A	N/A	4	10,900

## Zoning Assumptions by Jurisdiction

### *Unincorporated Growth Area of Rainier*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Rural - 1du per 5acres</u>					
Rural Residential/Resource 1/5	N/A	37% to 34.5% plus critical areas	0.13	0.2	217,800
Rural Residential/Resource 1/5 (with sewer)	N/A	40% to 40% plus critical areas	2.4	4	10,900

### *City of Tenino*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Master Planned Community</u>					
West Tenino	75% residential	N/A	N/A	8	5,400
<u>Moderate Multifamily</u>					
Commercial 1	10% residential	N/A	N/A	12.5	3,500
Commercial 2	10% residential	N/A	N/A	12.5	3,500
Commercial 3	25% residential	N/A	N/A	12.5	3,500
Multifamily Residential	N/A	35% to 35% plus critical areas	6.5	10	4,400
<u>Mixed Residential</u>					
Professional Office Overlay	25% residential	N/A	N/A	8	5,400
Single Family/Duplex Residential	N/A	35% to 35% plus critical areas	5.2	8	5,400
Single-Family Residential	N/A	35% to 35% plus critical areas	5.2	8	5,400
<u>Medium - Low / Sensitive</u>					
Single-Family Residential- Environmentally Sensitive	N/A	35% to 35% plus critical areas	2.6	4	10,900
<u>Non-Residential</u>					
Industrial	N/A	N/A	N/A	N/A	N/A
Parks/Open Space	N/A	N/A	N/A	N/A	N/A



## Zoning Assumptions by Jurisdiction

### *Unincorporated Growth Area of Tenino*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Rural - 1du per 5acres</u>					
Rural Residential/Resource 1/5	N/A	37% to 34.5% plus critical areas	0.13	0.2	217,800
Rural Residential/Resource 1/5 (with sewer)	N/A	35% to 35% plus critical areas	5.2	8	5,400

### *City of Tumwater*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>High Multifamily</u>					
Brewery District	25% residential	N/A	N/A	20	2,200
Capitol Boulevard Community	50% residential	40% to 35% plus critical areas	20	33.33	1,300
Mixed Use	20% residential	N/A	N/A	20	2,200
Multifamily High Density Residential	N/A	N/A	N/A	20	2,200
Town Center Multifamily Residential	80% residential	N/A	N/A	20	2,200
<u>Moderate Multifamily</u>					
Community Services	2% residential	N/A	N/A	12.5	3,500
General Commercial	5% residential	N/A	N/A	12.5	3,500
Multifamily Medium Density Residential	N/A	40% to 35% plus critical areas	7.5	12.5	3,500
Town Center Mixed Use	5% residential	N/A	N/A	12.5	3,500
<u>Mixed Residential</u>					
Manufactured Home Park	N/A	N/A	N/A	8	5,400
Single-Family Medium Density Residential	N/A	40% to 35% plus critical areas	4.44	7.41	5,900
<u>Medium</u>					
Single-Family Low Density Residential	N/A	40% to 35% plus critical areas	4.14	6.9	6,300
<u>Medium - Low / Sensitive</u>					
Residential/Sensitive Resource	N/A	40% to 35% plus critical areas	2.4	4	10,900

## Zoning Assumptions by Jurisdiction

### *City of Tumwater*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<b><u>Non-Residential</u></b>					
Airport Related Industry	N/A	N/A	N/A	N/A	N/A
Greenbelt	N/A	N/A	N/A	N/A	N/A
Heavy Industrial	N/A	N/A	N/A	N/A	N/A
Historic Commercial	N/A	N/A	N/A	N/A	N/A
Light Industrial	N/A	N/A	N/A	N/A	N/A
Neighborhood Commercial	N/A	N/A	N/A	N/A	N/A
Open Space	N/A	N/A	N/A	N/A	N/A
Town Center Civic	N/A	N/A	N/A	N/A	N/A
Town Center Professional Office	N/A	N/A	N/A	N/A	N/A

### *Unincorporated Growth Area of Tumwater*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<b><u>Moderate Multifamily</u></b>					
Commercial Development	2% residential	N/A	N/A	12.5	3,500
Multifamily Medium Density Residential	N/A	37% to 34.5% plus critical areas	7.88	12.5	3,500
<b><u>Mixed Residential</u></b>					
Single-Family Medium Density Residential	N/A	37% to 34.5% plus critical areas	4.67	7.41	5,900
<b><u>Medium</u></b>					
Single-Family Low Density Residential	N/A	37% to 34.5% plus critical areas	4.34	6.9	6,300
<b><u>Medium - Low / Sensitive</u></b>					
Residential/Sensitive Resource	N/A	37% to 34.5% plus critical areas	2.52	4	10,900
<b><u>Non-Residential</u></b>					
Business Park	N/A	N/A	N/A	N/A	N/A
General Commercial	N/A	N/A	N/A	N/A	N/A
Greenbelt	N/A	N/A	N/A	N/A	N/A
Heavy Industrial	N/A	N/A	N/A	N/A	N/A
Light Industrial	N/A	N/A	N/A	N/A	N/A
Neighborhood Commercial	N/A	N/A	N/A	N/A	N/A
Open Space	N/A	N/A	N/A	N/A	N/A

## Zoning Assumptions by Jurisdiction

### *City of Yelm*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>High Multifamily</u>					
High Density Residential (R-14)	N/A	32% to 27% plus critical areas	13.6	20	2,200
<u>Master Planned Community</u>					
Master Planned Community	65% residential	N/A	N/A	8.33	5,200
<u>Mixed Residential</u>					
Central Business District	50% residential	N/A	N/A	8.33	5,200
Commercial	10% residential	N/A	N/A	7.14	6,100
Heavy Commercial	10% residential	N/A	N/A	7.14	6,100
Large Lot Commercial	10% residential	N/A	N/A	7.14	6,100
Moderate Density Residential (R-6)	N/A	32% to 27% plus critical areas	5.04	7.41	5,900
<u>Medium</u>					
Low Density Residential (R-4)	N/A	32% to 27% plus critical areas	4.25	6.25	7,000
<u>Low</u>					
Arterial Commercial	25% residential	N/A	N/A	2	21,800
<u>Non-Residential</u>					
Industrial	N/A	N/A	N/A	N/A	N/A
Institutional District	N/A	N/A	N/A	N/A	N/A
Parks/Open Space	N/A	N/A	N/A	N/A	N/A

### *Unincorporated Growth Area of Yelm*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Low</u>					
Arterial Commercial	25% residential	N/A	N/A	2	21,800
<u>Rural - 1du per 5acres</u>					
Rural Residential 1/5	N/A	37% to 34.5% plus critical areas	0.13	0.2	217,800
Rural Residential 1/5 (with sewer)	N/A	32% to 27% plus critical areas	2.72	4	10,900
<u>Non-Residential</u>					
Light Industrial	N/A	N/A	N/A	N/A	N/A

## Zoning Assumptions by Jurisdiction

### *Grand Mound Unincorporated Growth Area*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Mixed Residential</u>					
Arterial Commercial	10% residential	N/A	N/A	8.33	5,200
Residential (R 4-16/1)	N/A	37% to 34.5% plus critical areas	5.25	8.33	5,200
<u>Medium</u>					
Residential (R 3-6/1)	N/A	37% to 34.5% plus critical areas	3.94	6.25	7,000
<u>Non-Residential</u>					
Light Industrial	N/A	N/A	N/A	N/A	N/A
Planned Industrial Park	N/A	N/A	N/A	N/A	N/A

### *Confederated Tribes of the Chehalis Reservation*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Tribal</u>					
Confederated Tribes of the Chehalis Reservation	5% residential	N/A	N/A	N/A	N/A

### *Nisqually Indian Reservation*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Tribal</u>					
Nisqually Indian Reservation	5% residential	N/A	N/A	N/A	N/A

### *Rural County*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Rural - LAMRID</u>					
Residential LAMIRD (1/1)	N/A	N/A	N/A	1	43,600
Residential LAMIRD (1/2)	N/A	N/A	N/A	0.5	87,100
Residential LAMIRD (2/1)	N/A	N/A	N/A	2	21,800

## Zoning Assumptions by Jurisdiction

### *Rural County*

Generalized Zone Type, Zoning District	% Residential in Mixed Use Zoning Districts	% Deducted for Open Space and Rights of Way	Gross Density (du/ac.)	Net Density (du/ac.)	Avg. Lot Size (sq. ft.)
<u>Rural - 1du per 5acres</u>					
McAllister Geologically Sensitive Area	N/A	N/A	N/A	0.2	217,800
Rural Residential (RR 1/5)	N/A	N/A	N/A	0.2	217,800
Rural Residential/Resource (RRR 1/5)	N/A	N/A	N/A	0.2	217,800
Urban Reserve 1/5	N/A	N/A	N/A	0.2	217,800
<u>Rural - 1du per 10acres</u>					
Rural 1/10	N/A	N/A	N/A	0.1	435,600
<u>Rural - 1du per 20acres</u>					
Long-Term Agriculture	N/A	N/A	N/A	0.05	871,200
Rural 1/20	N/A	N/A	N/A	0.05	871,200
<u>Non-Residential</u>					
Highway Commercial	N/A	N/A	N/A	N/A	N/A
Long-Term Forestry	N/A	N/A	N/A	N/A	N/A
Military Reservation	N/A	N/A	N/A	N/A	N/A
Neighborhood Convenience Commercial	N/A	N/A	N/A	N/A	N/A
Nisqually Agriculture	N/A	N/A	N/A	N/A	N/A
Public Preserves	N/A	N/A	N/A	N/A	N/A
Rural Commercial Center	N/A	N/A	N/A	N/A	N/A
Rural Resource/Industrial	N/A	N/A	N/A	N/A	N/A

% Residential in Mixed-Use Zoning Districts: The percent of a zone's land area likely to be developed with residential uses if non-residential uses are also allowed.

% Deducted for Open Space and Rights of Way: The percent of a parcel's area that is set aside for open space, storm water facilities, and roads. Two rates are used depending on how much of the parcel is covered in critical areas.

% Deducted for Open Space and Rights of Way: The percent of a parcel's area that is set aside for open space, storm water facilities, and roads. Two rates are used depending on how much of the parcel is covered in critical areas.

Gross Density: The number of dwelling units per acre assumed, including open space and rights of way.

Net Density: The number of dwelling units per acre of residential use.

Avg. Lot Size: The inverse of net density, converted to square feet.



## Appendix 3

### Detailed Calibration Report by Jurisdiction

#### *City of Lacey*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
<b>High Density Residential</b>				
Cora Street Apartments	Application	12	5	-58.3%
<b>Total</b>		<b>12</b>	<b>5</b>	<b>-58.3%</b>
<b>Mixed Use High Density Corridor</b>				
Lacey Senior Apartments	Application	135	133	-1.5%
Marq Apartments	Application	488	448	-8.2%
<b>Total</b>		<b>623</b>	<b>581</b>	<b>-6.7%</b>
<b>Village (Urban) Center</b>				
Summerwalk	Application	42	45	7.1%
Summerwalk Residential	Approved	98	120	22.4%
<b>Total</b>		<b>140</b>	<b>165</b>	<b>17.9%</b>
<b>Moderate Density Residential</b>				
Lakeview Meadows	Application	89	43	-51.7%
<b>Total</b>		<b>89</b>	<b>43</b>	<b>-51.7%</b>
<b>Low Density Residential (LD 3-6)</b>				
Vicwood Campus	Application	49	49	0.0%
<b>Total</b>		<b>49</b>	<b>49</b>	<b>0.0%</b>
<b>Total: City of Lacey</b>		<b>913</b>	<b>843</b>	<b>-7.7%</b>

#### *Unincorporated Growth Area of Lacey*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
<b>High Density Residential</b>				
7635 3rd Way SE	Pre-sub	168	173	3.0%
Marvin Estates	Pre-sub	120	120	0.0%
<b>Total</b>		<b>288</b>	<b>293</b>	<b>1.7%</b>

## Detailed Calibration Report by Jurisdiction

### *Unincorporated Growth Area of Lacey*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
<b>Mixed Use High Density Corridor</b>				
9325 Martin Way	Application	27	25	-7.4%
<b>Total</b>		<b>27</b>	<b>25</b>	<b>-7.4%</b>
<b>Mixed Use Moderate Density Corridor</b>				
1746 Sleater Kinney Road NE	Pre-sub	65	60	-7.7%
<b>Total</b>		<b>65</b>	<b>60</b>	<b>-7.7%</b>
<b>Moderate Density Residential</b>				
1743 Abernethy Road NE	Pre-sub	6	2	-66.7%
Abernethy Crossing	Pre-sub	31	24	-22.6%
Dalton's Crossing	Application	73	74	1.4%
Gateway North	Pre-sub	52	18	-65.4%
Mannerwood Meadows	Pre-sub	66	50	-24.2%
Meadows at Morningside	Pre-sub	86	84	-2.3%
<b>Total</b>		<b>314</b>	<b>252</b>	<b>-19.7%</b>
<b>Low Density Residential (LD 3-6)</b>				
7045 Hawks Prairie Road NE	Pre-sub	12	20	66.7%
8944 Steilacoom Road SE	Pre-sub	18	1	-94.4%
Abernethy	Pre-sub	36	23	-36.1%
Emmerson Crossing	Application	41	35	-14.6%
Oak Springs	Pre-sub	89	105	18.0%
Oak Tree Preserve	Pre-sub	907	908	0.1%
<b>Total</b>		<b>1,103</b>	<b>1,092</b>	<b>-1.0%</b>
<b>Low Density Residential (LD 0-4)</b>				
Edelweiss Village	Pre-sub	78	48	-38.5%
Pleasant Glade Plat	Application	28	11	-60.7%
Steilacoom Ridge Div. 2	Pre-sub	36	28	-22.2%
The Estates at Pleasant Glade	Pre-sub	21	62	195.2%
<b>Total</b>		<b>163</b>	<b>149</b>	<b>-8.6%</b>
<b>Total: Unincorporated Growth Area of Lacey</b>		<b>1,960</b>	<b>1,871</b>	<b>-4.5%</b>



## Detailed Calibration Report by Jurisdiction

### *City of Olympia*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
<b>Downtown Business</b>				
Annie's Artist Flats	Approved	18	33	83.3%
Avalon Project	Application	22	17	-22.7%
Market Flats	Application	23	0	-100.0%
Total		63	50	-20.6%
<b>High Density Corridor-4</b>				
Martin Way Tower	Pre-sub	94	110	17.0%
Total		94	110	17.0%
<b>Medical Service</b>				
Housing Authority of Thurston County	Pre-sub	24	28	16.7%
Total		24	28	16.7%
<b>Professional Office/Residential Multifamily</b>				
Eastside Street Multifamily	Approved	47	13	-72.3%
Total		47	13	-72.3%
<b>Residential Multifamily (RM-24)</b>				
Fern Street Townhomes	Application	7	8	14.3%
Total		7	8	14.3%
<b>Urban Waterfront</b>				
Columbia Place	Approved	115	138	20.0%
Dockside Flats	Application	44	66	50.0%
Westman Mill	Approved	86	0	-100.0%
Total		245	204	-16.7%
<b>Urban Waterfront - Housing</b>				
Views on 5th	Approved	140	106	-24.3%
Total		140	106	-24.3%
<b>Residential (R-6-12)</b>				
Ontario Place	Pre-sub	15	11	-26.7%
Village at Cain Road	Application	24	25	4.2%
Total		39	36	-7.7%

## Detailed Calibration Report by Jurisdiction

### *City of Olympia*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
<b>Residential (R-4-8)</b>				
Boulevard Park	Pre-sub	13	10	-23.1%
Total		13	10	-23.1%
<b>Residential Low Impact</b>				
Kaiserwood	Application	30	31	3.3%
Total		30	31	3.3%
<b>Total: City of Olympia</b>		<b>702</b>	<b>596</b>	<b>-15.1%</b>

### *Unincorporated Growth Area of Olympia*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
<b>Neighborhood Retail</b>				
2545 Yelm Highway SE	Pre-sub	6	0	-100.0%
Total		6	0	-100.0%
<b>Residential (R-4-8)</b>				
1839 Yelm Hwy SE	Pre-sub	12	9	-25.0%
2325 Friendly Grove Road NE	Pre-sub	6	1	-83.3%
810 South Bay Road NE	Pre-sub	9	14	55.6%
Hewitt Lake Heights	Pre-sub	40	45	12.5%
Total		67	69	3.0%
<b>Total: Unincorporated Growth Area of Olympia</b>		<b>73</b>	<b>69</b>	<b>-5.5%</b>

### *City of Rainier*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
<b>Residential 6-8</b>				
702 Hubbard Rd SE	Approved	11	11	0.0%
Rainier Heights Div. 3	Approved	22	22	0.0%
Total		33	33	0.0%

## Detailed Calibration Report by Jurisdiction

### *City of Rainier*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
<b>Residential 8-25</b>				
502 1/2 Centre Street N	Application	39	47	20.5%
Total		39	47	20.5%
<b>Total: City of Rainier</b>		<b>72</b>	<b>80</b>	<b>11.1%</b>

### *City of Tenino*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
<b>Single-Family Residential</b>				
Hidden Meadow	Application	30	24	-20.0%
Total		30	24	-20.0%
<b>Total: City of Tenino</b>		<b>30</b>	<b>24</b>	<b>-20.0%</b>

### *City of Tumwater*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
<b>Multifamily High Density Residential</b>				
80 West Apartments	Approved	80	69	-13.8%
Tumwater Point Apartments	Application	140	98	-30.0%
Total		220	167	-24.1%
<b>General Commercial</b>				
Mottman Village	Application	51	40	-21.6%
Total		51	40	-21.6%
<b>Multifamily Medium Density Residential</b>				
Bedrock Apartments	Approved	15	9	-40.0%
Highley Property	Pre-sub	64	55	-14.1%
Kirsop Crossing	Approved	64	76	18.8%
Total		143	140	-2.1%

## Detailed Calibration Report by Jurisdiction

### *City of Tumwater*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
Total: City of Tumwater		414	347	-16.2%

### *Unincorporated Growth Area of Tumwater*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
Multifamily Medium Density Residential				
1923 83rd Avenue SW	Pre-sub	32	28	-12.5%
Total		32	28	-12.5%
Single-Family Medium Density Residential				
8114 Littlerock Rd SW	Pre-sub	70	110	57.1%
Total		70	110	57.1%
Total: Unincorporated Growth Area of Tumwater		102	138	35.3%

### *City of Yelm*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
Central Business District				
Fyrst Property	Application	15	4	-73.3%
Total		15	4	-73.3%
Total: City of Yelm		15	4	-73.3%

## Detailed Calibration Report by Jurisdiction

### *Rural County*

Zoning District	Application Stage of Planned Project	Planned # of Units	Model Estimate	Difference
Rural Residential/Resource (RRR 1/5)				
13936 Rainier View Lane SE PRRD	Pre-sub	6	2	-66.7%
5540 Coppermill Court NE PRRD	Pre-sub	15	14	-6.7%
9141 Latigo Street SE	Application	5	3	-40.0%
Coppermill	Approved	20	18	-10.0%
Maxvale Hill	Approved	16	13	-18.8%
Wilridge Estates	Pre-sub	16	17	6.3%
Total		78	67	-14.1%
Total: Rural County		78	67	-14.1%

Grand Total 4,359 4,039 -7.3%

Note: Contains information on around 6,000 planned dwelling units (either in the pre-submission or application stages, or very recently approved). It does not contain information on projects that are in more than one zoning district, or in a mixed residential/commercial zoning district. Projects are report for the zoning category in which they were submitted. Some may have been subsequently annexed into adjacent cities.