

Appendix Material

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HOUSING MARKET AND GROWTH TRENDS

DRAFT Existing Conditions Technical Memorandum



Date: March 19, 2010 (revised August 20, 2010)
To: Expert Panel Members: Marc Amrine, Grant Beck, Dave Bugher, James Colburn, Charlie Gray, Tami Merriman, Greta Powell, Catherine Rudolph, Tiffany Speir, Pete Swensson, Jerry Wilkins
From: RKG Associates, Inc.
Re: Existing Conditions of the Housing Market and Growth Trends Economic Impact of Growth at JBLM

A. INTRODUCTION

This section analyzes the residential real estate market forces in the region surrounding Joint Base Lewis-McChord (JBLM). Gaining an understanding of regional real estate conditions will aid in projecting the impact of future growth resulting from the military and natural growth forces in the future. RKG Associates analyzed current trends in the supply, vacancy, sale pricing, leasing, and demand in the “for-sale” and rental housing market. In addition, RKG conducted field research and interviews of local planning officials, real estate professionals and JBLM leadership.

It should be noted that this analysis focuses on existing conditions within the regional housing market and does not attempt to project or define areas most suitable for future residential development. However, short-term projections regarding site-specific growth patterns pertaining to housing choice of the regional military and civilian population is detailed later in this report. This analysis will act as the foundation for later recommendations focused on altering local levels of service.

B. SUMMARY OF MAJOR FINDINGS

- Demand for single-family detached (SFD) housing units in the two-county region is high. Most new residential development includes single-family detached housing on modest-sized lots. However, the declining household size in Thurston County is likely to increase demand for multi-family units. In addition, the development of multi-family units may increase in popularity over the next few

years as fewer buyers are able to qualify for mortgage financing and turn to apartment living as an affordable housing alternative.

- Based on recent development trends in both counties, the majority of smaller-sized, lower-valued houses are found immediately south and east of Joint Base Lewis-McChord. Newer housing units in the Yelm/Rainier and Spanaway/Roy areas have the lowest average values and average square footage among SFD units in their respective counties. As population growth occurring at JBLM has exceeded new housing development on-post, these areas have been the recipients of many of the incoming military population due to proximity to the base and relative price affordability.
- Pierce and Thurston County have substantial backlogs in residential projects awaiting permit approval. However, the market slow down and project financing constraints could result in some projects changing hands, as new developers take over failed projects. For instance, the individual developers of the 6,000+ housing unit Cascadia project in Pierce County and 5,000 unit Thurston Highlands project in Thurston County have both recently filed for bankruptcy protection. This effectively stops those developments in the short-term, perhaps for the next 3 to 5 years as new deals are structured and plans are approved. While situations such as these create uncertainty about the future development of large land holdings, RKG assumes that over the 20-year horizon of this plan, troubled projects like this will eventually resume building.
- Slightly less than 4,600 residential units exist at Joint Base Lewis-McChord, while two new communities are in the pipeline. In addition, plans for a new mixed-use Town Center, also referred to as the Lifestyle Center, at JBLM include 220 more new residential units. Prior to the joining of Fort Lewis and McChord Air Force Base, Fort Lewis reports that on-post residential units housed 24% of their assigned soldiers and families. This total is substantially less than the standard 30% goal targeted by the Army. For this reason, many of the soldiers will need to search for housing off-post.
- The price of a single family detached home in Thurston County has experienced a 13% adjustment over two years as demand for existing homes has declined. In comparison, Pierce County single family detached homes dropped by 22%, which in effect has brought Pierce County housing prices more in line with Thurston County. This dramatic price decline shows how the current recession has impacted Pierce County more severely and deeper than Thurston County.
- Pierce and Thurston Counties, as well as the Puget Sound Region, are currently experiencing a down real estate and economic cycle that began during the 2006-2007 period. The future growth of JBLM is likely to fuel demand for off-base housing due to the Garrison Command's acknowledgement that they will not be able to house 30% of Joint Base personnel on the installation. This will have a modest influence on the demand for housing in the region, mostly in communities closest to the installation with housing priced to the incomes of the Joint Base's sizable workforce.
- The majority of incoming soldiers that will likely seek to purchase housing can afford units ranging between \$150,000 and \$350,000 if they are to maximize their incomes for housing. In addition, comparing the BAH levels for different ranks of soldiers with average apartment rent rates and associated utility costs in the two-county region shows that nearly all appropriately-sized units based on a soldier's number of dependents are deemed affordable.

C. METHODOLOGY

This residential market analysis focuses on the residential market conditions and trends of Pierce and Thurston County, as well as at Joint Base Lewis-McChord. Map 1 shows the location of these three areas and their relationship to the greater Puget Sound Region. To gain a clear understanding of the level of development and the type of housing in each county, RKG analyzed trends within different submarkets in each county. The boundaries of these submarkets were defined by locally-based, private market research firms New Home Trends, Inc. of Bothell, WA and Dupre+Scott Apartment Advisors of Seattle, WA, which have extensive knowledge of the region's new home and rental markets.

The analysis is divided into five sections: (1) housing profile, (2) residential development trends analysis, (3) supply-side analysis, (4) demand-side analysis, and (5) affordability analysis. The housing profile is a county-level analysis that depicts the type, tenure, age, growth rate, and scale of housing and provides a foundation for later analyses. Data for this analysis was obtained from the U.S. Census, and DemographicsNow and ESRI, private data vendors that compile and analyze housing, socio-economic and demographic data.

The development trends analysis provides a detailed profile of the type of residential activity that has occurred over the past ten years, which is when much of the recent growth at JBLM has taken place. The analysis shows current trends in the type, size and value of recently developed housing in various submarkets to quantify levels of residential building activity. Data utilized for this analysis were obtained from the real property tax assessment databases provided by the Pierce County and Thurston County Assessor's Offices. This data were then spatially linked to land parcels using GIS (Geographic Information Systems), which enabled RKG to identify the specific parcels and structures located in each submarket.

The supply- and demand-side analyses reflect current market conditions in each county. These analyses primarily rely on data obtained through New Home Trends, Dupre+Scott, the Northwest Multiple Listing Service (MLS), and Zillow.com, an online provider of real estate values. Both analyses focus on activity occurring in the ownership and rental markets, such as number of available units, projects in the pipeline, sale pricing and rent rates as well as absorption levels. It should be noted that the results of the analyses largely reflect conditions in the current real estate market, which is experiencing a downturn nationwide. Therefore, the findings should be viewed as an indicator of what may be anticipated in the short-term regionally with regard to residential activity, but may not be projected in a linear fashion over the next twenty years.

The affordability analysis utilizes data from the supply and demand analyses and examines the relative affordability of off-base housing for the incoming military soldiers to be stationed at Joint Base Lewis-McChord (JBLM) as part of the installation's recent and ongoing expansion. Private, off-base housing costs, rental and ownership, are compared against a soldier's ability to obtain housing based on their varying income levels by military rank. From this data, the supply of rental and ownership housing is derived providing a clearer picture of the availability and needs of off-base housing. The results of this analysis are based on data received from JBLM, Pierce and Thurston County Assessor's Offices, Dupre+Scott Apartment Advisors, REMI, interviews with local real estate professionals and the Consultant's professional experience.

Map 1



<p>PUGET SOUND REGION</p>	<p>LEGEND</p>
<p>Created by:  March 2010</p> <p>Note: Counties labeled in bold lettering comprise Puget Sound region</p>	<p>  Joint Base Lewis-McChord  Study Region  Interstates  Major Roads </p>

D. HOUSING PROFILE

According to recent estimates, there are approximately 431,000 housing units in Pierce and Thurston County.¹ Approximately 75% (325,000 units) of these units exist in Pierce County. Housing in Pierce County is primarily concentrated in the northern portion of the County. In Thurston County, many of the 106,000 housing units are concentrated in and around the City of Olympia. It should be noted that housing units in both counties are largely concentrated within defined urban growth areas, which encourage development densities near established and incorporated towns and cities. Between the urbanized areas of both counties lies Joint Base Lewis-McChord, which covers 86,000 acres, contains over 35,000 military personnel and 4,600 housing units among 18 neighborhoods². This section details characteristics of the regional housing inventory at the county-level and submarket level to provide a foundation for the in-depth supply and demand analysis detailed later in this report.

1. Housing Growth

The two-county region surrounding Joint Base Lewis-McChord has experienced substantial residential growth over the past two decades. Anecdotal information suggests that much of the growth over the past ten years has been driven by relative housing affordability, as compared to the Seattle MSA, and easy accessibility to King County employment centers via Interstate 5. However, this growth has slowed dramatically over the past 18 months due in large part to the national economic downturn and changes in mortgage underwriting requirements that are reducing the pool of prospective homebuyers.

Since 1990, most of the regional housing unit growth has occurred in Pierce County. Of the 133,000 units added over the past 20 years in both counties, approximately 96,000 (72.1%) have been added to Pierce County compared to nearly 37,000 in Thurston County (Table 1). During this time, each county has shown consistent housing unit increases from one decade to the next. In Pierce County, 48,104 units were added between 1990 and 2000 and it is estimated that nearly 48,000 have been added since 2000. Thurston County also added approximately close to 20,000 units in each decade. This level of consistency in new housing starts is coincidental, but may also reflect the influence of the region’s strong growth management policies, which were adopted at the state level in 1990.

**Table 1
Housing Unit Growth
1990-2009**

	1990	2000	2009
PIERCE COUNTY			
Total Housing Units	228,956	277,060	324,981
Net Growth	-	48,104	47,921
% Net Growth	-	21.0%	17.3%
THURSTON COUNTY			
Total Housing Units	66,465	86,652	103,687
Net Growth	-	20,187	17,035
% Net Growth	-	30.4%	19.7%

Source: ESRI & RKG Associates, Inc., 2010

While the amount of new housing units built in Pierce County has exceeded that in Thurston County, the percentage rate of growth in Thurston is much greater than in Pierce. The 37,222 new units built in Thurston since 1990 account for a 56% increase in the housing inventory compared to the 42% growth rate experienced in Pierce. The substantial growth rates in both counties have likely increased fiscal pressures as the demand for capital improvement has increase to support this growth.

¹ Data estimates derived from DemographicsNow, a private data vendor that compiles and analyzes socio-economic and demographic data. The company also applies proprietary methodologies to develop estimates and future projections.

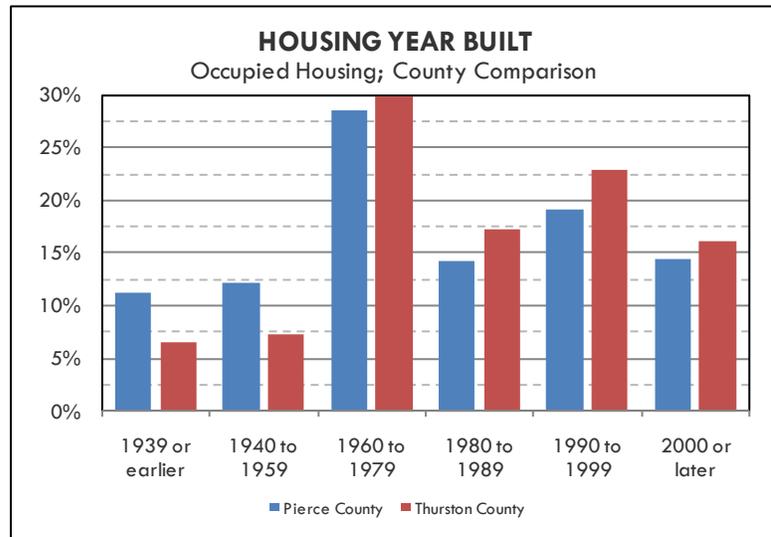
² On-post housing data is provided by the Residential Communities Division at Joint Base Lewis-McChord.

2. Age of Housing Stock

A majority of the residential units (56.3%) in Thurston County were built within the last 30 years. In comparison, only 48% of the residential units in Pierce lives in units built since 1980. While this figure does not account for vacant units, it is likely the influence of Thurston County’s smaller housing inventory growing at a faster rate than Pierce County over the past few decades (Figure 1).

Alternatively, Pierce County has a much higher percentage of residents living in housing built prior to 1960, indicating a more mature housing stock as compared with Thurston County. Nearly 25% of the residential population in Pierce resides in units constructed prior to 1960. It is likely that most of these units are concentrated in more established areas of the County, such as Tacoma and Lakewood.

Figure 1



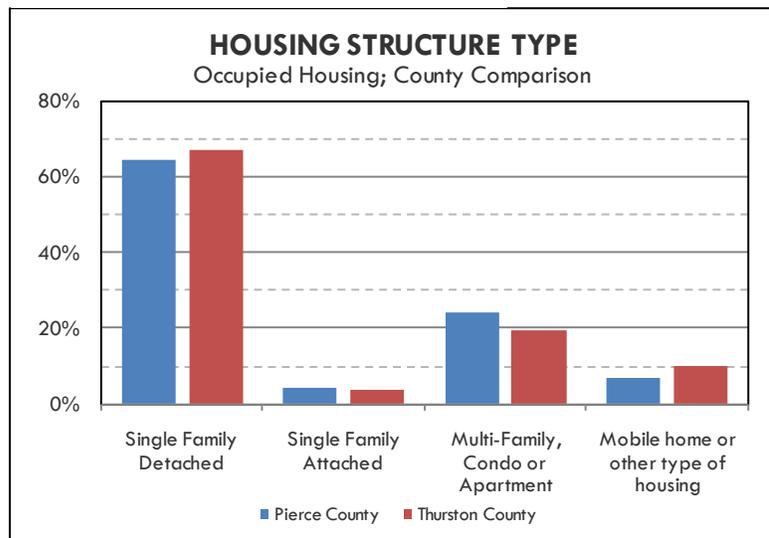
Source: U.S. Census American Community Survey 2006-2008 & RKG Associates, Inc., 2010

3. Housing Types

The mix of different housing types is similar in Pierce and Thurston Counties. The housing is primarily comprised of single family, detached units. In fact, approximately two-thirds of the occupied housing in both Pierce and Thurston County is detached single family units (Figure 2). This type of housing is also prevalent in much of the newer developments recently completed and/or under construction, which is examined in more detail later in this report.

Subtle differences exist in the concentrations of multi-family housing and mobile homes within each county. There is a slightly higher percentage of occupied multi-family housing units in Pierce County (24.4%) compared with Thurston County (19.4%). It is likely that the

Figure 2



Source: U.S. Census American Community Survey 2006-2008 & RKG Associates, Inc., 2010

higher concentration of multi-family units in Pierce County, which are typically rental units, is influenced by the relatively transient military population at Joint Base Lewis-McChord. While the typical assignment time for a military soldier ranges between two to four years, deployment schedules can shorten a soldier's length of stay. Currently, mobilization at JBLM personnel is high as the Garrison Command reports that as much as half of the military population is currently deployed. As for mobile homes, the slightly higher percentage of these units in Thurston County is likely reflective of the more rural environment. It was reported by one real estate professional that many of the mobile homes in Thurston County occupy large tracts of land in areas outside of the urban growth boundary.

4. Housing Tenure

The balance between renter-occupied and owner-occupied housing in Pierce and Thurston Counties has remained stable over the past 19 years. Since 1990, the percentage of owner-occupied housing has increased slightly in both Pierce and Thurston County, but has remained a few percentage points below the national average. The percentage of owner-occupied housing in Pierce County has reached 63.5%, an increase of nearly 3 percentage points since 1990 (Table 2). Likewise, Thurston County has increased from 64.7% in 1990 to 66.7% in 2009. For-sale housing development has increased in Thurston County; however, according to a report³ released by Thurston Regional Planning Council (TRPC), the percentage of renters in the County has been increasing since 1960. Factors stated by TRPC for the increase in renters include the encouragement of multi-family developments to achieve greater density and increasing home prices that likely price many residents and potential homebuyers out of ownership.

**Table 2
Housing Tenure
1990-2009**

	1990	2000	2009
PIERCE COUNTY			
Total Occupied Units	214,761	260,797	301,582
Owner-Occupied	129,520	165,599	191,414
Renter-Occupied	85,240	95,198	110,169
% Owner-Occupied	60.3%	63.5%	63.5%
% Renter-Occupied	39.7%	36.5%	36.5%
THURSTON COUNTY			
Total Occupied Units	62,145	81,626	98,088
Owner-Occupied	40,225	54,374	65,426
Renter-Occupied	21,920	27,252	32,661
% Owner-Occupied	64.7%	66.6%	66.7%
% Renter-Occupied	35.3%	33.4%	33.3%

Source: ESRI & RKG Associates, Inc., 2010

5. Household Size

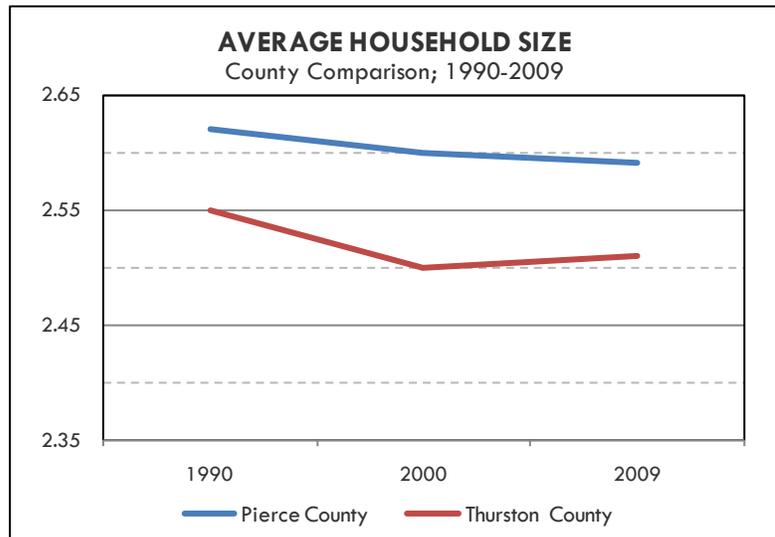
Since 1990, the average household size in Pierce County has remained fairly stable as opposed to Thurston County, which has experienced a relatively rapid decline. Currently, average household size in Pierce County is 2.59, only a slight difference from the 2.62 persons per household in 1990 and similar to the national average of 2.62 (Figure 3). Similarly, the average household size in Thurston County (2.51) has declined slightly by 2% since 1990. Part of this decline is likely attributable to the growth in renter-occupied housing in the County as many apartment rentals are typically occupied by one or two persons. In fact, one and two person households account for approximately 63% of all households in Thurston County while these smaller-sized households account for 58% of households in Pierce County.⁴

³ TRPC released the 27th edition of The Profile, a statistical report detailing a multitude of county characteristics including housing and real estate, in November 2009.

⁴ Data estimates derived from ESRI from the STDB, a private data vendor that compiles and analyzes socio-economic and demographic data. The company also applies proprietary methodologies to develop estimates and future projections.

Figure 3

It should also be noted that the average household size at Joint Base Lewis-McChord is substantially higher than the regional average. Current estimates show the average household size at Fort Lewis to be 3.72 and 3.42 at McChord Air Force Base. These higher figures reflect the substantial share of three- and four-bedroom units located at JBLM, which account for 73% and 14% of all on-post housing units, respectively⁵. It is also true that today's military households are primarily family households and these households have more children than the civilian households.



Source: U.S. Census Bureau and ESRI, 2010

6. Implications

The substantial growth in population throughout the two-county region will likely contribute to increased density in housing development as growth management policies are implemented. Field observations by RKG Associates indicate that while most of the newer residential development in Pierce and Thurston County are single-family detached units, the lots these units are being built on are generally smaller than those of older single-family development. It should be noted that the comparisons made by RKG in the field are of housing located within urban growth boundaries. The number of newer units being developed on smaller lots indicates that regional demand for detached housing remains strong. However, development of multi-family units may prove to be more popular in Thurston County over the next few years as fewer buyers are able to qualify for mortgage financing and turn to apartment living as an affordable housing alternative.

A byproduct of the substantial housing growth in the region is increased pressure for infrastructure improvements. Most real estate professionals and other stakeholders interviewed for this project expressed concerns about increasing levels of traffic congestion along highways arterial roads in both counties. It was reported that commuter traffic along Meridian and Pacific Avenues in Pierce County has become worse due in part to the rapid housing growth in the South Hill and Spanaway communities. In Thurston County, some stakeholders spoke of increased traffic along Interstate 5 due to the growth in DuPont, Hawk's Prairie (in Lacey) and at the Joint Base. Finally, rapid housing growth in the region will continue to require improvements to municipal service levels in education, transportation, wastewater treatment, and public safety.

E. DEVELOPMENT TRENDS

A residential trends analysis was completed to compare recent development activity in the regional market. The analysis focuses on residential development activity over the past ten years, which corresponds with the recent expansion of Joint Base Lewis-McChord (JBLM). RKG Associates divided each county into multiple submarkets to provide a clearer understanding of the magnitude and types of housing development occurring in the immediate region. New units were tracked by the "year built" field in the

⁵ The Joint Base Lewis-McChord housing data is provided by the Residential Communities Office.

assessor's database denoting the year of construction. The trend analysis also divides development activity into the 2000-2004 and 2005-2009 periods to document the divergent trends occurring during the decade. The boundaries for the submarkets were defined by New Home Trends, Inc., a real estate data and market research firm located in Bothell, WA that monitors residential development activity throughout the region. In addition, each submarket was further divided into development located within the urban growth boundary (UGB) and development located outside the UGB. This data separation provides a more accurate representation of the different magnitude and types of residential development activity occurring in each submarket as zoning requirements differ in these two zones. However, this analysis focuses on trends occurring in each submarket as a whole. The analysis of the UGB growth patterns is presented in the section of this report dealing with growth projections.

Data for this analysis originated from the most current property assessment databases provided by Pierce and Thurston Counties. It should be noted that methods for collecting and maintaining assessment data varies slightly between counties. For instance, Pierce County data includes an acreage allocation and land value with each condominium unit, while the data associated with Thurston County condominiums only include a land value. However, inconsistencies such as this do not affect the outcome of this analysis. Additionally, a few properties are included in two submarkets as some boundaries divide land parcels. For this reason, the resulting data should not be viewed as a 100% accounting of residential activity in each submarket. The results presented in this report are suitable for the purpose of identifying general residential growth patterns and characteristics within the two counties.

1. Pierce County

According to New Home Trends, Inc., there are eight submarkets that comprise Pierce County. Those submarkets include: (1) East Tacoma, (2) Graham, (3) Orting Valley/Southeast Pierce, (4) Peninsula, (5) South Hill/Puyallup, (6) Spanaway/Roy, (7) Sumner/Bonney Lake, and (8) West Tacoma. The boundaries of these submarkets often follow portions of major roadways, such as Routes 512, 7, 167 and 224th Street as well as major geographic boundaries, such as the Puget Sound. Boundaries of the submarkets also reflect varying levels of development as more established and denser areas are separated from areas that are generally more rural. The boundaries of the eight submarkets are detailed in Map 2. It is worth noting that the far eastern portion of the County is not included in any submarket as residential development activity surrounding Mount Rainier National Park is relatively non-existent.

For the purpose of simplifying the analysis and to better convey development trends, RKG Associates grouped the eight Pierce County submarkets into two distinct areas. These areas are based on proximity to Joint Base Lewis-McChord. According to most real estate professionals interviewed by RKG, military personnel generally search for off-post housing in Pierce County north of JBLM in the City of Tacoma and in areas east of the Joint Base to Meridian Avenue (Route 161). For this reason, RKG first analyzed the East Tacoma, South Hill/Puyallup, Spanaway/Roy, and West Tacoma submarkets followed by the remaining four.

a. Pierce County Submarkets Closest to Joint Base Lewis-McChord

Since 2000, the majority of new residential development near JBLM is single-family detached (SFD) units. In fact, slightly more than 75% (22,754 units) of the 29,455 total developed housing units within the four-submarket region are SFD units⁶. Much of this housing activity has occurred in the South Hill/Puyallup submarket. In fact, this submarket has experienced construction of nearly 11,000 new SFD units in the past ten years, accounting for roughly 37% of the total new units.

⁶ It should be noted that very few (169 units) of the total number of SFD units were developed on land defined as timber and forest, open space or agricultural by the Revised Code of Washington (RCW). These properties generally occupy substantially larger tracts of land.

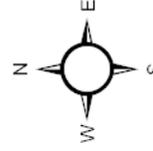
However, the rate of SFD housing development has tapered off recently in most submarkets due in large part to reduce demand and the economic recession.

Over the past five years, 3,830 new SFD units have been constructed in South Hill/Puyallup as compared to nearly 7,000 during the previous five years, resulting in a decline of 45.3% (Table 3). The decline in new SFD housing development has occurred in other submarkets as well except in East Tacoma where development of SFD units in the last five years increased by nearly 850 units over the first half of the decade. Much of this new development in East Tacoma occurred in the Radiance (485 units) and Saddle Creek (380 units) subdivisions in Fife. While these subdivisions have relatively easy access to Interstate 5, they are not considered preferred options for military personnel due to distance from JBLM.

PIERCE COUNTY RESIDENTIAL SUBMARKETS

LEGEND

- Submarket Boundaries
- Joint Base Lewis-McChord
- Primary Gates at JBLM
- Pierce County
- Interstates
- Major Roads



Created by:
RKCG
March 2010

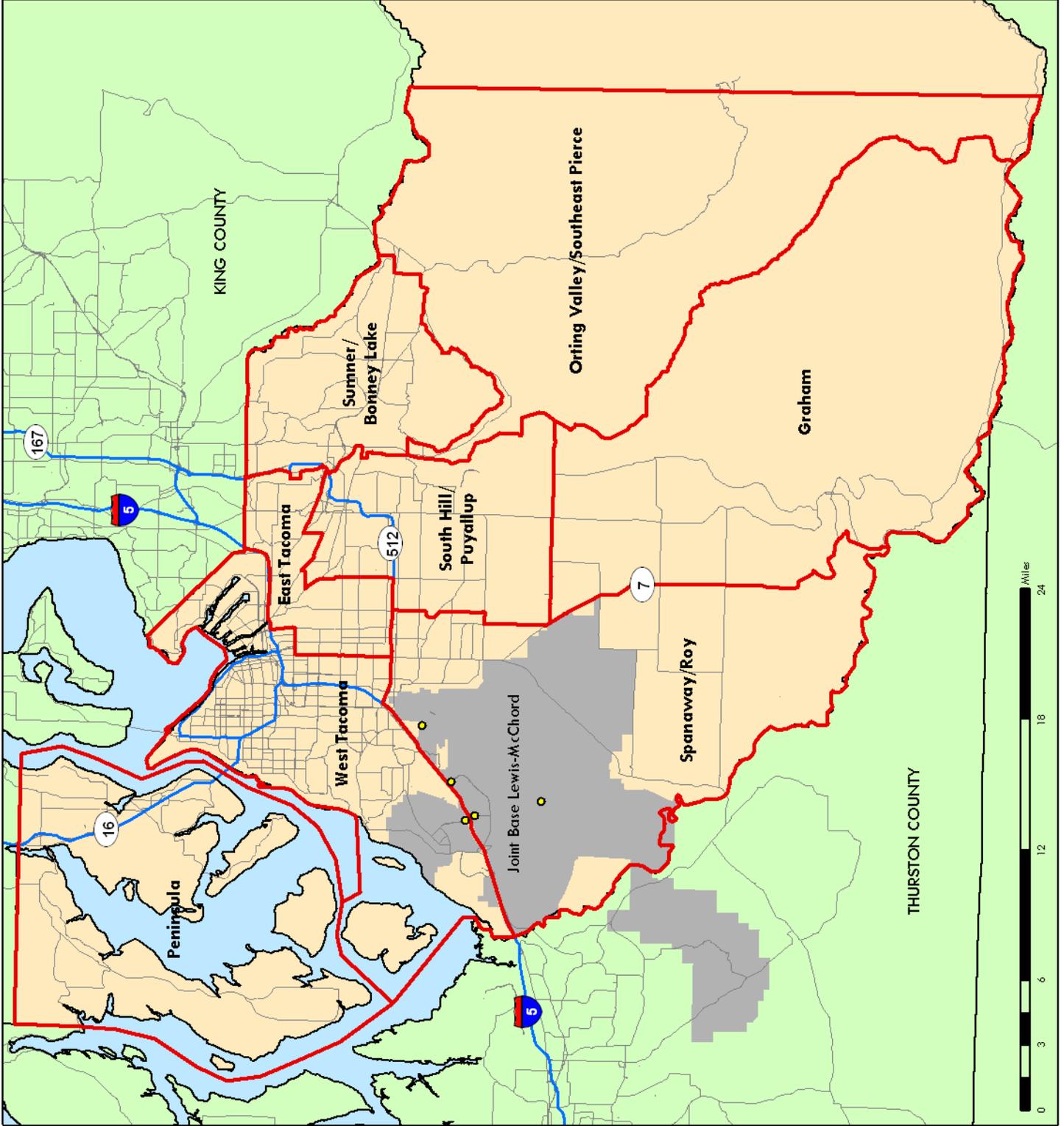


Table 3
Development Trends; Pierce County
2000-Present

Housing Type	2000-2004						2005-PRESENT					
	Unit Count	Avg Acre/Unit	Avg SF/Unit	Total AV/Unit	Building AV/SF	Avg Annual Absorp	Unit Count	Avg Acre/Unit	Avg SF/Unit	Total AV/Unit	Building AV/SF	Avg Annual Absorp
SUBMARKETS CLOSEST TO JOINT BASE LEWIS-MCCHORD												
WEST TACOMA												
Single Family Dwelling	3,367	0.2	2,129	\$318,270	\$91.65	673.4	2,319	0.2	2,408	\$345,970	\$91.65	463.8
Single Family Residential -RCW 84.33/34	1	2.8	2,051	\$777,500	\$145.34	0.2	1	5.4	1,064	\$188,900	\$105.55	0.2
Townhouse	67	0.1	1,701	\$251,328	\$76.68	13.4	260	0.1	1,568	\$245,373	\$101.28	52.0
Townhouse/Condominium	255	0.2	1,447	\$233,534	\$88.90	51.0	286	0.1	1,433	\$206,266	\$84.37	57.2
Condo - Separate Unit	17	0.2	2,027	\$362,765	\$110.24	3.4	13	0.2	1,738	\$298,354	\$97.84	2.6
Condo Apt High Rise	0	0.0	0	\$0	\$0.00	0.0	359	0.0	1,005	\$189,825	\$147.02	71.8
Condo Apt Low Rise	40	0.0	633	\$70,100	\$66.22	8.0	80	0.0	1,144	\$126,540	\$85.01	16.0
Condo High Rise	138	0.0	1,453	\$262,074	\$145.51	27.6	369	0.0	1,416	\$307,275	\$151.32	73.8
Condo Low Rise	182	0.1	1,308	\$227,645	\$115.18	36.4	80	0.0	1,120	\$224,089	\$143.78	16.0
Duplex	152	0.1	1,365	\$163,255	\$78.55	30.4	204	0.1	1,304	\$146,554	\$86.17	40.8
Triplex	12	0.1	998	\$124,400	\$99.06	2.4	24	0.1	1,405	\$128,150	\$68.99	4.8
Mobile or Manufactured Home	17	0.3	1,532	\$149,312	\$57.08	3.4	19	0.3	1,473	\$142,195	\$65.66	3.8
Mobile or Manufactured Home -RCW 84.33/34	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
EAST TACOMA												
Single Family Dwelling	1,001	0.5	2,013	\$289,564	\$89.59	200.2	1,845	0.2	2,103	\$260,938	\$81.11	369.0
Single Family Residential -RCW 84.33/34	0	0.0	0	\$0	\$0.00	0.0	1	22.7	2,060	\$478,900	\$63.79	0.2
Townhouse	42	0.1	1,659	\$283,176	\$107.61	8.4	139	0.1	1,222	\$178,713	\$79.94	27.8
Townhouse/Condominium	122	0.1	1,378	\$188,016	\$77.76	24.4	53	0.1	1,309	\$176,262	\$78.40	10.6
Condo - Separate Unit	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Apt High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Apt Low Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Low Rise	42	0.1	1,258	\$187,481	\$91.77	8.4	30	0.1	1,546	\$245,777	\$108.96	6.0
Duplex	28	0.2	1,419	\$159,818	\$74.72	5.6	368	0.1	1,226	\$124,155	\$73.42	73.6
Triplex	0	0.0	0	\$0	\$0.00	0.0	141	0.1	1,278	\$134,223	\$85.91	28.2
Mobile or Manufactured Home	33	0.4	1,589	\$173,585	\$49.68	6.6	36	0.3	1,437	\$166,544	\$57.10	7.2
Mobile or Manufactured Home -RCW 84.33/34	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
SPANAWAY/ROY												
Single Family Dwelling	1,656	1.3	1,937	\$250,868	\$82.92	331.2	1,573	1.2	2,087	\$257,827	\$82.21	314.6
Single Family Residential -RCW 84.33/34	33	18.3	2,696	\$511,718	\$110.68	6.6	123	16.7	2,582	\$503,000	\$116.45	24.6
Townhouse	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Townhouse/Condominium	60	0.1	1,519	\$164,903	\$64.45	12.0	199	0.1	1,221	\$153,075	\$71.60	39.8
Condo - Separate Unit	65	0.1	1,388	\$178,992	\$76.58	13.0	0	0.0	0	\$0	\$0.00	0.0
Condo Apt High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Apt Low Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Low Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Duplex	152	0.3	1,363	\$137,684	\$69.96	30.4	128	0.2	1,428	\$142,267	\$71.11	25.6
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile or Manufactured Home	165	3.2	1,668	\$198,444	\$54.71	33.0	58	3.3	1,916	\$242,678	\$69.21	11.6
Mobile or Manufactured Home -RCW 84.33/34	1	6.2	1,755	\$249,800	\$57.32	0.2	2	22.5	1,780	\$372,450	\$86.93	0.4
SOUTH HILL/PUYALLUP												
Single Family Dwelling	6,994	0.3	2,122	\$262,504	\$79.21	1,398.8	3,830	0.3	2,402	\$277,646	\$78.34	766.0
Single Family Residential -RCW 84.33/34	5	6.5	2,810	\$640,380	\$104.49	1.0	5	8.3	5,134	\$711,420	\$58.67	1.0
Townhouse	140	0.1	1,527	\$188,277	\$72.04	28.0	104	0.1	1,418	\$179,645	\$76.22	20.8
Townhouse/Condominium	91	0.1	1,368	\$182,820	\$76.05	18.2	449	0.1	1,409	\$172,302	\$75.34	89.8
Condo - Separate Unit	152	0.1	1,723	\$195,146	\$67.68	30.4	128	0.1	1,877	\$210,745	\$68.62	25.6
Condo Apt High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Apt Low Rise	155	0.1	976	\$92,632	\$75.88	31.0	121	0.1	1,089	\$148,385	\$95.59	24.2
Condo High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Low Rise	139	0.1	1,066	\$159,811	\$98.70	27.8	252	0.1	992	\$161,718	\$107.07	50.4
Duplex	202	0.3	1,353	\$155,766	\$74.57	40.4	110	0.2	1,475	\$158,955	\$72.22	22.0
Triplex	3	0.1	1,242	\$130,867	\$70.72	0.6	3	0.1	1,467	\$145,333	\$77.69	0.6
Mobile or Manufactured Home	126	1.0	1,678	\$187,981	\$50.42	25.2	87	0.7	1,604	\$189,522	\$60.39	17.4
Mobile or Manufactured Home -RCW 84.33/34	1	9.8	1,680	\$316,100	\$42.50	0.2	0	0.0	0	\$0	\$0.00	0.0
TOTALS												
Single Family Dwelling	13,018	0.4	2,092	\$277,528	\$83.70	983.2	9,567	0.4	2,294	\$287,727	\$82.74	542.0
Single Family Residential -RCW 84.33/34	39	16.4	2,694	\$535,028	\$110.78	5.7	130	16.3	2,665	\$508,415	\$113.74	23.3
Townhouse	249	0.1	1,596	\$221,250	\$79.29	20.8	503	0.1	1,441	\$213,362	\$90.20	38.9
Townhouse/Condominium	528	0.1	1,426	\$206,477	\$81.33	34.8	987	0.1	1,373	\$178,480	\$77.37	66.0
Condo - Separate Unit	234	0.1	1,652	\$202,836	\$73.24	23.6	141	0.1	1,864	\$218,822	\$71.31	23.5
Condo Apt High Rise	0	0.0	0	\$0	\$0.00	0.0	359	0.0	1,005	\$189,825	\$147.02	71.8
Condo Apt Low Rise	195	0.1	906	\$88,010	\$73.90	26.3	201	0.1	1,111	\$139,691	\$91.38	20.9
Condo High Rise	138	0.0	1,453	\$262,074	\$145.51	27.6	369	0.0	1,416	\$307,275	\$151.32	73.8
Condo Low Rise	363	0.1	1,210	\$197,023	\$106.16	29.9	362	0.1	1,066	\$182,468	\$115.34	39.1
Duplex	534	0.2	1,363	\$152,963	\$74.40	32.9	810	0.1	1,312	\$137,384	\$76.11	50.7
Triplex	15	0.1	1,046	\$125,693	\$93.40	2.0	168	0.1	1,299	\$133,554	\$83.35	24.4
Mobile or Manufactured Home	341	2.0	1,657	\$189,723	\$52.76	26.1	200	1.3	1,652	\$196,305	\$62.86	12.6
Mobile or Manufactured Home -RCW 84.33/34	2	8.0	1,718	\$282,950	\$49.91	0.2	2	22.5	1,780	\$372,450	\$86.93	0.4

Source: Pierce County Assessor's Office & RKG Associates, Inc., 2010

Note: East Tacoma - One MH Park was built in 2001 and houses 15 units

Note: South Hill/Puyallup - There are 60 MH Park listings in 2000-2004 with land and improv values, but improv values reflect MH infrastructure improv, not units

Note: South Hill/Puyallup - 84 condo low rise units left out of 2005-present analysis due to 0 unit in each listing -land and improv values are present though

As overall development of SFD units has recently declined throughout the four-submarket region, the construction of condominium units has increased. Condominiums are often viewed by consumers as an affordable option to single family ownership. The West Tacoma and South Hill/Puyallup submarkets have experienced the greatest activity in condominium development with a combined 2,225 new units coming online. Growth in condominium development has remained stable in South Hill/Puyallup, but increased in West Tacoma as 524 more units were developed since 2005 as opposed to the previous five years. This dense housing type is a good fit for West Tacoma as available land is relatively scarce. The largest condominium project in West Tacoma is the Esplanade, which accounts for 162 units. However, this project went into foreclosure in the summer of 2009 during the continued downturn in the national real estate market. Units at the Esplanade have since returned to the market with an average price reduction of 25%⁷. Falling list prices is a trend that has occurred throughout the greater Pierce-Thurston County region over the past 18-24 months and will be discussed later in this report.

The average size of most new housing units has increased in the submarkets closest to JBLM. This trend is most evident in the average square footage (SF) of single family units. Average sizes of these units have increased between 4% (East Tacoma) to 13% (South Hill/Puyallup and West Tacoma). While the average size of a SFD unit is approximately 2,400 SF in the South Hill/Puyallup and West Tacoma submarkets, smaller units are found in the Spanaway/Roy and East Tacoma submarkets, which average around 2,100 SF. According to local real estate professionals, single-family housing is the most preferred type of housing for military personnel and Spanaway and Parkland (also located in the Spanaway/Roy submarket) are considered desirable due to the close proximity to JBLM and the relative affordability.

The assessed value for new housing is lowest in the Spanaway/Roy submarket. For example, the average assessed value for single-family detached housing units is \$254,000 as compared to other submarkets where average values exceed \$267,000. Additionally, the average assessed value of a condominium (separate unit) in the Spanaway/Roy submarket is approximately \$179,000, which is roughly \$23,000 less than a condominium unit located in the South Hill/Puyallup submarket, where growth in condominium development has remained stable. However, similar to single family units, the average size of condominium units in Spanaway/Roy (1,388 SF) are substantially smaller than other areas. The relative size and values for housing in the Spanaway/Roy submarket make this area the most affordable for potential homebuyers.

b. Pierce County Submarkets Farthest from Joint Base Lewis-McChord

Fewer housing units have been developed in Pierce County submarkets located farther from JBLM compared with those located in closer proximity to the Joint Base. Approximately 15,831 total housing units were developed in the Peninsula, Graham, Sumner/Bonney Lake, and Orting Valley/Southeast Pierce submarkets between 2000 and 2009, which is about half the total number of units in the rest of the County. Much of this development occurred in the northern submarkets of Peninsula (4,449 units) and Sumner/Bonney Lake (7,462 units). These areas have greater access to major roadways, such as Interstate 5 and Route 167, and access to large employment centers, such as Tacoma and Auburn (in King County). Conversely, the Graham and Orting Valley/Southeast Pierce submarkets, which account for less than 4,000 new units combined, are generally more rural in character and lack immediate access to major roadways or employment centers.

As with other submarkets in Pierce County, a majority of the new housing development is single-family detached units (83%). However, the average size of these units is generally larger than

⁷ Gillie, John. [Esplanade condo sales reviving](#). *The News Tribune*, February 26, 2010.

SFD units in submarkets closer to JBLM. In fact, the average size of a SFD unit (not located on an RCW 84.33/34 lot⁸) in these four submarkets is 2,410 SF, which is 233 SF larger than the average unit size in areas closer to JBLM. Smaller SFD units are located in the more rural Graham and Orting Valley/Southeast Pierce areas. Since 2005, single-family detached units built in these two areas average 2,350 SF compared to the 2,550 SF in Peninsula and Sumner/Bonney Lake (Table 4).

Housing values are also comparatively higher in the submarkets located farthest from JBLM. This finding corresponds directly with larger housing and lot sizes and is most evident among SFD housing units. In the four submarkets, SFD housing values in Orting Valley/Southeast Pierce are lowest with an average of \$282,237, which should be noted is greater than three of the four submarkets closest to JBLM (West Tacoma being the exception). The highest average value for a single-family detached unit built in the last ten years is in the Peninsula submarket (\$488,660). The combination of higher housing values and relative inaccessibility to JBLM verify statements asserted by local real estate professionals that these areas are not considered to be realistic options for many potential homebuyers stationed or working at Joint Base Lewis-McChord.

There are relatively few attached housing units developed in this region since 2000 compared to the amount of detached units. Most of this unit type exists in the Sumner/Bonney Lake submarket and consists of condominiums. Many of these condos are in developments, such as the Reserve at Lakeland and Verona at Lakeland, located near the northwest corner of Lake Tapps. It should be noted that the other type of detached housing in the County is classified as mobile or manufactured homes. These units can be either a standard mobile home or a modular unit that resembles a typical single-family dwelling. Since 2000, there have been 845 of these units developed in this region, which exceeds the amount (541) developed in the submarkets closer to JBLM. Anecdotal information states that many owners of these units prefer to locate them on larger tracts of land in rural settings. This assertion is corroborated by the average acres of land (2.4 acres) each occupies, which is consistently higher than the amount of land occupied by SFD housing units (1.0 acres).

⁸ RCW 84.33/34 refers to the two Revised Code of Washington land classifications for timber and forest lands/open space, agricultural, timber lands – current use – conservation futures. Properties with this designation typically occupy a greater amount of acreage than other properties.

Table 4
Development Trends; Pierce County
2000-Present

Housing Type	2000-2004						2005-PRESENT					
	Unit Count	Avg Acre/Unit	Avg SF/Unit	Total AV/Unit	Building AV/SF	Avg Annual Absorp	Unit Count	Avg Acre/Unit	Avg SF/Unit	Total AV/Unit	Building AV/SF	Avg Annual Absorp
SUBMARKETS FARTHEST FROM JOINT BASE LEWIS-MCCHORD												
PENINSULA												
Single Family Dwelling	2,385	1.2	2,538	\$497,020	\$115.06	477.0	1,633	1.7	2,541	\$476,449	\$115.63	326.6
Single Family Residential -RCW 84.33/34	18	14.7	2,742	\$705,817	\$120.88	3.6	9	16.4	3,034	\$867,344	\$156.67	1.8
Townhouse	0	0.0	0	\$0	\$0.00	0.0	3	0.1	1,520	\$221,167	\$88.27	0.6
Townhouse/Condominium	68	0.2	1,927	\$378,282	\$128.00	13.6	26	0.2	1,969	\$402,412	\$141.20	5.2
Condo - Separate Unit	0	0.0	0	\$0	\$0.00	0.0	1	2.5	1,246	\$377,400	\$115.49	0.2
Condo Apt High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Apt Low Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Low Rise	14	0.2	2,512	\$1,176,143	\$270.36	2.8	0	0.0	0	\$0	\$0.00	0.0
Duplex	6	0.3	1,335	\$158,650	\$76.58	1.2	4	0.9	1,292	\$232,075	\$134.28	0.8
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile or Manufactured Home	196	2.9	1,713	\$198,365	\$49.37	39.2	81	3.1	1,746	\$210,673	\$56.59	16.2
Mobile or Manufactured Home -RCW 84.33/34	5	8.0	1,860	\$218,060	\$48.60	1.0	0	0.0	0	\$0	\$0.00	0.0
GRAHAM												
Single Family Dwelling	713	2.6	2,142	\$309,308	\$92.91	142.6	752	2.6	2,356	\$334,727	\$95.30	150.4
Single Family Residential -RCW 84.33/34	27	19.3	2,519	\$544,356	\$124.42	5.4	29	16.9	2,675	\$445,621	\$98.71	5.8
Townhouse	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Townhouse/Condominium	8	0.2	1,736	\$210,513	\$83.84	1.6	0	0.0	0	\$0	\$0.00	0.0
Condo - Separate Unit	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Apt High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Apt Low Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Low Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Duplex	4	1.1	1,164	\$148,425	\$79.47	0.8	2	0.1	1,286	\$113,800	\$64.27	0.4
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile or Manufactured Home	194	3.3	1,722	\$208,655	\$54.60	38.8	71	3.2	1,779	\$217,177	\$63.71	14.2
Mobile or Manufactured Home -RCW 84.33/34	4	20.6	1,925	\$277,175	\$59.49	0.8	0	0.0	0	\$0	\$0.00	0.0
SUMNER/BONNEY LAKE												
Single Family Dwelling	3,387	0.4	2,310	\$337,340	\$90.41	677.4	2,244	0.4	2,566	\$353,944	\$91.24	448.8
Single Family Residential -RCW 84.33/34	9	12.4	3,062	\$703,900	\$103.14	1.8	10	15.8	3,532	\$758,110	\$108.75	2.0
Townhouse	59	0.1	1,749	\$257,519	\$89.26	11.8	223	0.1	1,734	\$247,637	\$84.94	44.6
Townhouse/Condominium	308	0.1	1,433	\$208,470	\$79.93	61.6	76	0.1	1,590	\$236,407	\$87.15	15.2
Condo - Separate Unit	163	0.1	1,943	\$272,663	\$85.96	32.6	219	0.1	2,231	\$297,609	\$82.20	43.8
Condo Apt High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Apt Low Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Low Rise	208	0.1	979	\$172,788	\$113.15	41.6	237	0.1	1,039	\$179,517	\$107.17	47.4
Duplex	54	0.2	1,321	\$162,637	\$79.48	10.8	60	0.1	1,512	\$176,523	\$78.10	12.0
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile or Manufactured Home	151	0.6	1,509	\$178,889	\$55.86	30.2	54	0.9	1,080	\$210,009	\$96.73	10.8
Mobile or Manufactured Home -RCW 84.33/34	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
ORTING VALLEY/SOUTHEAST PIERCE												
Single Family Dwelling	925	0.9	2,143	\$290,771	\$88.67	185.0	984	0.6	2,357	\$274,214	\$79.35	196.8
Single Family Residential -RCW 84.33/34	11	17.6	2,624	\$668,809	\$130.95	2.2	12	15.4	2,510	\$553,750	\$107.57	2.4
Townhouse	8	0.1	1,779	\$225,025	\$87.91	1.6	42	0.1	1,776	\$226,198	\$89.43	8.4
Townhouse/Condominium	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo - Separate Unit	4	0.2	1,700	\$240,675	\$87.48	0.8	0	0.0	0	\$0	\$0.00	0.0
Condo Apt High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Apt Low Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Low Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Duplex	10	0.2	1,341	\$144,880	\$74.73	2.0	20	0.1	1,351	\$147,940	\$80.62	4.0
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile or Manufactured Home	73	1.7	1,669	\$215,438	\$59.03	14.6	25	1.4	1,691	\$216,240	\$61.34	5.0
Mobile or Manufactured Home -RCW 84.33/34	2	12.4	1,593	\$215,950	\$61.90	0.4	0	0.0	0	\$0	\$0.00	0.0
TOTALS												
Single Family Dwelling	7,410	0.9	2,346	\$380,225	\$98.37	500.0	5,613	1.1	2,494	\$373,033	\$96.79	329.1
Single Family Residential -RCW 84.33/34	65	16.8	2,674	\$632,220	\$121.60	3.9	60	16.3	2,839	\$582,587	\$110.85	3.9
Townhouse	67	0.1	1,753	\$253,639	\$89.10	10.6	268	0.1	1,738	\$243,981	\$85.68	38.4
Townhouse/Condominium	384	0.1	1,527	\$238,584	\$88.52	51.9	102	0.1	1,687	\$278,722	\$100.93	12.7
Condo - Separate Unit	167	0.1	1,937	\$271,896	\$86.00	31.8	220	0.2	2,227	\$297,971	\$82.35	43.6
Condo Apt High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Apt Low Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo High Rise	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo Low Rise	222	0.1	1,075	\$236,063	\$123.06	39.2	237	0.1	1,039	\$179,517	\$107.17	47.4
Duplex	74	0.2	1,316	\$159,146	\$78.60	8.3	86	0.2	1,459	\$171,001	\$80.98	9.3
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile or Manufactured Home	614	2.3	1,660	\$198,856	\$53.77	33.9	231	2.4	1,594	\$213,119	\$68.68	13.1
Mobile or Manufactured Home -RCW 84.33/34	11	13.4	1,835	\$239,173	\$54.98	0.8	0	0.0	0	\$0	\$0.00	0.0

Source: Pierce County Assessor's Office & RKG Associates, Inc., 2010

Note: Peninsula - A 60-acre MH Park was built in 2003 and is valued at over \$8M; however, this value only reflects the land and improv, not individual units

Note: Graham - In 2008, a triplex was built on a parcel that is occupied by an older SFR and triplex

Note: Sumner/Bonney Lake - One MH Park was built in 2000-2004 occupying 6.8 acres of land and housing 61 units

2. Thurston County

According to New Home Trends, Inc., Thurston County consists of ten residential submarkets. These submarkets include: (1) Black Lake/Littlerock/Delphi, (2) Cooper Point, (3) Griffin, (4) Lacey Environs, (5) North Thurston, (6) Olympia/Lacey/Tumwater, (7) Rochester, (8) Summit Lake, (9) Tenino/Bucoda, and (10) Yelm/Rainier. The boundaries of these submarkets are largely drawn along incorporated boundaries of the County's larger cities and along portions of major roadways, such as Route 101, 8, and Old Highway 99 SE (Map 3). Pierce County, RKG Associates grouped the submarkets into two regions based on proximity to Joint Base Lewis-McChord. Based on interviews with local real estate professionals, most potential homebuyers stationed at JBLM look no farther west than the City of Lacey and as far south as Yelm. Therefore, the submarkets considered closest to JBLM are North Thurston, Olympia/Lacey/Tumwater, Lacey Environs, and Yelm/Rainier.

a. Thurston County Submarkets Closest to Joint Base Lewis-McChord

Since 2000, approximately 13,500 housing units have been developed in the four submarkets closest to JBLM. Of this total, 90% are single-family detached (SFD) units. This ratio is similar, albeit slightly higher, to that of Pierce County. However, this four-submarket region has experienced overall growth in SFD housing development in the last five years compared to the first five, which is contrary to trends in most of Pierce County. More than 7,200 SFD housing units have been built since 2005, which are nearly 2,300 more than were built in the first half of the decade. This growth has primarily occurred in the Olympia/Lacey/Tumwater and the Yelm/Rainier submarkets, which have seen 3,550 and 1,860 new SFD units developed since 2005, respectively (Table 5).

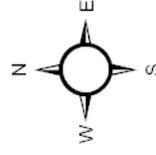
The Olympia/Lacey/Tumwater submarket is defined by the boundaries of the three cities, but much of the new development here has occurred in parts of Lacey. The Hawk's Prairie region in north Lacey includes multiple new subdivisions, such as the age-restricted Jubilee (55 and older community) and Meridian Green housing developments. In addition, Horizon Point, a subdivision in the southern end of Lacey, is said to be a popular choice among soldiers seeking to purchase off-post housing. Much of the newer housing development in the Yelm/Rainier submarket is concentrated near the border of Thurston and Pierce Counties. One of the larger subdivisions is Clearwood, which located southeast of Yelm and seen the construction of 360 new SFD units over the past five years.

The average size of a new SFD housing unit has increased in the last half of the decade. Single-family detached units built between 2000 and 2005 in the Olympia/Lacey/Tumwater and Yelm/Rainier submarkets averaged 1,965 SF and 1,785 SF, respectively. Since then however, newer SFD units in these areas are an average of 200 SF larger. Local real estate professionals stated that the increase in size is likely related to a demand for larger housing as housing prices began to decline during this time. Interview respondents also said that areas within the two aforementioned submarkets are among those highly sought after by potential homebuyers in the growing military population. Conversely, the average housing size in the North Thurston and Lacey Environs submarkets slightly exceeds 2,300 SF. The larger size of these units corresponds with their substantially higher values, essentially removing many of these units from levels of local affordability.

THURSTON COUNTY RESIDENTIAL SUBMARKETS

LEGEND

- Submarket Boundaries
- Joint Base Lewis-McChord
- Primary Gates at JBLM
- Thurston County
- Interstates
- Major Roads



Created by:
RK&G
March 2010

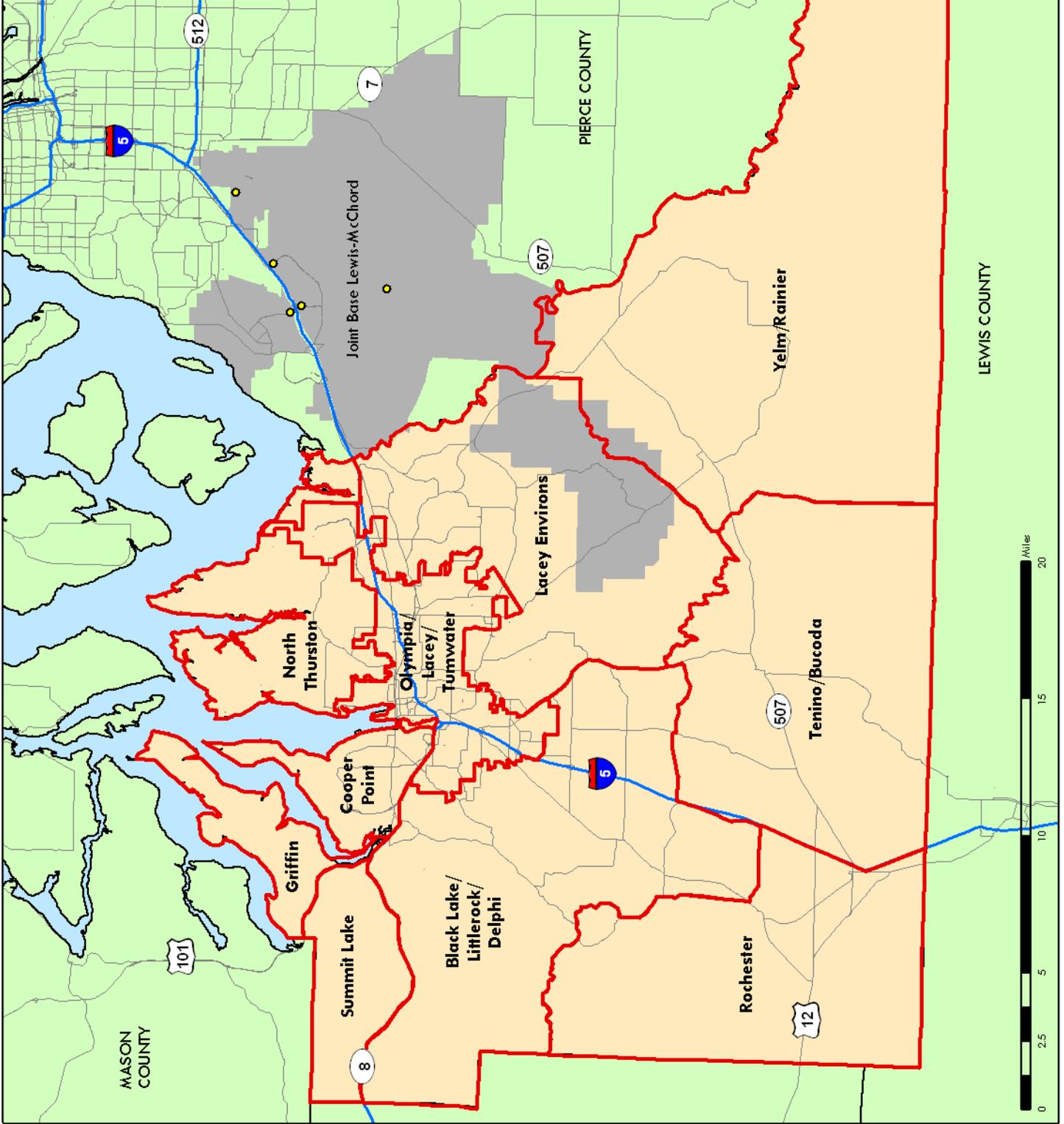


Table 5
Development Trends; Thurston County
2000-Present

Housing Type	2000-2004						2005-PRESENT					
	Unit Count	Avg Acre/Unit	Avg SF/Unit	Total AV/Unit	Building AV/SF	Avg Annual Absorp	Unit Count	Avg Acre/Unit	Avg SF/Unit	Total AV/Unit	Building AV/SF	Avg Annual Absorp
SUBMARKETS CLOSEST TO JOINT BASE LEWIS-MCCHORD												
NORTH THURSTON												
Single Family Dwelling	526	2.3	2,452	\$423,295	\$113.58	105.2	456	2.1	2,525	\$422,295	\$115.02	91.2
Single Family Dwelling -Agricultural	5	29.0	2,347	\$515,058	\$195.14	1.0	3	5.8	1,681	\$237,367	\$109.08	0.6
Townhouse	0	0.0	0	\$0	\$0.00	0.0	32	0.1	1,709	\$188,886	\$77.18	6.4
Condo	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Duplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Fourplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile Home	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
OLYMPIA/LACEY/TUMWATER												
Single Family Dwelling	1,376	0.2	1,965	\$277,641	\$99.40	275.2	3,550	0.1	2,166	\$285,668	\$98.61	710.0
Single Family Dwelling -Agricultural	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Townhouse	37	0.1	1,587	\$177,641	\$78.28	7.4	499	0.1	1,530	\$176,484	\$80.73	99.8
Condo	79	0.0	1,634	\$197,810	\$88.20	15.8	141	0.0	1,360	\$159,809	\$82.69	28.2
Duplex	85	0.1	1,372	\$148,149	\$83.57	17.0	65	0.1	1,499	\$156,753	\$86.59	13.0
Triplex	0	0.0	0	\$0	\$0.00	0.0	3	0.1	1,471	\$148,533	\$84.28	0.6
Fourplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile Home	1	0.2	384	\$220,100	\$363.54	0.2	0	0.0	0	\$0	\$0.00	0.0
LACEY ENVIRONS												
Single Family Dwelling	1,965	0.7	2,201	\$306,772	\$95.36	393.0	1,336	0.8	2,429	\$332,182	\$97.76	267.2
Single Family Dwelling -Agricultural	4	28.9	2,231	\$415,363	\$163.37	0.8	6	13.3	2,603	\$272,077	\$83.79	1.2
Townhouse	165	0.1	1,632	\$205,784	\$84.61	33.0	121	0.1	1,893	\$214,450	\$80.87	24.2
Condo	16	0.0	1,546	\$176,525	\$83.73	3.2	0	0.0	0	\$0	\$0.00	0.0
Duplex	42	0.1	1,305	\$142,535	\$83.57	8.4	20	0.1	1,202	\$145,848	\$92.30	4.0
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Fourplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile Home	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
YELM/RAINIER												
Single Family Dwelling	1,057	2.2	1,785	\$228,362	\$90.16	211.4	1,860	1.6	2,008	\$243,737	\$90.41	372.0
Single Family Dwelling -Agricultural	9	12.6	2,949	\$362,569	\$101.76	1.8	17	14.1	2,395	\$315,776	\$99.06	3.4
Townhouse	7	0.1	1,380	\$152,350	\$80.50	1.4	0	0.0	0	\$0	\$0.00	0.0
Condo	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Duplex	50	0.2	1,351	\$128,319	\$73.19	10.0	8	0.1	1,291	\$111,269	\$68.69	1.6
Triplex	4	1.3	463	\$70,875	\$82.55	0.8	0	0.0	0	\$0	\$0.00	0.0
Fourplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile Home	1	5.0	520	\$257,650	\$276.15	0.2	1	15.0	1,719	\$257,000	\$53.58	0.2
TOTALS												
Single Family Dwelling	4,924	1.1	2,072	\$294,247	\$97.32	290.4	7,202	0.8	2,197	\$292,118	\$97.37	501.4
Single Family Dwelling -Agricultural	18	20.8	2,622	\$416,659	\$141.39	1.4	26	12.9	2,361	\$296,645	\$96.69	2.6
Townhouse	209	0.1	1,616	\$199,012	\$83.35	27.4	652	0.1	1,606	\$184,139	\$80.58	81.2
Condo	95	0.0	1,619	\$194,225	\$87.45	13.7	141	0.0	1,360	\$159,809	\$82.69	28.2
Duplex	177	0.1	1,350	\$141,215	\$80.64	13.0	93	0.1	1,417	\$150,495	\$86.28	10.1
Triplex	4	1.3	463	\$70,875	\$82.55	0.8	3	0.1	1,471	\$148,533	\$84.28	0.6
Fourplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile Home	2	2.6	452	\$238,875	\$319.85	0.2	1	15.0	1,719	\$257,000	\$53.58	0.2

Source: Thurston County Assessor's Office & RKG Associates, Inc., 2010

Note: Lacey Environs - 37 rental cabins, averaging 600 SF, were constructed between 2000 and 2009

Townhome development is has not comprised a major share of the new housing development in these submarkets, with the exception of the Olympia/Tumwater/Lacey submarket, which saw only 37 townhomes constructed in the first half of the decade but nearly 500 built in the past five years.

Housing values vary widely in the four-submarket region. For instance, values of SFD units in the Yelm/Rainier submarket are the lowest with an average below \$240,000. Comparatively, average values of SFD units in the other submarkets are \$283,000 (Olympia/Lacey/Tumwater), \$317,000 (Lacey Environs), and \$423,000 (North Thurston). Other types of housing show widely varying values among the different submarkets as well. Townhouse units for example, which are not widely available in every submarket, have the highest average value in the Lacey Environs submarket (\$209,500), while the average value of these units in North Thurston are lower (\$189,000).

It should be noted that other developed housing types in the region since 2000 are largely comprised of townhouse and duplex units. However, these units, which are primarily concentrated in the Olympia/Lacey/Tumwater and Lacey Environs submarkets, are limited in quantity. In total, newly developed townhouses and duplexes account for 861 and 270 units, respectively. This figure emphasizes the strong demand for detached housing in the local residential marketplace.

b. Thurston County Submarkets Farthest from Joint Base Lewis-McChord

Relatively modest levels of residential development have occurred since 2000 in the western six submarkets of Thurston County. Less than 5,000 housing units have been built in these submarkets. In addition, 94% (4,700 units) of the development activity has been focused on single-family detached housing. This trend can likely be attributed to the lack of major urbanized areas in the western half of the County, which typically encourage density. Only the Cooper Point submarket, which is located immediately northwest of Olympia, has seen more than 80 attached or multi-family housing units built this decade as 202 non-SFD units have been constructed.

Increases in development activity have remained stable or have declined in each of the submarkets. In total, 2,662 new units were built between 2000 and 2005, while 2,326 were constructed afterward. The greatest levels of development have occurred in the Cooper Point and Black Lake/Littlerock/Delphi submarkets, but each of these has experienced a decrease in the number of housing units built. Specifically, the Black Lake/Littlerock/Delphi area has seen a 36% decline in SFD unit development as only 471 units were constructed later in the decade versus the 739 units built between 2000 and 2005 (Table 6).

Housing values in most of the submarkets are relatively high compared with those in the remainder of the County. For instance, SFD units have an average value exceeding \$330,000 with the exception of the two submarkets in the southwestern portion of the County, which have average values of \$246,000 (Rochester) and \$264,000 (Tenino/Bucoda). Higher housing values are concentrated in submarkets that have easy access to water and exist on larger average lots. Single-family detached units in Summit Lake and Griffin have average values above \$400,000 with lot sizes exceeding two acres on average. However, very few units have been built in these submarkets as Summit Lake has seen 101 new units and Griffin 396 new units.

Overall, the distance from JBLM and higher housing values are two factors that act as deterrents in attracting much of the local military population. Housing in this region is likely occupied and attractive to those that work in Olympia or in areas south along Interstate 5.

Table 6
Development Trends; Thurston County
2000-Present

Housing Type	2000-2004						2005-PRESENT					
	Unit Count	Avg Acre/Unit	Avg SF/Unit	Total AV/Unit	Building AV/SF	Avg Annual Absorp	Unit Count	Avg Acre/Unit	Avg SF/Unit	Total AV/Unit	Building AV/SF	Avg Annual Absorp
SUBMARKETS FARTHEST FROM JOINT BASE LEWIS-MCCHORD												
GRIFFIN												
Single Family Dwelling	177	2.9	2,332	\$416,788	\$115.59	35.4	219	2.3	2,412	\$399,259	\$114.04	43.8
Single Family Dwelling -Agricultural	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Townhouse	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Duplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Fourplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile Home	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
SUMMIT LAKE												
Single Family Dwelling	46	3.0	2,444	\$488,040	\$122.51	9.2	55	2.1	2,526	\$488,921	\$132.53	11.0
Single Family Dwelling -Agricultural	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Townhouse	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Duplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Fourplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile Home	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
COOPER POINT												
Single Family Dwelling	701	0.6	2,322	\$323,295	\$95.21	140.2	544	0.6	2,424	\$343,991	\$100.29	108.8
Single Family Dwelling -Agricultural	4	6.6	1,382	\$145,618	\$90.54	0.8	0	0.0	0	\$0	\$0.00	0.0
Townhouse	38	0.1	1,523	\$197,047	\$81.98	7.6	30	0.1	1,447	\$178,345	\$72.70	6.0
Condo	0	0.0	0	\$0	\$0.00	0.0	93	0.0	1,388	\$182,393	\$87.12	18.6
Duplex	19	0.2	1,211	\$147,324	\$93.86	3.8	16	0.1	1,394	\$169,884	\$91.29	3.2
Triplex	0	0.0	0	\$0	\$0.00	0.0	6	0.1	1,201	\$121,633	\$84.87	1.2
Fourplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile Home	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
BLACK LAKE/LITTLEROCK/DELPHI												
Single Family Dwelling	739	2.3	2,273	\$338,662	\$101.00	147.8	471	3.2	2,453	\$363,131	\$102.63	94.2
Single Family Dwelling -Agricultural	5	34.1	2,785	\$383,472	\$123.77	1.0	2	76.9	6,037	\$475,430	\$76.26	0.4
Townhouse	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Duplex	12	0.1	1,505	\$148,642	\$77.19	2.4	2	0.8	1,699	\$206,075	\$82.78	0.4
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Fourplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile Home	0	0.0	0	\$0	\$0.00	0.0	1	5.5	2,066	\$336,200	\$72.22	0.2
ROCHESTER												
Single Family Dwelling	512	2.1	1,780	\$239,062	\$85.40	102.4	440	2.3	2,058	\$254,940	\$84.62	88.0
Single Family Dwelling -Agricultural	6	14.1	2,402	\$289,405	\$89.85	1.2	5	17.4	1,888	\$231,480	\$94.48	1.0
Townhouse	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Duplex	22	1.4	1,089	\$118,239	\$76.82	4.4	46	0.2	1,197	\$111,362	\$69.94	9.2
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Fourplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile Home	0	0.0	0	\$0	\$0.00	0.0	1	1.2	904	\$226,550	\$155.75	0.2
TENINO/BUCODA												
Single Family Dwelling	368	3.8	1,806	\$250,880	\$87.81	73.6	378	3.3	2,157	\$275,949	\$87.56	75.6
Single Family Dwelling -Agricultural	9	18.5	2,178	\$261,402	\$99.87	1.8	9	28.8	1,716	\$220,708	\$110.06	1.8
Townhouse	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Condo	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Duplex	4	0.5	1,573	\$165,388	\$77.62	0.8	8	0.3	1,354	\$145,700	\$81.78	1.6
Triplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Fourplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile Home	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
TOTALS												
Single Family Dwelling	2,543	2.1	2,127	\$309,809	\$95.76	115.5	2,107	2.2	2,308	\$326,994	\$97.53	85.9
Single Family Dwelling -Agricultural	24	18.7	2,227	\$274,537	\$100.79	1.3	16	31.2	2,310	\$255,914	\$100.97	1.4
Townhouse	38	0.1	1,523	\$197,047	\$81.98	7.6	30	0.1	1,447	\$178,345	\$72.70	6.0
Condo	0	0.0	0	\$0	\$0.00	0.0	93	0.0	1,388	\$182,393	\$87.12	18.6
Duplex	57	0.7	1,251	\$137,643	\$82.63	3.5	72	0.2	1,272	\$130,813	\$76.36	6.8
Triplex	0	0.0	0	\$0	\$0.00	0.0	6	0.1	1,201	\$121,633	\$84.87	1.2
Fourplex	0	0.0	0	\$0	\$0.00	0.0	0	0.0	0	\$0	\$0.00	0.0
Mobile Home	0	0.0	0	\$0	\$0.00	0.0	2	3.3	1,485	\$281,375	\$113.98	0.2

Source: Thurston County Assessor's Office & RKG Associates, Inc., 2010

Note: Summit Lake - 87 1,032 SF rental cabins were constructed on a 125 acre parcel between 2000 and 2004

Note: Black Lake/Littlerock/Delphi - 496 rental cabins, averaging 500 SF, were built or renovated on 14.5 acres in 2004

3. Implications

Based on the development trends in both counties, the majority of smaller-sized, lower-valued houses are found immediately south and east of Joint Base Lewis-McChord. Newer housing units in the Yelm/Rainier and Spanaway/Roy submarkets have the lowest average values and average square footage among SFD units in their respective counties. As population growth occurring at JBLM has exceeded new housing development on-post, these areas have been the recipients of many of the incoming military population due to proximity to the base and relative price affordability. With military growth nearing the end of its projected cycle, new housing in these submarkets may need to be marketed to a different population.

Major differences in new residential development exist between the most urbanized areas closest to the Joint Base. For instance, values and square footage are higher in the West Tacoma submarket compared with units in the Olympia/Lacey/Tumwater submarket. Additionally, overall housing development has increased in the Olympia/Lacey/Tumwater submarket, while it has declined in West Tacoma. These visible differences are likely to dictate where many future potential homebuyers looking for amenities typically available in urbanized centers choose to live.

F. SUPPLY-SIDE RESIDENTIAL ANALYSIS

The following supply-side analysis examines the number of available ownership and rental units as well as projects currently in the pipeline that contribute to the region’s current and future housing supply. Data for this analysis was obtained from multiple sources. Current “for-sale” housing data was obtained through Zillow.com, an online provider of residential values and listing. Data for the rental market was obtained from Dupre+Scott, a private market research and development tracking firm that monitors trends within the Puget Sound apartment market. This apartment data originates from property manager surveys, which account for approximately 80% to 90% of the units in the market. It should be noted that RKG Associates interpolated the data obtained from Dupre+Scott to reflect a more accurate representation of the number of units in the regional apartment market, while maintaining the ratio of apartment types. Lastly, residential permit data was collected from New Home Trends as well as the Thurston Regional Planning Council and the Pierce County Planning and Land Services department.

1. Pierce County

a. New “For-Sale” Housing

There are 9,463 housing units listed for-sale in Pierce County as of March 13th, 2010 (Table 7). A majority of these units (7,188 units) are listed for-sale by an agent or the current owner, while another 2,118 are available as foreclosures. These figures will change slightly on a daily basis as units are both bought and sold, but these figures provide a sense for the current level of available units in the ownership market.

Aside from the county totals, Table 7 also lists areas located within

**Table 7
For-Sale Housing Units; Pierce County
March 13th, 2010**

	Total	For Sale by Agent	For Sale by Owner	Foreclosures	New Construction
Pierce County	9,463	7,132	56	2,118	157
Tacoma	1,904	1,476	13	409	6
South Hill	625	430	3	192	0
Spanaway	489	256	2	231	0
Lakewood	350	293	2	55	0
Elk Plain	303	175	2	110	16
Parkland	266	148	1	117	0
Puyallup	229	200	2	27	0
University Place	217	199	3	15	0
Frederickson	175	90	0	85	0
DuPont	127	65	1	5	56
Waller	71	60	2	9	0
Summit	70	57	1	12	0
Midland	66	55	1	10	0
Steilacoom	59	50	0	9	0
Fircrest	57	45	1	11	0
Roy	8	6	0	2	0

Source: Zillow.com & RKG Associates, Inc, 2010

close proximity to JBLM and have been identified by local real estate professionals as areas preferred by many of the local military population. These areas account for approximately 5,000 of the total units available in Pierce County. The City of Tacoma currently has the most units available for purchase with nearly 1,500 for-sale units and 409 foreclosures. Lakewood and DuPont are the areas located immediately outside the main gates of JBLM along Interstate 5 and combine for 477 available homes for sale. It should be noted that residential neighborhoods within DuPont are still under construction as development there has increased rapidly since 2000. This development activity is evidenced by the 56 new construction units currently being listed in DuPont. It should be noted that the list of housing units for-sale in the new construction category does not represent all units currently under construction or those recently completed as “spec” houses. Many of these units are held by the builder and/or developer and are not marketed through MLS or other sales databases.

b. Rental Market

The rental market in Pierce County, as with much of the country, consists of commercial apartment units and individually-owned attached and detached housing units. According to Census Bureau estimates based on the 2006-2008 American Community Survey, approximately 36% of single-family, attached and detached (including mobile homes) occupied housing units in Pierce County are renter-occupied. This percentage equates to nearly 38,000 units of the 105,000 total renter-occupied housing units in the County. The remaining 67,000 units are classified as apartments.

Many of the apartment units in Pierce County are located in larger 20-plus unit complexes. RKG Associates examined data associated with these complexes to gain a better understanding of the locational attributes and capacity limitations of these rental units. The data is grouped into multiple submarkets, which are detailed in Map 4.

Much of the apartment development in Pierce County is located immediately north of Joint Base Lewis-McChord. In fact, the two submarkets with the greatest amount of apartment units, Lakewood (8,006 units) and South Tacoma (8,034 units), are close to Interstate 5, which provides quick access to the main gates at JBLM (Table 8). Other submarkets heavily concentrated in apartment units are located in or near established and urbanized areas, such as Tacoma, or areas of increasing development like Puyallup and Sumner. The concentration in Puyallup and Sumner is likely due to easy access to employment centers Tacoma and King County via Interstate 5 and Route 167, respectively.

Apartment units with one bathroom and either one or two bedrooms comprise more than 70% of the total number of apartment units in the County. These smaller units are ideally suited for single person occupancy or married couples without children due to their limited capacity. Additionally, these units may appeal to the approximately 25,000 soldiers ranked between E-3 to E-6 stationed at Joint Base Lewis-McChord, who are generally younger and may not yet have families of their own.

Map 4

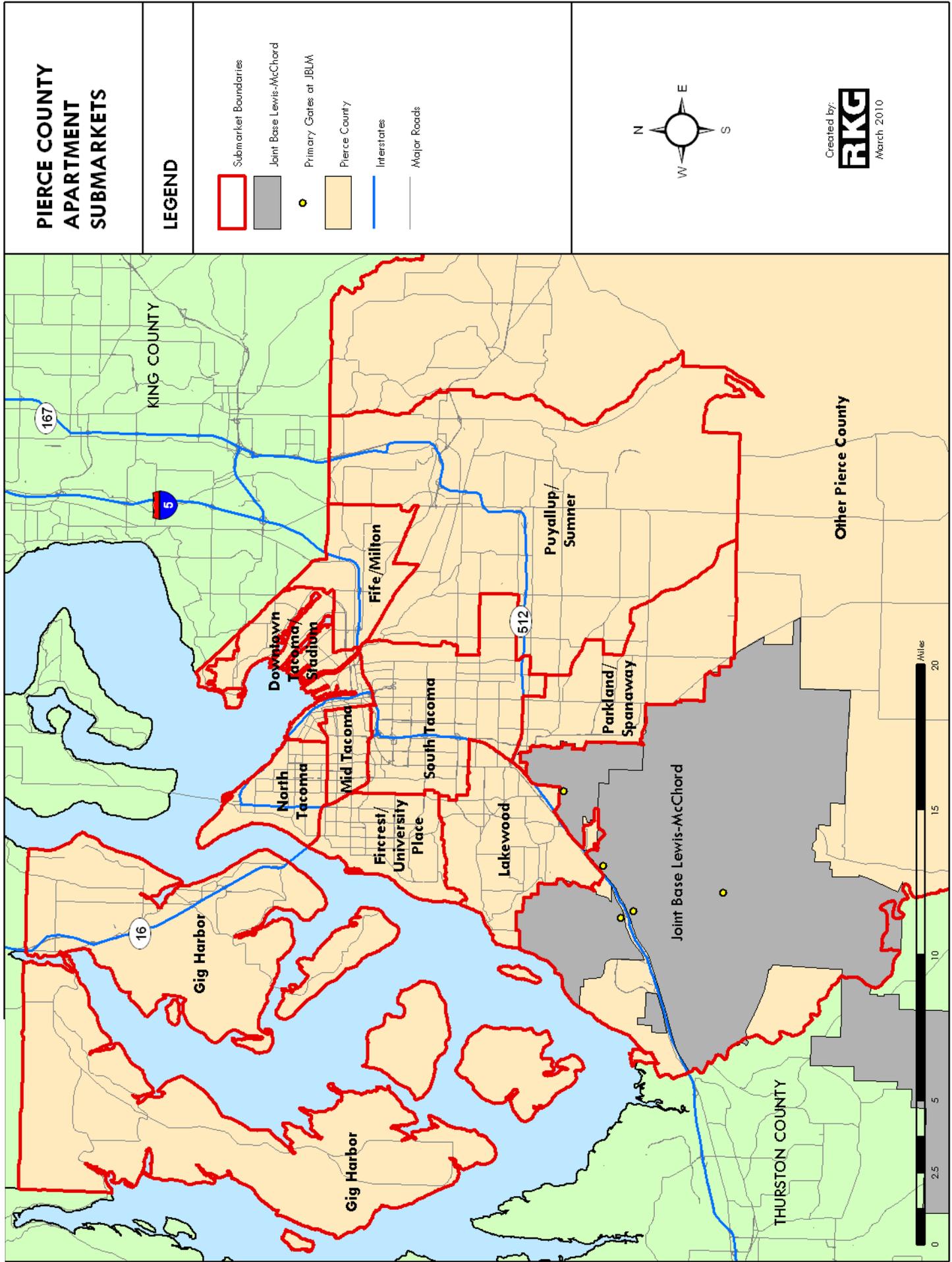


Table 8
Apartment (20+) Units by Type; Pierce County
3rd Quarter 2009

Submarket	Studio	1-bed	2/1 ba	2/2 ba	3/2 ba	All
Downtown Tacoma/Stadium	693	1,765	464	548	183	3,654
Fife/Milton	0	1,005	845	551	258	2,660
Fircrest/University Place	108	2,451	1,991	1,065	396	6,011
Gig Harbor	0	291	347	254	92	984
Lakewood	268	3,392	2,912	901	534	8,006
Mid Tacoma	159	291	458	0	0	908
North Tacoma	39	473	462	404	0	1,377
Other Pierce County	0	611	183	472	130	1,396
Parkland/Spanaway	21	648	673	338	89	1,768
Puyallup/Sumner	11	2,411	2,222	1,819	1,019	7,482
South Tacoma	308	2,591	3,275	1,418	442	8,034
Total Units by Type	1,607	15,929	13,832	7,769	3,142	42,280
% of Total Units	3.8%	37.7%	32.7%	18.4%	7.4%	100.0%

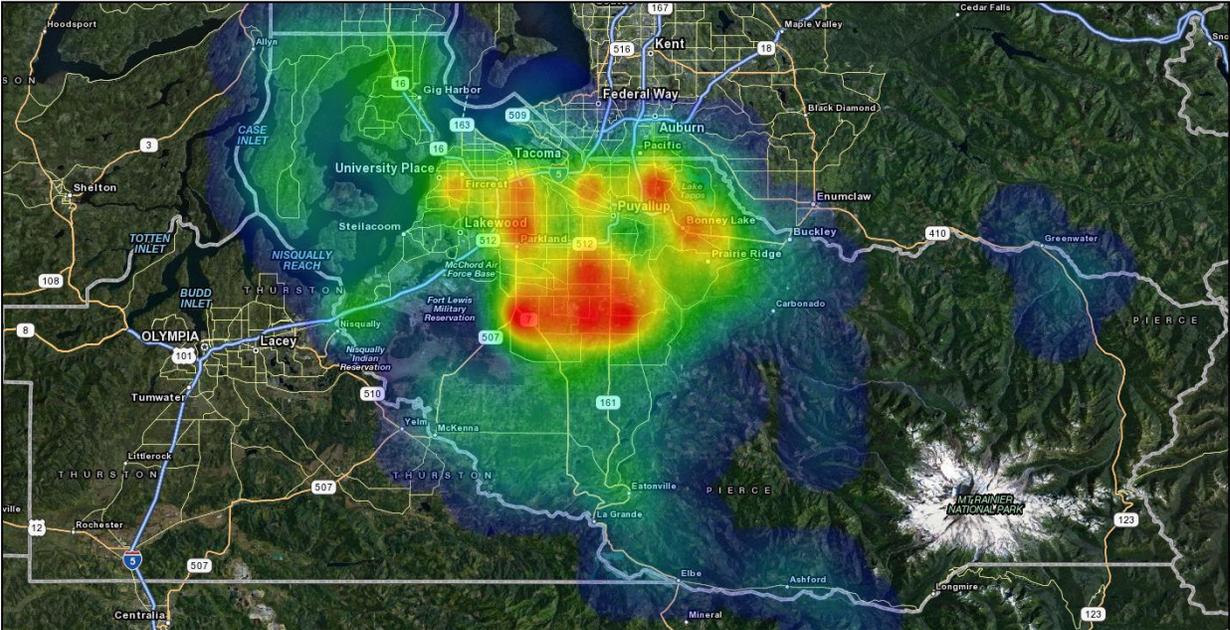
Source: Dupre + Scott & RKG Associates, Inc., 2010

c. Pipeline Development

A substantial number of housing units currently exist in the Pierce County pipeline as much of the residential development has slowed since 2005 compared to the first half of the decade. However, of the nearly 28,634 approved and proposed lots in the pipeline, most (20,400 units) have only received preliminary approval or are still in the plan review phase of permitting. It is largely unknown when or how many of these lots will proceed through the approval process and move on to development. The current economic downturn has caused many projects to stop construction or go into foreclosure. The remaining 8,000 lots are vacant and awaiting construction or have unsold spec houses on them.

Most of the current residential building permit activity is concentrated in areas that have been active during the latter part of this decade. For instance, the South Hill/ Puyallup and Sumner/Bonney Lake submarkets have a substantial number of pending plats and lots moving through the approval process (Figure 4). This ‘heat map’ depicted in Figure 4 illustrates the concentrations of single-family dwelling permits issued during the 2004 to 2008 period. The hot or red areas signify areas where single-family permit activity has been the strongest, while the lighter blue and green areas show less concentrated activity. It is important to note that the Pierce County Planning and Land Services department that provided this data reported that 2009 permit activity was ready for release, but was also substantially lighter compared to the previous years. The submarkets closest to Joint Base Lewis-McChord with the greatest number of housing units in the pipeline include South Hill/Puyallup (9,820 lots and/or units) and Spanaway/Roy (2,518 lots and/or units) (Figure 5). Newer development in the Spanaway/Roy submarket is largely focused west of the Boeing facility in Frederickson near the Spanaway Airport. Currently this submarket has 66 unsold spec houses and more than 1,200 vacant lots ready for construction. It should be noted that while these spec houses have either been completed or under construction, they may not be reflected on local sales listings databases, which primarily list existing homes as presented earlier in this analysis.

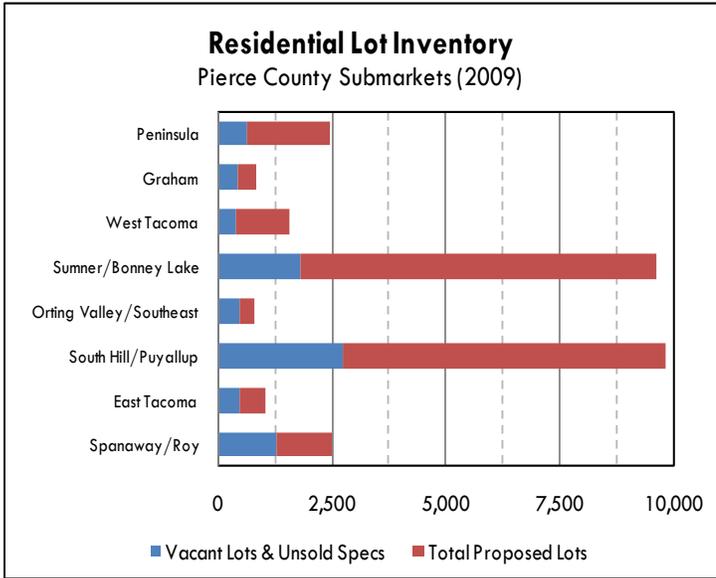
Figure 4
Single-Family Building Permit Activity
Pierce County (2004-2008)



Source: Pierce County Planning and Land Services & RKG Associates, Inc., 2010

Much of the newer residential construction in the South Hill/Puyallup submarket has occurred west of the Pierce County Airport along Gem Heights Drive. Currently 109 units are in various stages of development and remain unsold, while approximately 2,600 lots have completed the permitting process and are waiting to be developed. In addition, another 7,084 lots are currently moving through the preliminary phase of the permitting process. Many of these are part of the planned Sunrise Village (less than 1,000 lots) and Lapoma Communities projects (1,000 lots). Another 1,134 proposed lots are for the Emerald Ridge and Daybreak subdivisions. Some local real estate professionals interviewed said that the rapid development in the South Hill area has increased traffic along Meridian Avenue, which has contributed to a slowdown in interest among these developments. Meridian

Figure 5



Source: New Home Trends & RKG Associates, Inc., 2010

Avenue is a four-lane, north/south roadway used by many residents to access employment in King County.

The other submarket experiencing a substantial amount of preliminary permitting activity is Sumner/Bonney Lake. It is here that the proposed Cascadia (6,047 proposed lots) planned community is projected to be developed. However, progress on this near 5,000-acre project, which is slated for 6,500 new housing units among other commercial uses, has currently stalled due to financial obstacles on the part of the developer as they recently filed for bankruptcy protection⁹. These potential units account for most of the 7,819 proposed lots currently awaiting permits.

2. Thurston County

a. “For-Sale” New Housing

There are approximately 3,250 housing units currently available for purchase in Thurston County (Table 9). Of this total, nearly 25% are available due to foreclosure processes. Many of these type properties are generally listed below market value and can entice many first-time homebuyers looking to become established in a particular neighborhood. The remaining 75% are primarily resale units listed by agents and current owners. As with Pierce County, these figures are likely to remain relatively constant as the current real estate conditions are preventing many potential sellers from listing their properties due to declining values. However, these figures represent available units during a month when home sales are typically slow. The total amount of for-sale units in the county (and region) will likely increase during warmer months when moving may be easier for many buyers and sellers.

The City of Lacey currently has the greatest number of available housing units (487 units) among the more urbanized areas located in close proximity to JBLM. The two cities immediately west of Lacey also have relatively high numbers of available units; however, most local real estate professionals interviewed believe potential buyers stationed at JBLM do not

**Table 9
For-Sale Housing Units; Thurston County
March 13th, 2010**

	Total	For Sale by Agent	For Sale by Owner	Foreclosures	New Construction
Thurston County	3,249	2,306	31	796	116
Lacey	487	336	8	137	6
Olympia	372	278	8	86	0
Tumwater	250	104	2	112	32
Yelm	133	82	1	10	40
Tanglewilde-Thompson Place	34	30	0	4	0
North Yelm	29	22	0	7	0
Rainier	15	12	0	3	0

Source: Zillow.com & RKG Associates, Inc., 2010

search for housing west of Lacey due to distance from the Joint Base. The City of Yelm also has a substantial number of available housing units (133 units) for-sale. Of these, 30% are listed as new construction (40 units) and are located in the new Tacoma Terra subdivision.

b. Rental Market

Figures released by the U.S. Census Bureau in 2008 estimate approximately 44% of the renter-occupied housing units in Thurston County are single-family, attached or detached units, which include mobile homes. This percentage equates to approximately 13,900 units of the County’s total 31,650 renter-occupied units. The remaining 17,750 occupied rental units are classified as

⁹ Vernon, Peter. “Bank Foreclosure Sales Averted by Bankruptcy.” October 19, 2009. Information obtained at <http://www.bankforeclosuresale.com/wp/article-10191576.html> on March 12, 2010.

apartments. This very high rate of single-family rental units and may be indicative of a number of things. In many military communities, when soldiers are deployed, they often have to leave behind vacant homes and chose put on the rental market until they return. It may also be the case that a number of homeowners sold their original during the past decade to move up into newer housing being constructed throughout the county. Rather than selling their original, many people across the county used the rising equity in their homes to purchase new homes. Up until 2006-2007 they were able to do this with little or no down payment and many people retained their first homes as rental or investment properties. At a time when JBLM was expanding the past decade, a conversion of ownership to rental properties may have occurred.

Dupre+Scott Apartment Advisors report that there is at least 10,700 investment grade, apartment units in building with at least 20 units concentrated in the Cities of Olympia, Lacey and Tumwater (Table 10). The incorporated boundaries of these submarkets are detailed in

Table 10
Apartment (20+) Units by Type; Thurston County
3rd Quarter 2009

Submarket	Studio	1-bed	2/1 ba	2/2 ba	3/2 ba	All
Olympia	114	2,040	1,465	1,015	415	5,049
Lacey	11	1,555	859	833	175	3,434
Tumwater	45	820	414	608	334	2,222
Total Units by Type	171	4,415	2,738	2,456	925	10,705
% of Total Units	1.6%	41.2%	25.6%	22.9%	8.6%	100.0%

Source: Dupre + Scott & RKG Associates, Inc., 2010

Map 5. This figure does not include smaller apartment complexes with fewer than 20 units, nor does it include single family homes that might be for rent in the three cities. The state capitol of Olympia has the greatest number of investment grade apartment units with 5,049, while the other two cities combine for 5,656 units.

It should be noted that the percentage of one-bedroom units is highest in Lacey. The 1,555 one-bedroom units account for 45% of all apartment units in the City, compared to 40% in Olympia and 37% in Tumwater. As previously mentioned, the concentration of smaller-sized units is likely the most suitable type of unit for many of the 25,000 low- to mid-level rank (E-6 or lower) enlisted military personnel at JBLM. This type of soldier is generally younger, has a lower salary and basic allowance for housing (BAH) and is often single. Additionally, the concentration of this type unit in Lacey as opposed to elsewhere makes sense as anecdotal information says that Lacey is as far west as most military personnel look for housing.

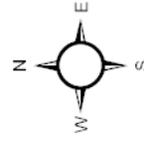
c. Pipeline Development

Much of the recent residential development in Thurston County has been concentrated in the Olympia/Lacey/Tumwater and Yelm/Rainier submarkets. The ‘heat map’ provided in Figure 6 shows single-family building permits issued between 2004 and 2008 and as with Pierce County, the source of the permit data stated that permit issuing has been substantially less in 2009. Figure 6 shows heavy concentrations of issued permits in the Hawk’s Prairie area of Lacey and in the southern portion of the City, where Horizon Point is located. Other lighter concentrations appear near the incorporated area of Yelm and farther southeast along the county border. According to data provided by New Home Trends, these submarkets also have the higher amount of lots in the pipeline with approved building permits.

THURSTON COUNTY APARTMENT SUBMARKETS

LEGEND

- Submarket Boundaries
- Joint Base Lewis-McChord
- Interstates
- Major Roads
- Local Streets
- Thurston County



Created by:
RKG
March 2010

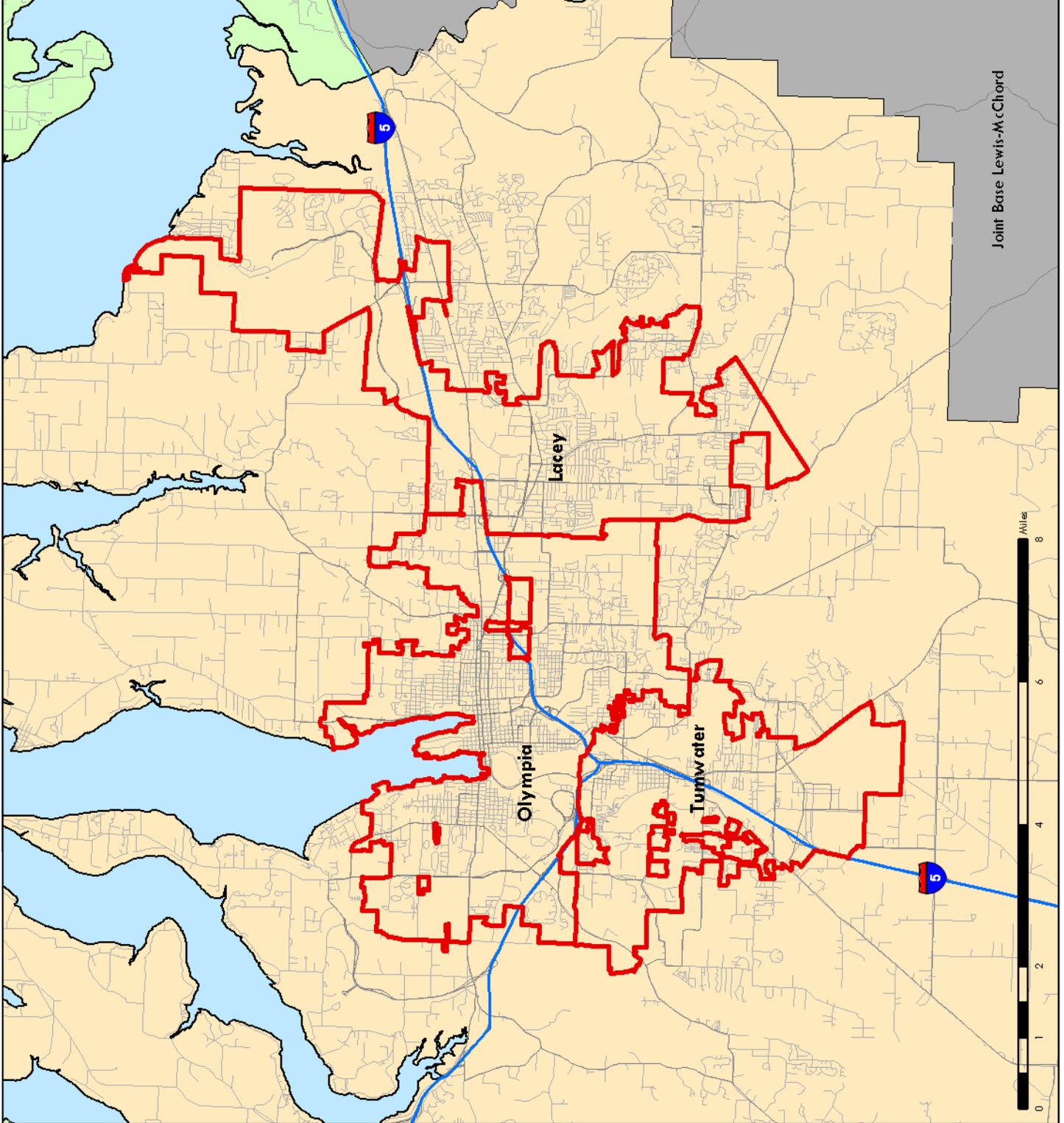
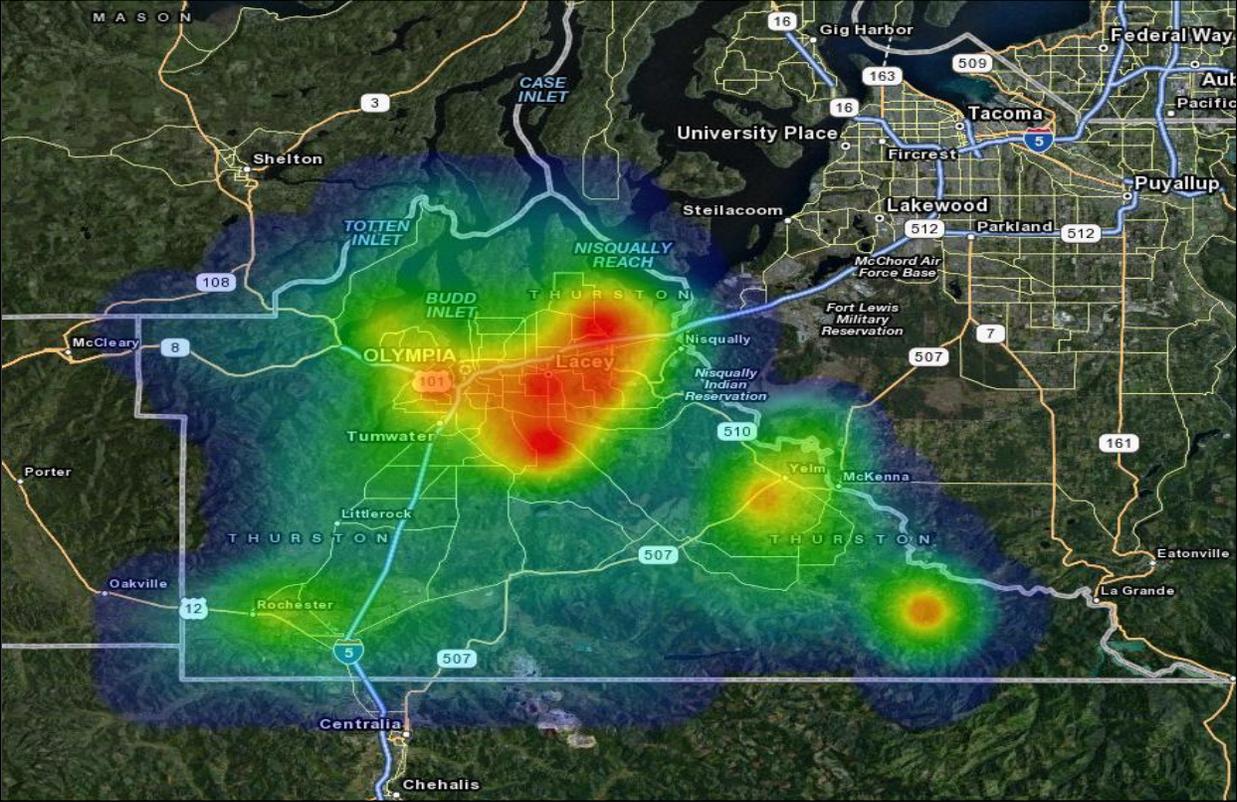


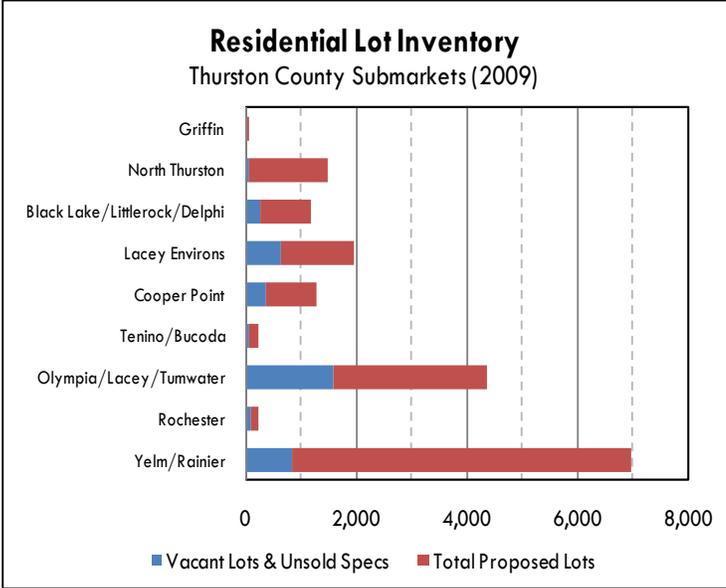
Figure 6
Single-Family Building Permit Activity
Thurston County (2004-2008)



Source: Thurston Regional Planning Council & RKG Associates, Inc., 2010

The Olympia/Lacey/ Tumwater and Yelm/Rainier submarkets have the greatest amount of lots permitted or proposed for future development. Currently, Thurston County has 17,819 permitted and proposed lots, which also include 239 unsold spec houses. Of this total, the Olympia/Lacey/Tumwater and Yelm/Rainier submarkets account for 4,359 lots and 6,979 lots, respectively (Figure 7). It should also be noted that the other two submarkets closest to Joint Base Lewis-McChord, Lacey Environs and North Thurston, account for a substantial number of proposed and permitted lots (3,452 combined) as well.

Figure 7



Source: New Home Trends & RKG Associates, Inc., 2010

The Olympia/Lacey/Tumwater submarket has the greatest amount of vacant permitted lots (1,487 lots) in the County. In addition, this submarket also has 101 unsold spec houses, more than in any other submarket. These houses and vacant lots are primarily located in the Horizon Point subdivision and in the numerous new subdivisions in Hawk's Prairie off Willamette Drive. While these subdivisions have been relatively successful at selling homes, recent data indicate the pace has slowed due to the current economy. However, the percentage growth of housing development in this submarket has surpassed all others in the region over the past five years and will likely continue to benefit from other commercial investments made in the area as well as the quick access to Interstate 5 this submarket possesses. As for the other 2,771 proposed lots in this submarket, it is unknown when or whether these lots will reach the development stage.

The greatest number of proposed lots is in the Yelm/Rainier submarket (6,133 lots). Most of these are included in the proposed 5,000 lot Thurston Highlands project, which is currently on-hold as the developer has filed for bankruptcy protection. In addition, local real estate professionals report that development and purchasing activity in the Yelm area has slowed more than in most other areas in the two-county region, which is contributing to a growing backlog in proposed lots. The primary reason stated for the downturn in activity by these professionals is the relatively long length of time it takes to reach Interstate 5 and local shopping outlets from Yelm.

Another reason cited includes the issue of obtaining additional water rights for new development. In August of 2009, Yelm officials withdrew a proposal to the Department of Ecology for obtaining additional water rights, in part to support new development, due to community opposition¹⁰. Without additional water rights, proposed subdivisions, such as Thurston Highlands, are unable to obtain permits and break ground. Thurston Highlands is 1,250-acre property projected to include 5,000 new homes, which are all in the proposal review stage of permitting. Further impacting new development in Yelm is the status of the Tahoma Terra subdivision. It should also be noted that the this subdivision, which was originally planned for 1,200 housing units, will have its seven remaining unfinished phases auctioned in a foreclosure sale in early April 2010¹¹. According to the New Home Trends data, there are 450 lots in Tahoma Terra in the proposal review stage of permitting.

3. Joint Base Lewis-McChord

a. Available Units

Currently 18 neighborhoods exist at Joint Base Lewis-McChord, while another is currently under construction. The established neighborhoods account for 4,595 units. Prior to the joint basing decision, housing units were split between Fort Lewis (3,767 units) and McChord Air Force Base (828 units). At this time, Fort Lewis reports that on-post residential units housed 24% of their assigned soldiers and families. This total is substantially less than the standard 30% goal targeted by the Army. For this reason, many of the soldiers will need to search for housing off-post.

A majority of the units at JBLM are three-bedroom units. The 3,370 three-bedroom units account for 73% of the total number of units at JBLM (Table 11). Conversely, the number of two-bedroom units accounts for substantially less (13%), which is corroborated in interviews with JBLM representatives that state most of the soldiers living on-post are family units that require multiple bedrooms.

¹⁰ Information obtained from <http://www.thefreelibrary.com/United+States+%3a+Yelm+drops+water+rights+proposal.-a0206142555> on March 13, 2010.

¹¹ Hill, Christian. [1,200-unit Yelm housing development heads to auction block](#). *The News Tribune*. March 13, 2010.

Table 11
Housing Unit Profile; Joint Base Lewis-McChord
January 2010

Area	2BR Units	3BR Units	4BR Units	5BR Units	6BR Units	Total Units
CURRENT PROFILE						
Fort Lewis	444	2,798	503	21	1	3,767
McChord Air Force Base	143	572	113	0	0	828
JBLM Total	587	3,370	616	21	1	4,595
JBLM Percentage Total	12.8%	73.3%	13.4%	0.5%	0.0%	100.0%
PROJECTIONS THROUGH FY2012						
Westcott Hills	0	16	16	0	0	32
Cascade Village	0	47	14	0	0	61
Town Center	164	56	0	0	0	220
Beachwood III	N/A	N/A	N/A	N/A	N/A	250
New Development Total	164	119	30	0	0	563

Source: Joint Base Lewis-McChord Residential Communities Division & RKG Associates, Inc, 2010

Note: Eight of the thirty-two units at Westcott Hills started construction in 2009

b. Pipeline Development

Joint Base Lewis-McChord has privatized housing development on-post through the Army’s Residential Communities Initiative (RCI). This public/private venture has begun construction of new housing units on-post, notably in the Discovery Village neighborhood. It should also be noted that the RCI program involves the demolition of some units in order to build new units and renovation plans. According to an April, 2009 report released by JBLM, 2,781 homes have been or will be renovated. Current plans moving forward include completion of development in two new neighborhoods, Westcott Hills and Cascade Village, along with a new Town Center, which will include residential units, by FY2012. Construction is underway at Westcott Hills as the first eight units were delivered in early March 2010¹². This neighborhood is projected to add 32 new units to JBLM consisting of sixteen 3-bedroom units and sixteen 4r-bedroom units. Cascade Village is a larger project and is scheduled to include 47 three-bedroom units and 14 four-bedroom units.

Plans for the new Town Center, also referred to as the Lifestyle Center, at JBLM include 220 new residential units. This project is envisioned as mixed-use and will incorporate space for housing, retail, dining and office uses. Of the 220 housing units, 164 will be two-bedroom units and 56 will be three-bedroom units. The inclusion of more two-bedroom units on-post are generally necessary when developing at higher densities and will provide additional units for smaller families stationed at JBLM. It should also be noted that 16 of the total number of units at the Town Center will be ADA qualified.

4. Implications

The relatively high rate of single-family detached rental units in each county may inhibit future growth in the multi-family rental market. The urban growth boundaries in each county encourage density in new housing development; however, most of the new units being developed are single-family detached units, albeit on smaller lots. In addition, local real estate professionals said that many incoming residents (buyer and renter) prefer detached housing due in part to competitive pricing. It is likely that the substantial amount of single-family detached rentals available in each county will contribute to stability in preferences for detached units in the greater region.

¹² Joint Base Lewis-McChord. [New housing on McChord opens tomorrow](#). *The Ranger* (blog post). March 8, 2010.

Pierce and Thurston County have substantial backlogs in residential projects awaiting permit approval. However, the market slow down and project financing constraints could result in some projects changing hands, as new developers take over failed projects. For instance, the individual developers of the 6,000+ housing unit Cascadia project in Pierce County and 5,000 unit Thurston Highlands project in Thurston County have both recently filed for bankruptcy protection. This effectively stops those developments in the short-term, perhaps for the next 3 to 5 years as new deals are structured and plans are approved. While situations such as these create uncertainty about the future development of large land holdings, RKG assumes that over the 20-year horizon of this plan, troubled projects like this will eventually resume building.

G. DEMAND-SIDE ANALYSIS

The demand-side analysis examines the rate at which new housing is demanded by local homebuyers and renters over time. For purposes of this analysis, demand is measured as new housing development, annual sales activity, new rental units and vacancy trends. The following section examines housing demand in Pierce and Thurston Counties over the past several decades. RKG Associates relied on several proprietary data sources for this analysis including New Home Trends, Inc. and Dupre+Scott Apartment Advisors. New Home Trends, Inc. tracks the status of new home sales within the Puget Sound Region, including newly platted subdivisions that are moving through the planning approval process. Because of the transition occurring within the region’s real estate market, the status of many proposed or “pipeline” developments are uncertain at this time. Some projects are stalled; others are in foreclosure or have other market or financial constraints. For the purposes of the JBLM Growth Coordination Plan, RKG Associates assumes that current market circumstances will slow the development of many existing and proposed subdivisions in the short term (next 5 years), but over the plan’s 20-year planning horizon, it is likely that these projects will begin to move forward.

1. Pierce County

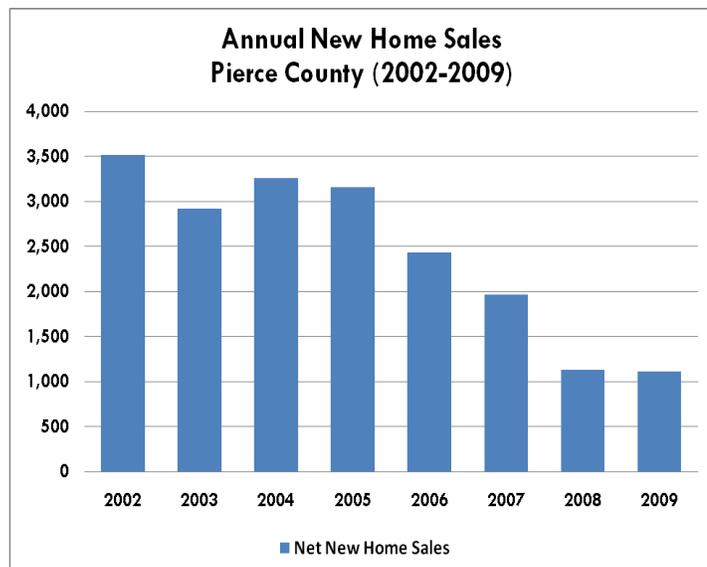
a. New Home Sales

Over the past 8 years, the number of newly built homes sold in Pierce County has average about 2,439 annually. However, since the most recent sale peak in 2002, when roughly 3,500 units sold, sales of new homes has dropped by 68% to 1,129 sales by 2008 (Figure 8).

The number of new home sales has dropped precipitously since 2005 when annual sales exceeded 3,200 units. Not surprisingly, as the number of homes sales has dropped during the 2000s, median sales prices have dropped and the inventory of vacant lots and “spec” built homes has increased.

According to New Home Trends, Inc., Pierce County is comprised of

Figure 8



Source: New Home Trends, Inc., 4th Quarter 2009 and RKG Associates, Inc. 2010

eight residential submarkets. During 2009, the largest percentage of sales in Pierce County (28.3%) occurred in the South Hill/Puyallup submarket, followed by Sumner/Bonney Lake (18.4%) and Spanaway/Roy (17.9%) (Table 12). Anecdotal information states that two neighborhoods in the South Hill/Puyallup area, Gem Heights and Sunrise, are among the most popular with new homebuyers. Growth and development in these submarkets is occurring at a faster pace than other parts of Pierce County. As of the 4th Quarter of 2009, these three submarkets accounted for 76.6% of all existing new homes sales and pipeline lots in the county.

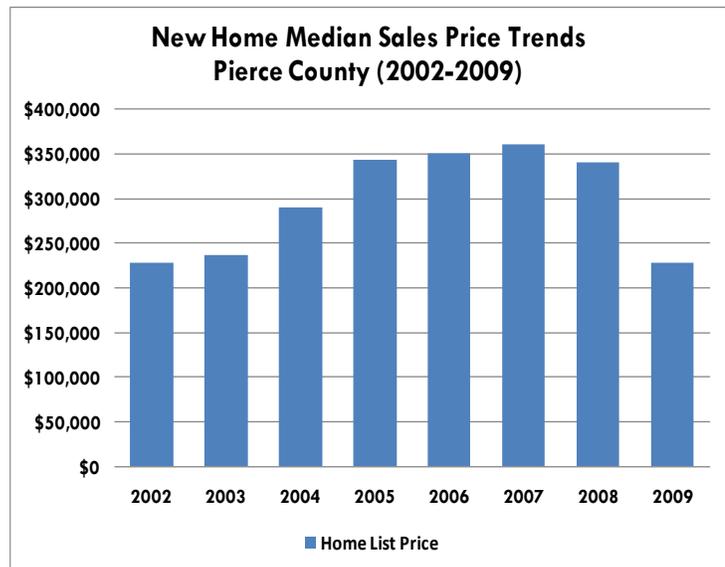
b. Median Sales Price – New Homes

The median sales price of newly built homes in Pierce County dropped by nearly \$132,000 or 36%, from a high of \$359,000 in 2007 to \$227,000 in 2009. Although the Seattle MSA was one of the last metropolitan housing markets in the country to experience price declines due to the economic recession, Pierce County new home prices have dropped by 18% in just the past year (Figure 9).

At the submarket level, the greatest price drops in the past year have occurred in Peninsula (39.3%), East Tacoma (28%) and Graham (15.8%). While the drop in home prices was expected in the face of declining economic conditions and tougher mortgage lending practices, it has improved the general affordability of housing within the region.

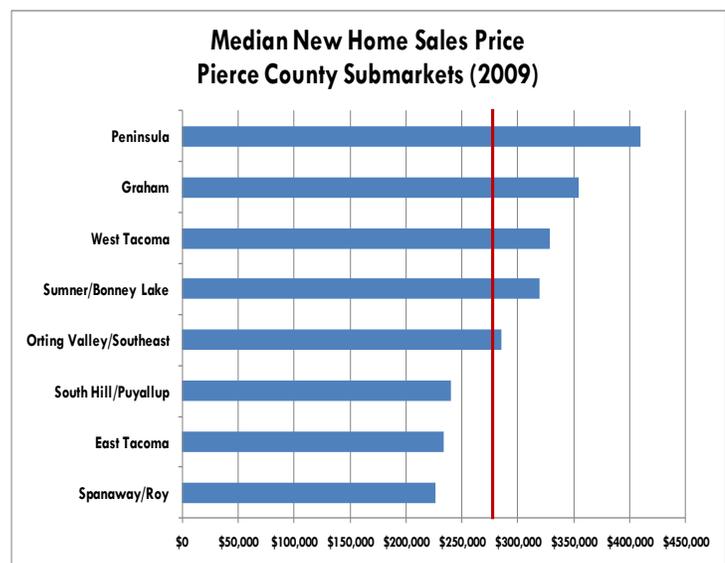
Median sales prices for newly built homes in Pierce County range from a low of \$226,812 in Spanaway/ Roy submarket to a high of \$405,500 in Peninsula. Half of the eight submarkets have median sales prices either near or below the county median sales price of \$277,426 (Figure 10). The three submarkets with the lowest median sale price are located in close proximity to Joint Base Lewis-McChord. This higher level of new home affordability

Figure 9



Source: New Home Trends, Inc., 4th Quarter 2009 and RKG Associates, Inc. 2010

Figure 10



Source: New Home Trends, Inc., 4th Quarter 2009 and RKG Associates, Inc. 2010

around JBLM provides greater choice for those either stationed or working on-post.

While all submarkets have seen new home prices decline over the past year, new homes sold, on average, for roughly 99% of their listed price in the county, suggesting that prices may have stabilized in 2009. Only in Sumner/Bonney Lake (87.4%) and Peninsulas (74.1%) have new homes sold well below their asking price in 2009 (Table 12).

As related to JBLM, those communities with median sales prices below the county median are some of the more popular communities for military households. RKG’s interviews with real estate professionals confirm that the Spanaway/Roy submarket is among the most popular due in large part to the lower sale prices, close proximity to commercial amenities along Pacific Avenue and relatively easy access to East Gate at JBLM.

Table 12
Recorded Plats Not Yet Sold (as of December 31, 2009)
Pierce County

Submarket	Median List Price	Recorded Plats Not Yet Sold	Avg. Plat Size (# of lots)	Vacant Lots & Unsold Specs			2008 Home Sales		2009 Home Sales	
				# of Lots & Homes	% of Total	Months of Inventory	Net New Sales	Median Sales Price	Net New Sales	Median Sales Price
Spanaway/Roy	\$224,950	27	70	1298	16%	78.3	125	\$260,000	199	\$226,812
East Tacoma	\$227,950	21	48	467	6%	48.7	103	\$325,000	115	\$233,995
South Hill/Puyallup	\$249,950	59	76	2736	33%	103.9	426	\$264,975	316	\$239,950
Orting Valley/Southeast	\$284,950	15	57	467	6%	169.8	53	\$310,000	33	\$285,000
Sumner/Bonney Lake	\$365,950	38	61	1802	22%	105.5	168	\$364,332	205	\$320,000
West Tacoma	\$349,950	28	30	388	5%	28	202	\$359,095	166	\$328,932
Graham	\$329,950	8	72	441	5%	182.5	19	\$421,658	29	\$355,000
Peninsula	\$552,400	27	35	631	8%	140.2	33	\$664,129	54	\$409,500
Total - Pierce County	\$277,975	223	58	8230	--	88.4	1129	\$ 317,942	1117	\$ 277,426

Source: New Home Trends, Inc., 4th Quarter 2009 and RKG Associates, Inc.

c. Existing Home Sales

RKG Associates analyzed MLS existing home sales data at the residential submarket level to better understand recent sales trends. MLS reports sales using established MLS submarkets that are similar to those submarkets used by New Home Trends, Inc. in the reporting of new home sales. Because there were differences in the submarket boundaries, RKG combined MLS submarkets to fit, as closely as possible, the submarkets created by New Home Trends and shown in Map 2.

The sale of existing homes in Pierce County over the past three years has mirrored the sale of new homes according the MLS data obtained for Pierce and Thurston Counties. Over the past three years, nearly 28,292 existing homes have sold totaling \$8.1 billion in sales volume (Table 13). By comparison, new home sales accounted for only 4,214 sales during the same period bringing the county total to 32,506 home sales during the 3-year period, including both new and existing homes. As a general rule, new home sales are not captured by MLS data because they are sold directly by the developer in conjunction with a lot sale without the use of a licensed broker. This is not always the case, but real estate brokers are generally used to market resale properties once the original owner decides to sell.

With existing home sales comprising 78.1% of all sales over the past three years, RKG Associates examined recent trends to characterize Pierce County housing demand. Detached housing of all types, mostly single family homes, comprised 86.6% of all existing homes sales. Condominiums,

which also include townhomes, were the second most popular housing type over the past three years accounting for only 8.8% of the “for-sale” market.

Over the past three years, all housing types have experienced a significant drop in demand, as total existing home sales have dropped 28%, from 11,673 in 2007 to 8,377 and sales volumes have declined 43% from \$3.7 billion to \$2.1 billion since 2007. It should be noted however, that according to MLS data, the number of existing home sales in 2009 increased slightly from the previous year by approximately 140 sales.

Relative to pricing, all housing types have experienced price drops since 2007 ranging from a low of 17% for condominiums to a high of 25% for manufactured housing. Single family detached homes declined by approximately 22% or \$71,396 during the period; going from an average sales price of \$328,551 to \$257,155. For prospective homebuyers, the drop in single family detached sale prices is the equivalent to a pay raise of \$16,328 annually. In other words, in order to finance \$71,396 in home value, a prospective homebuyer would have to show \$16,328 in income based on standard mortgage underwriting standards. As such, the reduction in home values is making homes more affordable. However, at the same time, mortgage lending standards have become more constrictive, making housing more difficult to finance due to higher minimum credit scores and 20% down payment requirements. This is less of a constraint for military personnel who can continue to obtain 0 to 3 percent down, VA mortgage loans to finance home purchases.

With the decline in home sales and prices, Pierce County existing homes are remaining on the market much longer than before. Where homes were generally sold within 70 to 120 days in 2007, they now take between 145 and 160 days today, for an increase of roughly 40 to 72 days, depending on housing type. While current marketing periods are reflecting a slowdown in home sales, cumulative days on market are still shorter in Pierce County than in many other parts of the country.

According to MLS, 32% (2,679 units) of Pierce County’s existing home sales in 2009 occurred in the West Tacoma submarket and the South Hill/Puyallup captured nearly 20% (1,626 units) of existing home sales. These figures are in part due to the established nature of these communities. In addition, the East Tacoma, Spanaway/Roy and Sumner/Bonney Lake submarkets each captured roughly 11% of existing home sales during the previous year.

The most affordably-priced single family homes in Pierce County were located in the East Tacoma (\$195,250) and Spanaway/Roy (\$214,471) submarkets where prices remained 20% to 25% below the county average of \$257,155 in 2009. As stated previously, both East Tacoma and Spanaway/Roy are popular locations for military households according to local Realtors.

Table 13
Existing Home Sales
Pierce County
2007-2009

	# of Sales	Avg. List Price	Avg. Sale Price	Cum. DOM(1)	Avg. SF	Avg Sale \$/SF	Sale to Asking Price Ratio
2007							
Attached Housing	109	\$ 265,829	\$ 266,769	74	1,498	\$ 178.08	1.004
Detached Housing	9,894	\$ 332,404	\$ 328,551	118	1,982	\$ 165.75	0.988
Condominium	1,167	\$ 240,034	\$ 243,271	82	1,232	\$ 197.52	1.013
Manufactured	503	\$ 191,493	\$ 188,455	95	1,453	\$ 129.67	0.984
Total Sales	11,673						
Total Sales Volume		\$3,658,446,659					
2008							
Attached Housing	81	\$ 245,336	\$ 242,528	98	1,426	\$ 170.05	0.989
Detached Housing	7,100	\$ 302,559	\$ 296,084	154	1,985	\$ 149.16	0.979
Condominium	761	\$ 224,348	\$ 219,717	112	1,245	\$ 176.54	0.979
Manufactured	300	\$ 176,657	\$ 173,483	119	1,434	\$ 121.02	0.982
Total Sales	8,242						
Total Sales Volume		\$2,341,091,237					
2009							
Attached Housing	78	\$ 208,928	\$ 205,673	146	1,504	\$ 136.78	0.984
Detached Housing	7,518	\$ 264,020	\$ 257,155	158	1,996	\$ 128.81	0.974
Condominium	569	\$ 208,190	\$ 201,813	151	1,264	\$ 159.67	0.969
Manufactured	212	\$ 147,548	\$ 141,033	147	1,441	\$ 97.88	0.956
Total Sales	8,377						
Total Sales Volume		\$2,094,061,023					
Totals - 2007-2009							
Attached Housing	268	\$ 243,075	\$ 241,661	106	1,476	\$ 161.64	0.99
Detached Housing	24,512	\$ 302,786	\$ 297,249	143	1,988	\$ 147.91	0.98
Condominium	2,497	\$ 227,997	\$ 226,645	115	1,247	\$ 177.91	0.99
Manufactured	1,015	\$ 177,930	\$ 174,125	120	1,443	\$ 116.19	0.98
Total Sales	28,292						
Total Sales Volume		\$ 8,093,598,919					
Numerical Change (2007-2009)							
Attached Housing	(31)	\$ (56,901)	\$ (61,097)	72	6	\$ (41.31)	(0.02)
Detached Housing	(2,376)	\$ (68,384)	\$ (71,396)	40	14	\$ (36.94)	(0.01)
Condominium	(598)	\$ (31,845)	\$ (41,458)	69	32	\$ (37.86)	(0.04)
Manufactured	(291)	\$ (43,945)	\$ (47,422)	52	(13)	\$ (31.79)	(0.03)
Total Sales	(3,296)						
Total Sales Volume		(1,564,385,636)					
Percentage (2007-2009)							
Attached Housing	-28%	-21%	-23%	97%	0%	-23%	-2%
Detached Housing	-24%	-21%	-22%	34%	1%	-22%	-1%
Condominium	-51%	-13%	-17%	84%	3%	-19%	-4%
Manufactured	-58%	-23%	-25%	55%	-1%	-25%	-3%
Total Sales	-28%						
Total Sales Volume		-43%					

Source: Pierce County Multiple Listing Service, 2010

Note: (1) Cumulative Days on Market reflect total number of days home has been marketed for sale, including multiple listing periods.

d. Rental Housing Demand

RKG Associates estimated average annual additions to the supply of investment grade apartment buildings of 20 or more units. The data were obtained from Dupre+Scott Apartment Advisors, a rental market tracking firm located in Seattle. While the data do not include all apartment units in Pierce County, it represents the demand for professionally managed apartment complexes. The units were categorized by unit type and the year the units were constructed.

According to Dupre+Scott, during the past decade (through the 3rd Quarter of 2009), approximately 6,609 new apartment units were added to the county supply for an average of 661 units per year (Table 14). During the 1990s, the average annual additions to supply were approximately 723 units, or 9.3% higher than the past decade. However, the single greatest period of rental housing expansion in Pierce County occurred during the 1985 to 1989 period, where 11,195 new units were added to the supply for an annual average of 2,239 units, nearly 3.4 times the most recent decade.

**Table 14
Apartment Average Annual Absorption
Pierce County**

Year Built	Studio	1-bed	2/1 ba	2/2 ba	3/2 ba	Total Ann. Absorp.	
1900-1944	528	540	92	22	9	1191	---
1945-1964	72	493	411	7	0	983	---
1965-1974	281	2695	2474	328	160	5938	594
1975-1984	90	4304	4012	573	178	9157	916
1985-1989	97	3998	3746	2337	1016	11195	2,239
1990-1999	104	1963	1984	2105	1074	7231	723
2000-2009	392	2012	1000	2464	741	6609	661
Totals	1564	16006	13719	7838	3178	42280	---
% Distribution	3.7%	37.9%	32.4%	18.5%	7.5%	100.0%	

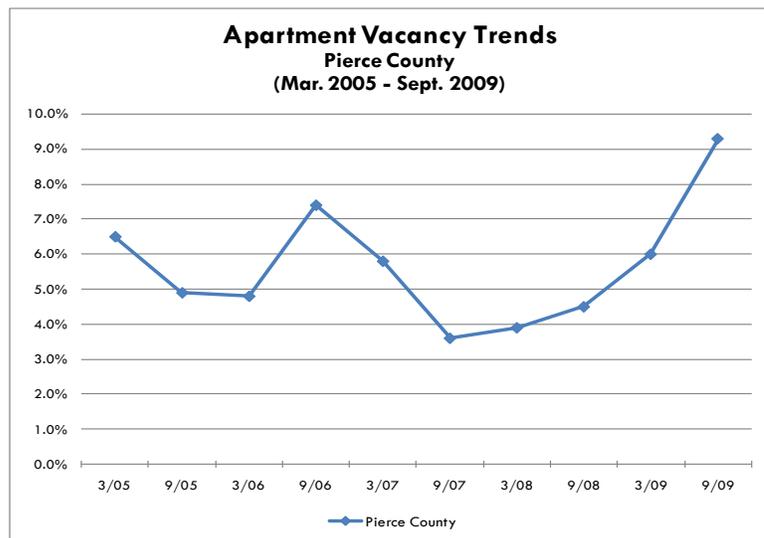
Source: Dupre + Scott Apartment Advisors, 3rd Quarter, 2009 and RKG Associates, Inc. 2010

The greatest demand for new apartments has been for 1 and 2 bedroom units, which account for over 70% of new additions. The demand for this type of unit is likely due to the subtle decline in average household size combined with the substantial amount of single-family, detached housing in the area, which typically is comprised of more than 2 bedrooms.

e. Rental Vacancy Trends

Rental vacancy trends over the past five years indicate that Pierce County apartments have ranged from a low of 3.6% in September 2007 to a high of 9.3% in September 2009. During the 5-year period, apartment vacancies averaged roughly 5.7% on all properties types (Figure 11). At the submarket level,

Figure 11



Source: Dupre+Scott Apartment Advisors, 3rd Qtr. 2009

vacancy rates vary by location and unit type. The Lakewood submarket reported the highest rental vacancies in the 3rd Quarter of 2009 at 13.3%, which was substantially above the county rate of 9.3% (Table 15).

Lakewood is a popular community for JBLM personnel and it's possible that higher vacancies reflect the impact of deployment actions during 2009. Based on RKG's experience in other military communities, broad fluctuations occurred in the local rental market based on the deployment movements. Military personnel must give landlords a 30-day advanced notice before deploying, which then absolves them from any further lease obligations. Another high vacancy area is the South Tacoma submarket, which had a vacancy rate of 10.6% in the 3rd quarter of 2009.

Typically, the highest vacancies are seen in studio apartments (12.2%) and the 3-bedroom units (10.0%). Anecdotally, RKG has heard the greatest unmet demand for military households is for larger units with three or four bedrooms. With the income of many lower level enlisted soldiers JBLM, it is possible that studio units are in high demand, but the data in Table 15 depicts the impacts of deployments. The same could be true for the larger rental units.

Table 15
Pierce County Rental Market Vacancy Trends
Total 20+ Market Rental Units
Vacancy Rates by Apartment Types (3rd Quarter 2009)

Pierce County	Studio	1-bed	2/1 ba	2/2 ba	3/2 ba	Total
Downtown Tacoma/Stadium	7.0%	4.9%	7.3%	10.5%	6.6%	6.6%
Fife/Milton	0.0%	7.8%	6.1%	8.1%	8.9%	7.4%
Fircrest/University Place	11.0%	8.1%	7.1%	9.6%	8.4%	8.1%
Gig Harbor	0.0%	5.6%	7.6%	4.0%	3.7%	5.6%
Lakewood	21.2%	11.8%	13.1%	14.1%	18.4%	13.3%
Mid Tacoma	11.7%	3.0%	6.8%	0.0%	0.0%	6.5%
North Tacoma	0.0%	6.9%	4.1%	5.6%	0.0%	5.5%
Other Pierce County	0.0%	7.0%	12.7%	8.1%	8.9%	8.3%
Parkland/Spanaway	5.6%	7.8%	7.5%	9.9%	5.2%	7.9%
Puyallup/Sumner	22.2%	8.1%	10.7%	7.4%	8.9%	9.0%
South Tacoma	22.0%	9.0%	10.1%	13.2%	9.1%	10.6%
Average Vacancy - Pierce Co.	12.2%	8.4%	9.4%	9.7%	10.0%	9.3%

Rent Rates by Apartment Type (3rd Quarter 2009)

Pierce County	Studio	1-bed	2/1 ba	2/2 ba	3/2 ba	All
Downtown Tacoma/Stadium	\$ 675	\$ 838	\$ 978	\$ 1,198	\$ 1,195	\$ 905
Fife/Milton	\$ -	\$ 712	\$ 846	\$ 927	\$ 1,190	\$ 846
Fircrest/University Place	\$ 583	\$ 653	\$ 771	\$ 927	\$ 1,066	\$ 767
Gig Harbor	\$ -	\$ 758	\$ 814	\$ 945	\$ 1,009	\$ 849
Lakewood	\$ 536	\$ 623	\$ 751	\$ 882	\$ 1,052	\$ 729
Mid Tacoma	\$ 543	\$ 597	\$ 758	\$ -	\$ -	\$ 671
North Tacoma	\$ 589	\$ 716	\$ 784	\$ 1,054	\$ -	\$ 836
Other Pierce County	\$ -	\$ 764	\$ 943	\$ 1,129	\$ 1,291	\$ 963
Parkland/Spanaway	\$ 603	\$ 604	\$ 756	\$ 961	\$ 1,127	\$ 757
Puyallup/Sumner	\$ 629	\$ 756	\$ 866	\$ 1,039	\$ 1,254	\$ 929
South Tacoma	\$ 648	\$ 671	\$ 779	\$ 878	\$ 1,057	\$ 775
Average Monthly Rent	\$ 624	\$ 694	\$ 798	\$ 979	\$ 1,150	\$ 815

Source: Dupre + Scott Apartment Advisors, 3rd Quarter, 2009 and RKG Associates, Inc. 2010

f. Rental Rates

Up until March of 2009, apartment rents in Pierce County had been on a steady 5-year rise (Figure 12), increasing by an average of 2.6% every six months. However, as the recession has hit the Puget Sound housing market, Pierce County rents have started to decline slightly.

According to Dupre+Scott Apartment Advisors, the average rent in Pierce County in September of last year was \$815/mo. This figure represents the base rent and does not include utilities. In addition, they report that 53% of

apartments are offering financial incentives to attract renters. This is the highest percentage over the five years with the exception of March 2005 when 58% of apartments offered incentives. The dollar value of those financial incentives was equal to \$582 in September 2009.

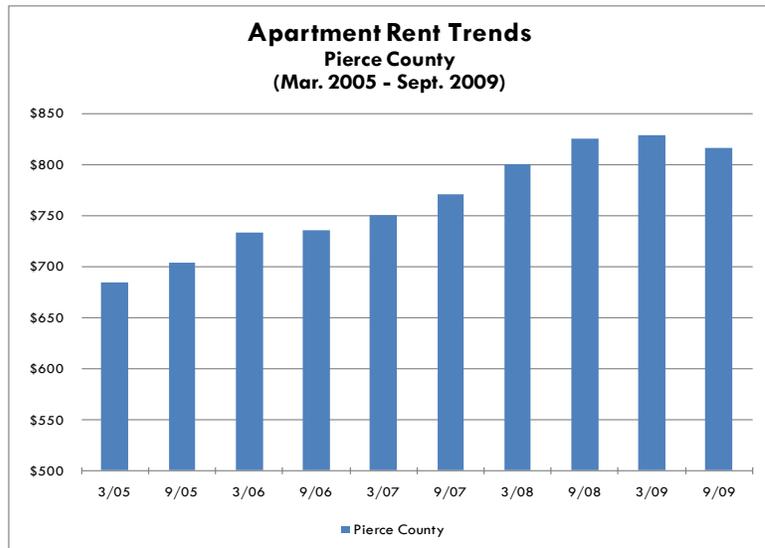
The highest average rents were achieved in the Other Pierce County submarket (\$905/mo.), which is located at the eastern edge of Fort Lewis, as well as the Puyallup/Sumner (\$929/mo.) submarket (Map 2). Some of the more affordable rental submarkets include Mid Tacoma (\$671/mo.) and Lakewood (\$729/mo.) (Table 4). It should be noted that the apartment submarkets identified by Dupre+Scott are different than those created by New Home Trends, Inc. to describe new home development.

2. **Thurston County**

a. New Home Sales

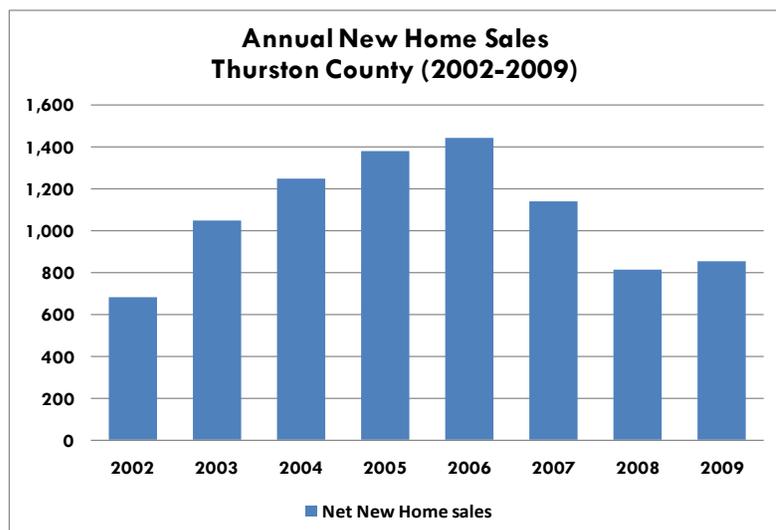
Unlike Pierce County, which achieved a high point in new home sales in 2002, Thurston County achieved low sales levels in the first half of the decade. However, home sales rapidly increased by an average annual rate of 28% until reaching a peak in 2006 (1,445 units); one year before the national recession began (Figure 13).

Figure 12



Source: Dupre+Scott Apartment Advisors, 3rd Qtr. 2009

Figure 13



Source: New Home Trends, Inc., 4th Quarter 2009 and RKG Associates, Inc. 2010

As a more affordable alternative to Pierce County’s housing market, Thurston County was able to sustain new home sales growth two years longer than Pierce County, which started to contract in 2005. Since 2006 annual sales activity has declined by 41%, but still remains above 2002 levels. In fact, according to New Home Trends, Inc., Thurston County experienced a modest increase of 4.7% in sales during 2009.

According to New Home Trends, Inc., Thurston County consists of ten residential submarkets, not all of which are relevant to the JBLM Growth Coordination Plan. This is because several of the submarkets are quite small and distant from the Joint Base. Those submarkets closest to JBLM include Yelm/Rainier, Lacey Environs, and Olympia/Lacey/Tumwater (Table 16). These submarkets accounted for 90% of total new home sales in 2009, and according to local real estate professionals, the submarkets are popular locations for military households.

During 2009, Thurston County median sales prices decreased by 7.8%, but individual submarkets such as Cooper Point (-28.8%), Rochester (-25.1%), and North Thurston (-13.5%) have fared much worse. New home sales in the Lacey Environs submarket increased by 67% between 2008 and 2009. Homes in this submarket have been selling at prices equal to 93% (\$281,500) of the median list price of \$301,950 (Table 16).

Table 16
Recorded Plats Not Yet Sold (as of December 31, 2009)

Thurston County										
Submarket	Median List Price	Recorded Plats Not Yet Sold	Average Plat Size (# of lots)	Vacant Lots & Unsold Specs			2008 Home Sales		2009 Home Sales	
				# of Lots & Homes	% of Total	Months of Inventory	Net New Sales	Median Sales Price	Net New Sales	Median Sales Price
Yelm/Rainier	\$234,950	32	39	846	21%	115.4	147	\$ 240,000	88	\$ 225,000
Rochester	\$239,950	10	12	101	3%	606.0	7	\$ 299,900	2	\$ 224,725
Olympia/Lacey/Tumwater	\$263,990	30	122	1588	40%	44.2	459	\$ 282,500	431	\$ 250,199
Tenino/Bucoda	\$299,950	8	21	75	2%	50.0	16	\$ 304,041	18	\$ 325,750
Cooper Point	\$300,000	11	50	378	9%	96.5	25	\$ 351,225	47	\$ 249,950
Lacey Environs	\$301,950	27	47	647	16%	30.6	152	\$ 299,950	254	\$ 281,500
Black lake/Littlerock/Delphi	\$302,250	5	56	279	7%	3348.0	0	\$ -	1	\$ 295,221
North Thurston	\$319,900	7	18	62	2%	57.2	10	\$ 329,450	13	\$ 285,000
Griffin	\$552,380	4	10	32	1%	384.0	0	\$ -	1	\$ 497,000
Summit Lake	--	0	--	0	0%	--	0	\$ -	0	\$ -
Total - Thurston County	\$268,950	134	56	4008	--	56.3	816	\$ 281,347	855	\$ 259,292

Source: New Home Trends, Inc., 4th Quarter 2009 and RKG Associates, Inc.

b. Median Sales Price – New Homes

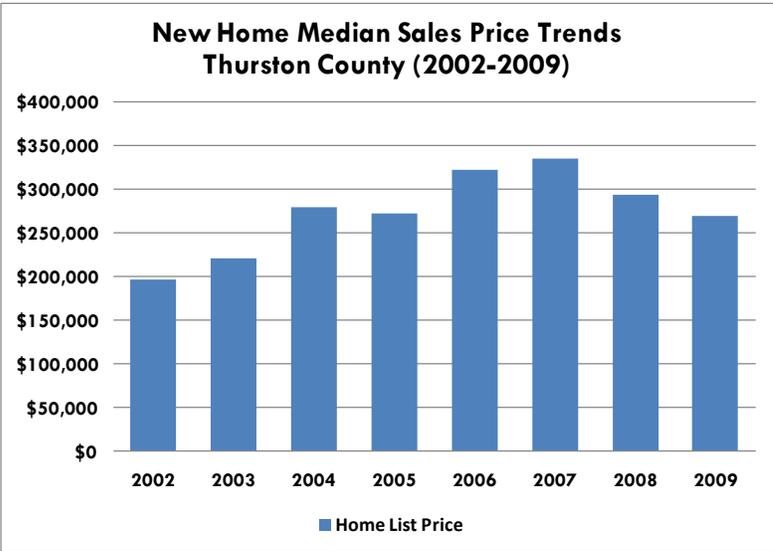
As the demand for new homes in Thurston County increased by an average of 28% per year between 2002 and 2006, median sale prices also increased by an average of 22% per year. This rapid increase in sale prices continued into 2007 even after demand for new homes started to decline (Figure 14). Since peaking in 2007 at \$334,000, Thurston County median home sales have declined by approximately 19.7% or \$60,000. This price decline reflects a significant adjustment in prices in just a 3-year period; however, it is considerably less than the 36% decline experienced in Pierce County between 2007 and 2009.

At a median sales price of \$259,292 in 2009, new homes in Thurston County sold at roughly 93% of the Pierce County median sales price (\$277,426). Over the past year, sales prices between the two counties have actually gotten closer, as Pierce County prices have declined faster. In 2008, Thurston County home prices were roughly 88% of Pierce County.

At the submarket level, Yelm/Rainier, Lacey Environs, and Olympia/Lacey/Tumwater had sales prices below the county median (Figure 15). The highest median prices in 2009 were achieved in Griffin and Tenino/Bucoda, but very few sales occurred in those submarket.

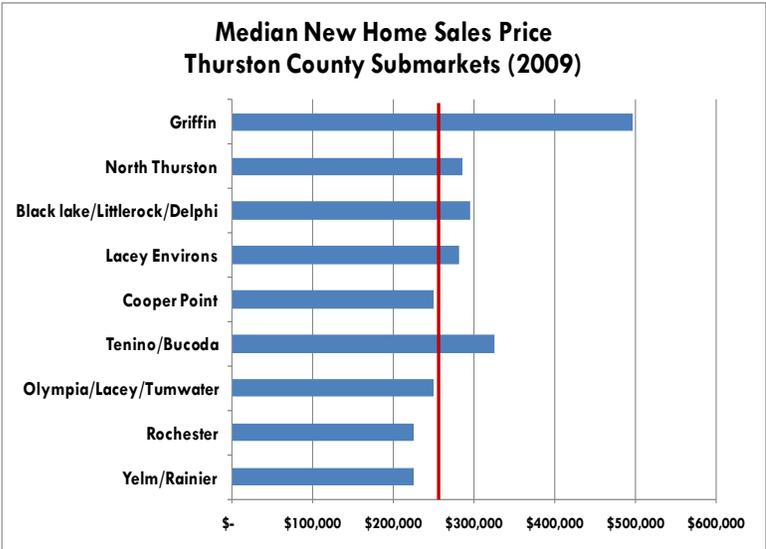
c. Existing Home Sales
 Existing homes in Thurston County over the past three years has accounted for approximately 10,001 sales, which is approximately 3.5 times the number of new home sales (2,806 units) during the same period (Table 17). The combined total of all home sales during this study period is estimated at 12,806, with existing home sales accounting for more than 78% of all sales - the same share as Pierce County.

Figure 14



Source: New Home Trends, Inc., 4th Quarter 2009 and RKG Associates, Inc. 2010

Figure 15



Source: New Home Trends, Inc., 4th Quarter 2009 and RKG Associates, Inc. 2010

Table 17
Existing Home Sales
Thurston County
2007-2009

	# of Sales	Avg. List Price	Avg. Sale Price	Avg. CDOM	Avg. SF	Avg Sale \$/SF	Sale to Asking Price Ratio
2007							
Attached Housing	51	\$244,989	\$ 241,906	68	1,726	\$140.18	0.987
Detached Housing	3,584	\$304,858	\$ 302,359	113	1,904	\$158.82	0.992
Condominium	225	\$205,721	\$ 204,985	23	1,306	\$156.97	0.996
Manufactured	180	\$190,933	\$ 187,173	90	1,527	\$122.58	0.980
Total Sales	4,040						
Total Sales Volume		\$1,175,805,410					
2008							
Attached Housing	57	\$181,600	\$ 181,773	42	1,317	\$138.03	1.001
Detached Housing	2,731	\$294,956	\$ 289,973	132	1,970	\$147.19	0.983
Condominium	153	\$204,875	\$ 203,241	92	1,342	\$151.41	0.992
Manufactured	147	\$177,110	\$ 170,805	90	1,456	\$117.31	0.964
Total Sales	3,088						
Total Sales Volume		\$858,481,636					
2009							
Attached Housing	66	\$199,434	\$ 196,549	80	1,618	\$121.49	0.986
Detached Housing	2,668	\$268,925	\$ 263,488	136	1,952	\$134.99	0.980
Condominium	48	\$210,961	\$ 203,260	60	1,462	\$139.06	0.963
Manufactured	91	\$160,262	\$ 154,308	116	1,461	\$105.64	0.963
Total Sales	2,873						
Total Sales Volume		\$739,756,877					
Totals - 2007-2009							
Attached Housing	174	\$206,944	\$ 205,003	63	1,553	\$133.23	0.99
Detached Housing	8,983	\$291,175	\$ 287,049	127	1,942	\$147.00	0.99
Condominium	426	\$206,008	\$ 204,164	58	1,370	\$149.15	0.99
Manufactured	418	\$179,395	\$ 174,262	99	1,481	\$115.18	0.97
Total Sales	10,001						
Total Sales Volume		\$ 2,774,043,923					
Numerical Change (2007-2009)							
Attached Housing	15	\$(45,555)	\$ (45,357)	12	(108)	\$(18.69)	(0.00)
Detached Housing	(916)	\$(35,932)	\$ (38,871)	23	48	\$(23.83)	(0.01)
Condominium	(177)	\$ 5,240	\$ (1,724)	37	156	\$(17.91)	(0.03)
Manufactured	(89)	\$(30,671)	\$ (32,865)	26	(66)	\$(16.94)	(0.02)
Total Sales	(1,167)						
Total Sales Volume		(436,048,533)					
Percentage (2007-2009)							
Attached Housing	29%	-19%	-19%	17%	-6%	-13%	0%
Detached Housing	-26%	-12%	-13%	20%	3%	-15%	-1%
Condominium	-79%	3%	-1%	163%	12%	-11%	-3%
Manufactured	-49%	-16%	-18%	29%	-4%	-14%	-2%
Total Sales	-29%						
Total Sales Volume		-37%					

Source: Thurston County Multiple Listing Service, 2010

Note: (1) Cumulative Days on Market reflect total number of days home has been marketed for sale, including multiple listing periods.

Thurston County's sales volume (10,001 units) during the 2007-2009 period was approximately 35% of the sales volume recorded in Pierce County (28,282 units) during the same period. This is not surprising since Pierce County has a considerably larger housing inventory than Thurston County. In 2007, existing home sales totaled 4040 units and by 2009 this number had dropped to 2,876 units, reflecting a 29% decline in homes sales activity. This drop in existing homes sales was slightly faster than new home sales (24.8%) during the same period. Likewise, total sales volumes declined from \$1.2 billion to \$738 million, for a decline of 37%, which was less than volume loss reported in Pierce County (43%).

The price of a single family detached home in Thurston County has declined by roughly \$38,871, from \$302,359 in 2007 to \$263,488 in 2009. This price drop reflects a 13% adjustment over two years as demand for existing homes has declined. In comparison, Pierce County single family detached homes dropped by roughly \$71,000 or 22%, which in effect has brought Pierce County housing prices more in line with Thurston County. In fact, the average sales price of a single family detached home in 2007 was \$328,000 in Pierce and \$302,000 in Thurston. By the end of 2009, that same unit sold for \$263,000 in Thurston and only \$257,000 Pierce County; making home prices 2.3% higher in Thurston County. This dramatic price reversal shows how the current recession has impacted Pierce County more severely and deeper than Thurston County. However, as demand starts to return, RKG projects that Pierce County prices will exceed Thurston County's in all housing types.

The Olympia/Lacey/Tumwater submarket has captured the largest share of existing home sales over the past three years. In 2009, this submarket accounted for 40.9% of single family attached, 38.6% of single family detached, 52.1% of condominium and 38.1% of all existing home sales in Thurston County. The next largest submarket, Lacey Environs, accounted for 18.9% (544 units) in 2009. Olympia (52.1%), Lacey Environs (25%) and Cooper Point (22.9%), accounted for nearly all of the county's (48 units) condominium and townhome sales in 2009. Yelm/Rainier (38.5%) and Rochester (16.5%) captured the greatest share of the county's 116 manufactured home sales in the past year.

d. Rental Housing Demand

RKG Associates estimated average annual additions to the supply of investment grade apartment buildings of 20 or more units. The data were obtained from Dupre+Scott Apartment Advisors, a rental market tracking firm located in Seattle (Table 18). While the data do not include all apartment units in Thurston County, it represents the demand for professionally managed apartment complexes. The units were categorized by unit type and the year the units were constructed.

Table 18
Apartment Average Annual Absorption
Thurston County

Year Built	Studio	1-bed	2/1 ba	2/2 ba	3/2 ba	Total Ann. Absorp.	
1900-1944	0	0	0	0	0	0	---
1945-1964	48	130	56	0	0	234	---
1965-1974	76	1178	691	0	66	2011	201
1975-1984	0	650	561	353	27	1591	159
1985-1989	16	540	544	320	158	1578	316
1990-1999	0	1319	669	1162	539	3689	369
2000-2009	0	613	229	621	138	1602	160
Totals	140	4429	2751	2456	929	10705	---
% Distribution	1.3%	41.4%	25.7%	22.9%	8.7%	100.0%	

Source: Dupre + Scott Apartment Advisors, 3rd Quarter, 2009 and RKG Associates, Inc. 2010

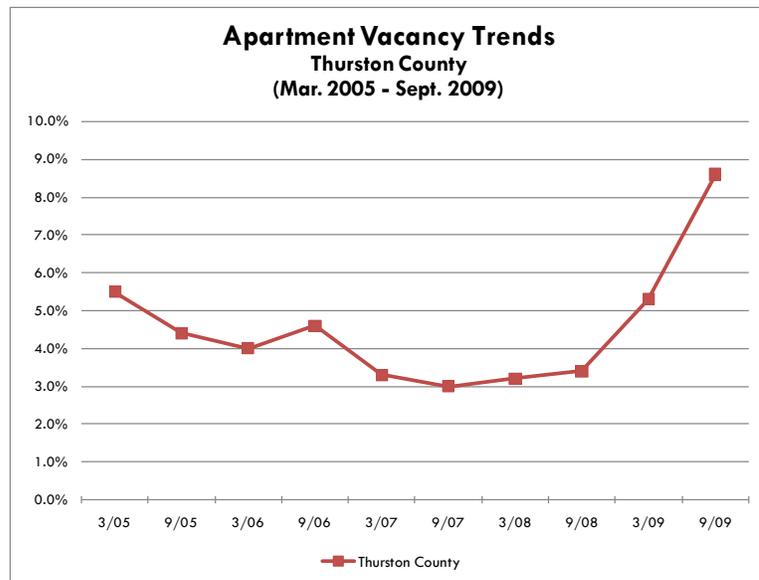
According to Dupre+Scott, during the past decade (through the 3rd Quarter of 2009), approximately 1,602 new apartment units were added to the county supply for an average of 160 units per year (Table 7). During the 1990s, the average annual additions to supply were approximately 369 units, or 130% higher than the past decade.

The single greatest period of rental housing expansion in Thurston County occurred during the 1990s, when 3,689 new units were added to the supply. This is different than Pierce County, which experience its greatest apartment growth during the 1985-1989 period. Since 1990, the greatest demand for new apartments has been for 1 bedroom (1,963 units) and 2 bedroom/2 bath units (1,783 units), which accounted for 71% of all new units during that 20-year period.

e. Rental Vacancy Trends

Rental vacancy trends over the past five years indicate that Thurston County apartments have ranged from a low of 3.0% in September 2007 to a high of 8.6% in September 2009. During the 5-year period, apartment vacancies averaged roughly 4.5% for all properties types combined; roughly 1.2% percentage points lower than Pierce County. In fact, over the past five years, apartment vacancies in Thurston County have run between 0.5% and 2.8% lower than Pierce County, with considerably less volatility. However, between September 2008 and September 2009, the average vacancy rate increased rapidly from 3.4% to 8.6% (Figure 16).

Figure 16



Source: Dupre+Scott Apartment Advisors, 3rd Qtr. 2009

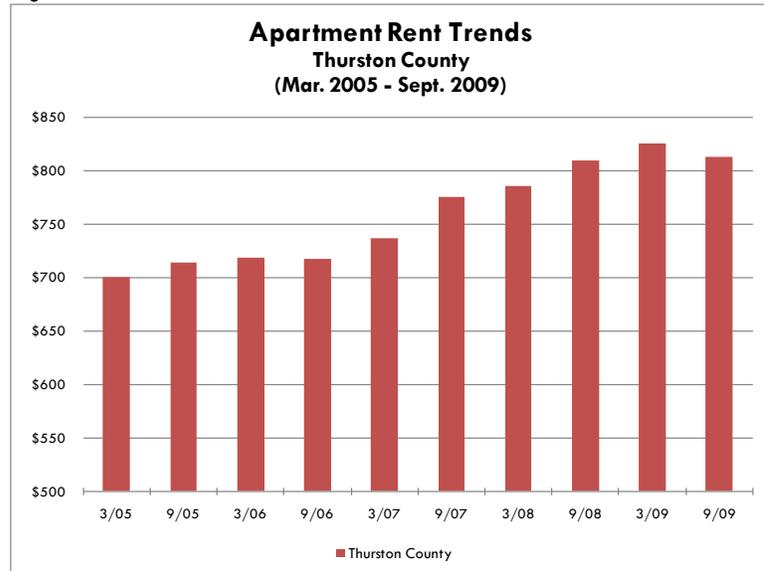
At the submarket level, vacancy rates vary by location and unit type. Unlike Pierce County with its eight rental submarkets, Dupre+Scott have identified only three submarkets in Thurston, including: Olympia, Lacey, and Tumwater. The Olympia submarket is the largest in terms of units, but the Lacey submarket is experiencing the highest rental vacancy at 10.4%, or 1.6 percentage points above the county average of 8.6% as of September 2009 (Table 8). The highest vacancies are also occurring in the larger units, particularly the 2 and 3 bedroom units. Lacey and Tumwater have been identified as areas attracting many military households.

Over the 5-year study period, vacancy rates in the Lacey submarket have consistently remained 20% higher than the county average, while vacancies in Olympia and Tumwater have remained 20% below the county average.

f. Rental Rates

Up until March of 2009, apartment rents in Thurston County had been on a steady 5-year rise (Figure 17), increasing by an average of 2.3% every six months. However, as the recession has hit the region, Thurston County rents have started to decline slightly, dropping from \$826/mo. to \$813/mo (Table 19). Rents in Thurston County have experienced roughly the same price appreciation over the past year and average rent rates are comparable.

Figure 17



Source: Dupre+Scott Apartment Advisors, 3rd Qtr. 2009

According to Dupre+Scott Apartment Advisors, the average rent in Thurston County in September of last year was \$813/mo – only \$2 off the Pierce County average rent. Whereas Thurston County has been viewed by many as a more affordable housing market, this is becoming less true as the cost gap for both “for sale” and rental housing has closed substantially. In addition, Dupre+Scott report that 61% of apartments are offering financial incentives to attract renters. This the highest percentage over the five year study period and higher than the 53% reported in Pierce County. The dollar value of those financial incentives was equal to \$581 in September 2009. The highest average rents were reported in the Tumwater submarket (\$867/mo.), while the Olympia submarket had the most affordable rents at \$791/mo.

Table 19
Thurston County Rental Market Vacancy Trends
Total 20+ Market Rental Units
Vacancy Rates by Apartment Types (3rd Quarter 2009)

Thurston County	Studio	1-bed	2/1 ba	2/2 ba	3/2 ba	All
Olympia	6.4%	6.2%	8.1%	7.5%	9.3%	7.6%
Lacey	0.0%	9.0%	11.8%	11.9%	9.9%	10.4%
Tumwater	7.7%	6.8%	8.2%	8.0%	11.8%	8.1%
Average Vacancy	6.3%	7.3%	9.8%	9.1%	10.4%	8.6%

Rent Rates by Apartment Type (3rd Quarter 2009)

Thurston County	Studio	1-bed	2/1 ba	2/2 ba	3/2 ba	All
Olympia	\$ 613	\$ 679	\$ 775	\$ 927	\$ 1,053	\$ 791
Lacey	\$ 602	\$ 704	\$ 809	\$ 951	\$ 1,051	\$ 811
Tumwater	\$ 615	\$ 750	\$ 822	\$ 938	\$ 1,108	\$ 867
Average Monthly Rent	\$ 613	\$ 701	\$ 793	\$ 938	\$ 1,073	\$ 813

Source: Dupre + Scott Apartment Advisors, 3rd Quarter, 2009 and RKG Associates, Inc. 2010

3. Implications

The results of the demand-side analysis indicates that Pierce and Thurston Counties, as well as the Puget Sound Region, are currently experiencing a down real estate and economic cycle that began during the 2006-2007 period. The future growth of JBLM is likely to fuel demand for off-base housing due to the Garrison Command's acknowledgement that they will not be able to house 30% of Joint Base personnel on the installation. This will have a modest influence on the demand for housing in the region, mostly in communities closest to the installation with housing priced to the incomes of the Joint Base's sizable workforce.

The largest demand segment will come from the region's natural growth pressures, which have been fueling housing growth of 1.5% to 3.0% over the past decade. This rapid growth pattern has been temporarily interrupted by the current economic recession, but will inevitably resume within the next few years. Currently, there are structural bottlenecks in the economy; the financial markets, consumer confidence; and in the real estate markets that are constraining regional growth pressures. However, as those structural barriers begin to lift, Pierce and Thurston County and the Greater Puget Sound Region will continue to be a very desirable location for businesses and new residents.

H. HOUSING AFFORDABILITY ANALYSIS

1. Introduction

This analysis examines the relative affordability of off-base housing for the incoming military population to be stationed at Joint Base Lewis-McChord (JBLM) as part of the installation's recent and ongoing expansion. Currently, JBLM houses approximately 24% of their soldier population on-base, which is below the Army's target of reaching 30%. It is anticipated that this ratio will not substantially shift over the next few years as modest plans exist to increase on-base housing. Therefore, the large number of soldiers living off-base places a greater emphasis on the need to understand the level of housing affordability, both rental and ownership, throughout the region. The results of this analysis are based on data received from JBLM, Pierce and Thurston County Assessor's Offices, Dupre+Scott Apartment Advisors, REMI, interviews with local real estate professionals and the Consultant's professional experience.

2. Methodology

The Consultant performed a detailed supply and demand analysis for military soldiers and housing at select affordability price points, which reflect typical fair market home values and rents in the region. For each increase in price point, the Consultant calculated the number of soldiers able to afford such a unit based on incomes of varying military rank. In addition, the analysis identifies locational attributes and magnitude of housing supply according to each price point.

To comprehend the soldier demand for off-base housing, the Consultant first allocated the incoming soldier population into those with and without dependents and those potential renters and owners by rank. This separation is critical as soldiers receive varying levels of allowances based on their dependents and ownership and renting incur different costs. The division ratios of soldiers with and without dependents and of renters and owners among ranks originated from JBLM's personnel distribution by rank. It is estimated that renters comprise 61.1% of soldiers stationed at JBLM, while owners account for the other 38.9%. Additionally, a majority of soldiers in each rank maintain dependents, ranging from 56.4% of the lower enlisted soldiers to 100% of soldiers ranking at an O7 or higher. The following Demand-Side Analysis details the projected increase in the soldier population with dependents and without between 2010 and 2016 stationed at JBLM by tenure.

Total incomes of soldiers determine the amount of housing costs each ranking soldier can afford. The incomes of the soldiers include a base salary and a Basic Allowance for Housing (BAH) and a Basic Allowance for Subsistence (BAS) by rank. Soldiers also receive additional pay for special assignments, combat pay, and the like, but these additional sources are difficult to estimate across the entire population. It should be noted that based on the Consultant’s previous experience with military growth projects, it is common that soldiers living off base often desire to restrict their housing costs to the amount of the BAH. To determine the demand for rental housing, the Consultant relied on this assumption and limited affordable rent rates to a soldier’s BAH. However, for ownership properties, bank underwriting guidelines do allow soldiers to spend portions of their salary on home mortgage payments. As such, the Consultant determined housing price points based on soldiers utilizing their housing allowances and a portion of their salaries. Including a portion of salary gives a more accurate representation of soldiers’ ability to pay for housing. The Demand-Side Analysis also details the cost assumptions for homeownership, such as interest rates, home insurance, and real estate taxes, which are part of the housing affordability calculation

The housing supply available to soldiers is divided into ownership and rental units. For the ownership supply, the Consultant focused on the availability of single-family housing units. This type of unit accounts for the vast majority of total housing units in the two-county region and according to interviews with local real estate professionals is the desired housing type of area soldiers. The presence of this type of housing throughout the region also helps determine locational attributes of affordable housing. To understand the fair market value for these units, the Consultant estimated values based on a relationship between 2009 sales and assessment data in each submarket. For instance, in the West Tacoma submarket in Pierce County, 3,511 housing sales were recorded by the County in 2009 according to the County Assessor’s Office (Table 20). Of these transactions, the average sale price exceeded the average 2010 assessed value by a ratio of 1.01. This ratio calculation was then applied to all single-family units to gauge fair market value. Afterward, the Consultant assumed a 3% turnover rate of the total number of units to estimate the amount of units that may be sold in any one year. This is based on RKG’s research in other urban residential markets as well as historical regional resale data provided by New Home Trends, Inc.

To determine the available supply of rental housing, RKG calculated the number of available apartments in the region by varying rent rates and submarkets. Average rent rates for various submarkets and apartment size originated from the Dupre+Scott Apartment Advisor October 2009 Apartment Vacancy Report. The supply of available rental units was derived by multiplying the number of units in a submarket by the most recent vacancy levels. Lastly, the Consultant compared the soldier demand for rental housing by the supply of apartments they can afford to determine any surplus or deficits of apartment units in the region.

Table 20
Sales-to-Value Ratio; By Submarket
2009

Submarket	# of Sales	Sales-to-Value Ratio
PIERCE COUNTY		
East Tacoma	958	0.99
Graham	317	0.97
Orting Valley/Southeast Pierce	286	1.38
Peninsula	894	0.97
South Hill/Puyallup	2,048	1.00
Spanaway/Roy	1,022	1.06
Sumner/Bonney Lake	1,074	1.03
West Tacoma	3,511	1.01
TOTAL	10,110	1.02
THURSTON COUNTY		
Black Lake/Littlerock/Delphi	71	1.02
Cooper Point	129	1.02
Griffin	25	1.05
Lacey Environs	422	1.04
North Thurston	74	0.96
Olympia/Lacey/Tumwater	631	1.07
Rochester	39	1.06
Summit Lake	8	1.10
Tenino/Bucoda	44	1.09
Yelm/Rainier	171	1.07
TOTAL	1,614	1.05

Source: Pierce County and Thurston County Assessor’s Offices & RKG Associates, Inc., 2010

3. Demand-Side Analysis

a. Military Growth (2010-2016)

According to official projections from JBLM, 1,899 new soldiers will locate to the installation between 2010 and 2016. This population increase reflects growth in nearly every rank. However, not all of these soldiers will comprise demand for housing off-base. Between 2010 and 2016, 559 net new barracks beds and 555 new family housing units will be developed on-base, according to the Public Works Department at JBLM (Table 21). The barracks spaces will be absorbed by the overall incoming military growth lessening the demand for off-base housing to 785 soldiers. In addition, it is assumed that the 555 new family housing units will primarily be absorbed by soldiers currently living off-base as they are able to request this new housing before newly stationed soldiers. However, the number of housing units in the region being vacated by soldiers moving into family housing on-base is expected to be backfilled by a portion of the incoming military population. Consequently, the total impact on off-base housing demand by the military growth is expected to equal 785 housing units.

Table 21
New Housing Development Schedule
Joint Base Lewis-McChord; 2010-2016

	2010	2011	2012	2013	2014	2015	2016	TOTAL
BARRACKS BY NUMBER OF BEDS								
Beds	78	491	-10	0	N/A	N/A	N/A	559
FAMILY HOUSING UNITS BY NEIGHBORHOODS								
Westcott Hills	24	0	0	0	N/A	N/A	N/A	24
Town Center	70	150	0	0	N/A	N/A	N/A	220
Cascade Village	0	61	0	0	N/A	N/A	N/A	61
Beachwood III	0	85	85	80	N/A	N/A	N/A	250
TOTAL	172	787	75	80	0	0	0	1,114

Source: Joint Base Lewis-McChord Department of Public Works, 2010

RKG divided this population growth into four groups, potential renters (with and without dependents) and potential owners (with and without dependents), to understand housing needs and affordability thresholds. In addition, the population growth is reported by rank, which is critical for understanding varying income levels. The distribution of military personnel by rank was provided by the JBLM Base Command. The data reflect the current staffing load at JBLM and is the most accurate information available. It is assumed that the incoming personnel will have the same distribution as the existing JBLM population Table 22 details the breakdown of these soldier types by rank.

According to the projections, 305 new soldiers will search for for-sale housing units; while 480 soldiers will prefer rental units. A majority of these soldiers (578) are classified as enlisted with the remaining 207 classified as officers. This data aids the analysis as enlisted soldiers generally have lower incomes than higher ranking officers.

b. Affordability Thresholds

RKG analyzed the incomes of the incoming soldier population to determine the maximum the level of housing affordability for each military rank; or in other words, their ability to pay for off-base housing. The incomes include salary and Basic Allowances for Housing (BAH) and a Basic Allowance for Subsistence (BAS). Thresholds were determined for ownership and rental housing units.

1. Ownership Thresholds

To calculate affordability thresholds for soldiers desiring ownership housing, RKG Associates determined maximum purchase prices based on requisite incomes, assumptions regarding loan terms, and standard mortgage underwriting guidelines for military personnel. It is understood that most soldiers prefer to keep housing costs equal or below their BAH level. However, to calculate the maximum housing price affordable to a soldier, RKG included a portion of each soldier’s salary allowable under standard underwriting guidelines. Assumptions made for determining ownership affordability thresholds include:

- **BAH Level** – The BAH for each soldier varies and is determined by their rank and whether the soldier has dependents. For instance, a soldier with dependents receives a slightly higher BAH due in large part to the necessity for a larger-sized home.
- **Base Salary** – The salary for each soldier varies and is determined by their rank and duration of service. For this analysis, the Consultant assumes higher length of service for higher levels attained within ranks. For instance, salary for an E7 soldier reflects service time over six years, while the salary for an E3 reflects service time of over three years. It is also assumed officers maintain a longer service time than most enlisted soldiers. Therefore, an O5 salary is reflective of over eight years of service, while an O2 reflects over six years.
- **Mortgage Interest Rate** – The current VA loan interest rate of 4.5% is utilized in the calculations. VA loans typically offer the lowest interest rate for soldiers and require no down payment.
- **Down Payment** – The affordability thresholds assume no down payment as VA loans do not require money up front.

**Table 22
Projected Soldier Population Growth
Joint Base Lewis-McChord; 2010-2016**

Rank	Soldiers with Dependents		Soldiers without Dependents		TOTAL
	Owners	Renters	Owners	Renters	
O7 or Higher	0	0	0	0	0
O6	3	0	0	0	3
O5	8	9	1	1	19
O4	17	8	4	2	31
O3	26	25	15	14	80
O2	5	9	5	10	29
O1	3	5	3	6	17
W5	0	1	0	0	1
W4	3	1	1	0	5
W3	5	2	0	0	7
W2	3	6	0	1	10
W1	3	1	1	0	5
E9	4	3	0	0	7
E8	19	10	3	2	34
E7	52	31	15	9	107
E6	42	57	33	44	176
E5	10	15	8	11	44
E4	7	77	6	60	150
E3	0	21	0	16	37
E2	0	10	0	8	18
E1	0	3	0	2	5
TOTAL	210	294	95	186	785

Source: Joint Base Lewis-McChord & RKG Associates, Inc., 2010

- Loan Term – The Consultant assumes 30-year fixed interest rate mortgage loan.
- Homeowners Insurance – A 0.16% rate is applied to the value of a home to account for anticipated homeowner’s insurance costs.
- Real Property Taxes – While tax rates change throughout Pierce and Thurston County, RKG Associates calculated the blended average real property tax rate in the region and at a millage rate of \$10.88.
- Other Household Debt – RKG assumed some level of household debt for each soldier to account for such things as auto loan payments, credit card debt, and other financial obligations in addition to mortgage payment. These additional debt payments comprise the upper limit on the debt-to-income ratio used by mortgage underwriters.

Using the assumptions above, RKG first capitalized BAH levels of military personnel to calculate the “buying power” of each housing allowance. RKG assumed a 30-year fixed mortgage term at 4.5% interest to determine the principal and interest on a home loan for each military rank. In other words, the first calculation converts the amount of the BAH for each rank, into the maximum monthly mortgage payment that the BAH would support, excluding taxes and insurance. The Consultant then calculated the value of homes that different ranking military can afford based on the other stated assumptions, including property taxes and homeowners insurance. To simplify the results of this analysis, RKG determined the number of soldiers by rank that can afford houses between value intervals of \$50,000, beginning with \$200,000. For example, an E7 soldier without dependents may be able to afford a house valued at \$262,500, but for the purposes of this analysis, the results state that soldier can afford a \$250,000 house, but not one at \$300,000 (Table 23).

Technical Memorandum

Table 23

**Housing Allowance as primary basis for Mortgage Calculation - Using Basic Pay
Based on 2010 Household Income Estimates**

Rank	Monthly BAH	Average Other HH Debt	Capitalized Value of BAH Less Other Debt	Monthly Pay (Salary plus BAS)	Percent of Salary Required for:								
					\$200,000 Home	\$250,000 Home	\$300,000 Home	\$350,000 Home	\$400,000 Home	\$450,000 Home	\$500,000 Home	\$550,000 Home	
MILITARY PERSONNEL WITH DEPENDENTS													
O7 >	\$ 2,285	\$459	\$360,407	\$9,177	0.0%	0.0%	0.0%	0.0%	2.3%	5.2%	8.2%	11.2%	
O-6	\$ 2,265	\$366	\$374,817	\$7,317	0.0%	0.0%	0.0%	0.0%	1.8%	5.6%	9.3%	13.2%	
O-5	\$ 2,244	\$324	\$378,917	\$6,482	0.0%	0.0%	0.0%	0.0%	1.8%	6.0%	10.3%	14.7%	
O-4	\$ 2,115	\$303	\$357,670	\$6,055	0.0%	0.0%	0.0%	0.0%	3.8%	8.4%	13.0%	17.8%	
O-3	\$ 1,929	\$280	\$325,479	\$5,597	0.0%	0.0%	0.0%	2.4%	7.3%	12.3%	17.4%	22.6%	
O-2	\$ 1,629	\$230	\$276,105	\$4,600	0.0%	0.0%	2.8%	8.8%	15.0%	21.3%	27.8%	34.4%	
O-1	\$ 1,422	\$184	\$244,360	\$3,677	0.8%	0.8%	8.4%	16.2%	24.2%	32.5%	41.0%	49.9%	
W-5	\$ 2,082	\$347	\$342,326	\$6,950	0.0%	0.0%	0.0%	0.6%	4.5%	8.4%	12.4%	16.5%	
W-4	\$ 2,004	\$236	\$348,913	\$4,722	0.0%	0.0%	0.0%	0.1%	6.0%	12.0%	18.2%	24.5%	
W-3	\$ 1,935	\$209	\$340,719	\$4,173	0.0%	0.0%	0.0%	1.2%	8.0%	14.9%	22.1%	29.5%	
W-2	\$ 1,791	\$196	\$314,812	\$3,918	0.0%	0.0%	0.0%	5.0%	12.3%	19.9%	27.6%	35.6%	
W-1	\$ 1,638	\$182	\$287,443	\$3,631	0.0%	0.0%	1.9%	9.7%	17.7%	26.0%	34.6%	43.5%	
E-9	\$ 1,983	\$183	\$355,223	\$3,663	0.0%	0.0%	0.0%	0.0%	7.0%	15.0%	23.3%	31.9%	
E-8	\$ 1,860	\$180	\$331,613	\$3,595	0.0%	0.0%	0.0%	2.9%	10.9%	19.2%	27.7%	36.6%	
E-7	\$ 1,743	\$176	\$309,187	\$3,528	0.0%	0.0%	0.0%	6.5%	14.8%	23.3%	32.1%	41.3%	
E-6	\$ 1,635	\$156	\$291,845	\$3,125	0.0%	0.0%	1.5%	10.7%	20.2%	30.2%	40.5%	51.2%	
E-5	\$ 1,395	\$145	\$246,625	\$2,908	0.6%	0.6%	10.4%	20.6%	31.2%	42.2%	53.8%	65.8%	
E-4	\$ 1,263	\$126	\$224,362	\$2,524	5.6%	5.7%	17.3%	29.5%	42.2%	55.6%	69.7%	84.5%	
E-3	\$ 1,263	\$112	\$227,095	\$2,247	5.7%	5.8%	19.1%	33.1%	47.8%	63.5%	80.1%	97.7%	
E-2	\$ 1,263	\$97	\$230,064	\$1,946	5.8%	6.0%	21.7%	38.4%	56.3%	75.4%	95.9%	118.0%	
E-1	\$ 1,263	\$94	\$230,654	\$1,886	5.8%	6.0%	22.3%	39.7%	58.4%	78.4%	99.9%	123.1%	
MILITARY PERSONNEL WITHOUT DEPENDENTS													
O7 >	\$ 1,974	\$688	\$253,746	\$9,177	0.0%	0.0%	2.6%	5.5%	8.5%	11.4%	14.4%	17.4%	
O-6	\$ 1,935	\$549	\$273,585	\$7,317	0.0%	0.0%	1.9%	5.6%	9.3%	13.1%	16.9%	20.8%	
O-5	\$ 1,824	\$486	\$264,045	\$6,482	0.0%	0.0%	3.0%	7.1%	11.4%	15.7%	20.1%	24.5%	
O-4	\$ 1,755	\$454	\$256,746	\$6,055	0.0%	0.0%	3.8%	8.3%	12.9%	17.5%	22.3%	27.1%	
O-3	\$ 1,548	\$420	\$222,669	\$5,597	0.0%	2.6%	7.4%	12.3%	17.3%	22.5%	27.7%	33.0%	
O-2	\$ 1,350	\$345	\$198,343	\$4,600	0.2%	6.0%	12.0%	18.1%	24.4%	30.9%	37.5%	44.2%	
O-1	\$ 1,128	\$276	\$168,193	\$3,677	4.6%	12.1%	19.8%	27.8%	36.0%	44.5%	53.2%	62.3%	
W-5	\$ 1,770	\$521	\$246,460	\$6,950	0.0%	0.3%	4.1%	8.0%	11.9%	15.9%	20.0%	24.1%	
W-4	\$ 1,662	\$354	\$258,117	\$4,722	0.0%	0.0%	4.8%	10.7%	16.7%	22.9%	29.2%	35.6%	
W-3	\$ 1,524	\$313	\$239,016	\$4,173	0.0%	1.4%	8.0%	14.8%	21.7%	28.9%	36.2%	43.8%	
W-2	\$ 1,440	\$294	\$226,208	\$3,918	0.0%	3.3%	10.4%	17.6%	25.1%	32.9%	40.8%	49.0%	
W-1	\$ 1,230	\$272	\$189,003	\$3,631	1.6%	9.2%	16.9%	25.0%	33.2%	41.8%	50.6%	59.8%	
E-9	\$ 1,518	\$275	\$245,379	\$3,663	0.0%	0.7%	8.3%	16.1%	24.1%	32.5%	41.1%	49.9%	
E-8	\$ 1,443	\$270	\$231,574	\$3,595	0.0%	2.8%	10.6%	18.6%	26.8%	35.4%	44.2%	53.4%	
E-7	\$ 1,308	\$265	\$205,929	\$3,528	0.0%	6.8%	14.8%	23.1%	31.6%	40.4%	49.5%	59.0%	
E-6	\$ 1,227	\$234	\$195,902	\$3,125	0.7%	9.6%	18.7%	28.3%	38.2%	48.4%	59.1%	70.3%	
E-5	\$ 1,074	\$218	\$168,925	\$2,908	5.8%	15.5%	25.6%	36.1%	47.0%	58.4%	70.3%	82.7%	
E-4	\$ 960	\$189	\$152,110	\$2,524	10.5%	21.9%	33.9%	46.4%	59.6%	73.4%	88.0%	103.3%	
E-3	\$ 960	\$169	\$156,208	\$2,247	10.9%	23.9%	37.7%	52.1%	67.5%	83.7%	100.9%	119.1%	
E-2	\$ 960	\$146	\$160,662	\$1,946	11.5%	26.8%	43.2%	60.6%	79.3%	99.2%	120.6%	143.6%	
E-1	\$ 960	\$141	\$161,548	\$1,886	11.6%	27.6%	44.6%	62.7%	82.2%	103.1%	125.5%	149.8%	

Note: Areas in dark gray denote a value of over 30%. Other assumptions include:

30-Year Term

4.5% Interest Rate

5.0% HH Debt for Soldiers with Dependents/7.5% HH Debt for Soldiers without Dependents

Home Value	\$200,000	\$250,000	\$300,000	\$350,000	\$400,000	\$450,000	\$500,000	\$550,000
In Annual Property Taxes \$ 10.88	\$ 2,176	\$ 2,720	\$ 3,263	\$ 3,807	\$ 4,351	\$ 4,895	\$ 5,439	\$ 5,983
In Annual Insurance Costs 0.160%	\$ 320	\$ 400	\$ 480	\$ 560	\$ 640	\$ 720	\$ 800	\$ 880
0% Downpayment (Assumes VA Loan)	\$ 2,496	\$ 3,120	\$ 3,743	\$ 4,367	\$ 4,991	\$ 5,615	\$ 6,239	\$ 6,863
Monthly Expense (Taxes & Insurance)	\$ 208	\$ 260	\$ 312	\$ 364	\$ 416	\$ 468	\$ 520	\$ 572

Source: RKG Associates, Inc.

Table 24 details the cumulative number of incoming soldiers between 2010 and 2016 that are likely to prefer ownership housing and the corresponding housing value thresholds that each can afford. The results of the analysis reflect soldiers with dependents and those without dependents. The analysis shows that nearly all (96.7%) incoming soldiers with dependents (203 soldiers) are able to afford at least a \$300,000 housing unit. Conversely, approximately one-quarter (25.3%; 24 soldiers) of the soldiers without dependents can afford housing units priced at \$300,000. This discrepancy is due, in large part; to the lower BAH levels soldiers without dependents receive. Overall, demand for ownership housing of incoming JBLM soldiers is primarily in the \$200,000 to \$300,000 range. It should also be noted that RKG calculated the value of homes that soldiers with dependents can afford if a co-signer or spouse is added to the household income assumptions. This analysis shows nearly each rank being able to afford approximately \$50,000 more for a housing unit. The income for co-signers was determined by the Consultant’s professional experience and through interviews with real estate professionals versed in providing home loans for the military.

Table 24
Demand for Ownership Housing among Incoming Soldiers at JBLM
2010-2016

Home Price:	Number of Soldiers with Dependents that can Afford Housing Threshold								Number of Soldiers without Dependents that can Afford Housing Threshold							
	\$200,000	\$250,000	\$300,000	\$350,000	\$400,000	\$450,000	\$500,000	\$550,000	\$200,000	\$250,000	\$300,000	\$350,000	\$400,000	\$450,000	\$500,000	\$550,000
Rank																
O7 >	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O-6	3	3	3	3	3	3	3	3	-	-	-	-	-	-	-	-
O-5	8	8	8	8	8	8	8	8	1	1	1	1	-	-	-	-
O-4	17	17	17	17	17	17	17	17	4	4	4	4	4	-	-	-
O-3	26	26	26	26	26	26	-	-	15	15	15	-	-	-	-	-
O-2	5	5	5	5	-	-	-	-	5	5	-	-	-	-	-	-
O-1	3	3	3	-	-	-	-	-	3	-	-	-	-	-	-	-
W-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W-4	3	3	3	3	3	-	-	-	1	1	1	1	-	-	-	-
W-3	5	5	5	5	5	-	-	-	-	-	-	-	-	-	-	-
W-2	3	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-
W-1	3	3	3	3	-	-	-	-	1	1	-	-	-	-	-	-
E-9	4	4	4	4	4	-	-	-	-	-	-	-	-	-	-	-
E-8	19	19	19	19	19	-	-	-	3	3	3	-	-	-	-	-
E-7	52	52	52	52	-	-	-	-	15	15	-	-	-	-	-	-
E-6	42	42	42	42	-	-	-	-	33	33	-	-	-	-	-	-
E-5	10	10	10	-	-	-	-	-	8	-	-	-	-	-	-	-
E-4	7	7	-	-	-	-	-	-	6	-	-	-	-	-	-	-
E-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL DEMAND	210	210	203	190	85	28	11	-	95	78	24	6	-	-	-	-
% of Likely Homebuyers	100.0%	100.0%	96.7%	90.5%	40.5%	13.3%	5.2%	0.0%	100.0%	82.1%	25.3%	6.3%	0.0%	0.0%	0.0%	0.0%

Source: RKG Associates, Inc., 2010

2. Rental Thresholds

Comparing the BAH levels for different ranks of soldiers with the average apartment rent rates and associated utility costs in the two-county region shows that nearly all appropriately-sized units based on a soldier's number of dependents are deemed affordable. This finding assumes that a soldier without dependents does not require a two-bedroom apartment (or larger) for sole occupancy and that a soldier with dependents cannot occupy an apartment smaller than a one-bedroom unit. In the real world, it is quite common for one or more soldiers to share an apartment to reduce their monthly housing expenses. However, for purposes of evaluating the region's rental affordability, RKG has looked at the BAH for different military personnel in comparison to local rents by submarket. Average rent rates for apartment units in the region are derived from Dupre+Scott Apartment Advisors, while average utility costs were calculated using 10% of the rent. Utilities in this analysis include electric, gas, phone, cable and internet access. The analysis shows the lowest level for BAH is \$960/month and is provided to E1 to E4 soldiers without dependents, while the highest average rent rate for a studio or one-bedroom apartment is below the soldier's housing allowance, at \$922/month (one-bedrooms in the Downtown Tacoma/Stadium submarket in Pierce County). Additionally, the lowest level of BAH for soldiers with dependents is \$1,263/month (also provided to soldiers ranked at an E1, 2, 3 or 4), which covers nearly all two-bedroom units and most three-bedroom units in the region (Table 25). The Consultant acknowledges that the rent of some units in the region will exceed a soldier's BAH, but for the purposes of this analysis, individual unit rents are not available and averages are used.

Table 25
Average Rent and Utility Rates by Apartment Type
3rd Quarter 2009

	Studio	1 Bd	2 Bd/1Ba	2 Bd/2 Ba	3 Bd/2 Ba
PIERCE COUNTY					
Downtown Tacoma/Stadium	\$743	\$922	\$1,076	\$1,318	\$1,315
Fife/Milton	\$0	\$783	\$931	\$1,020	\$1,309
Fircrest/University Place	\$641	\$718	\$848	\$1,020	\$1,173
Gig Harbor	\$0	\$834	\$895	\$1,040	\$1,110
Lakewood	\$590	\$685	\$826	\$970	\$1,157
Mid Tacoma	\$597	\$657	\$834	\$0	\$0
North Tacoma	\$648	\$788	\$862	\$1,159	\$0
Other Pierce County	\$0	\$840	\$1,037	\$1,242	\$1,420
Parkland/Spanaway	\$663	\$664	\$832	\$1,057	\$1,240
Puyallup/Sumner	\$692	\$832	\$953	\$1,143	\$1,379
South Tacoma	\$713	\$738	\$857	\$966	\$1,163
THURSTON COUNTY					
	Studio	1-bed	2/1 ba	2/2 ba	3/2 ba
Olympia	\$674	\$747	\$853	\$1,020	\$1,158
Lacey	\$662	\$774	\$890	\$1,046	\$1,156
Tumwater	\$677	\$825	\$904	\$1,032	\$1,219

Source: Dupre + Scott Apartment Advisors & RKG Associates, Inc., 2010

4. Supply-Side Analysis

a. Ownership Housing

It is estimated that there are approximately 7,000 single-family housing units with fair market values between \$150,000 and \$550,000 on the resale market in the region. This figure derives from the total number of single-family units multiplied by a turnover factor of 3%, which is representative of the estimated number of units available on the resale market during any one year. According to New Home Trends, Inc., there were an average of 4,892 resale units in Pierce County and an average of 1,437 resale units in Thurston County on the market at any one time in 2009. Based on the number of owner-occupied units (detailed earlier in this report) in each county, this represents approximately 2.6% of owner-occupied units in Pierce County and 2.2% of owner-occupied units in Thurston County were being actively marketed. RKG applied a slightly higher resale activity level (3%), reflecting the assumption that the market will return to a pre-recessionary environment. Table 26 details the values and locations of these units. It should be noted that the analysis reflects only those units with improvement values above \$50,000. This limitation is a measure to exclude units that may be in poor condition or deemed unfit for inhabitation. Of the total number of for-sale units, the majority (5,207 units/74%) are valued at less than \$300,000. This supply of units reflects the pricing range that many of the incoming soldiers are able to afford. The remaining 1,858 units are valued above \$300,000, which are primarily affordable for officers and higher ranking enlisted soldiers.

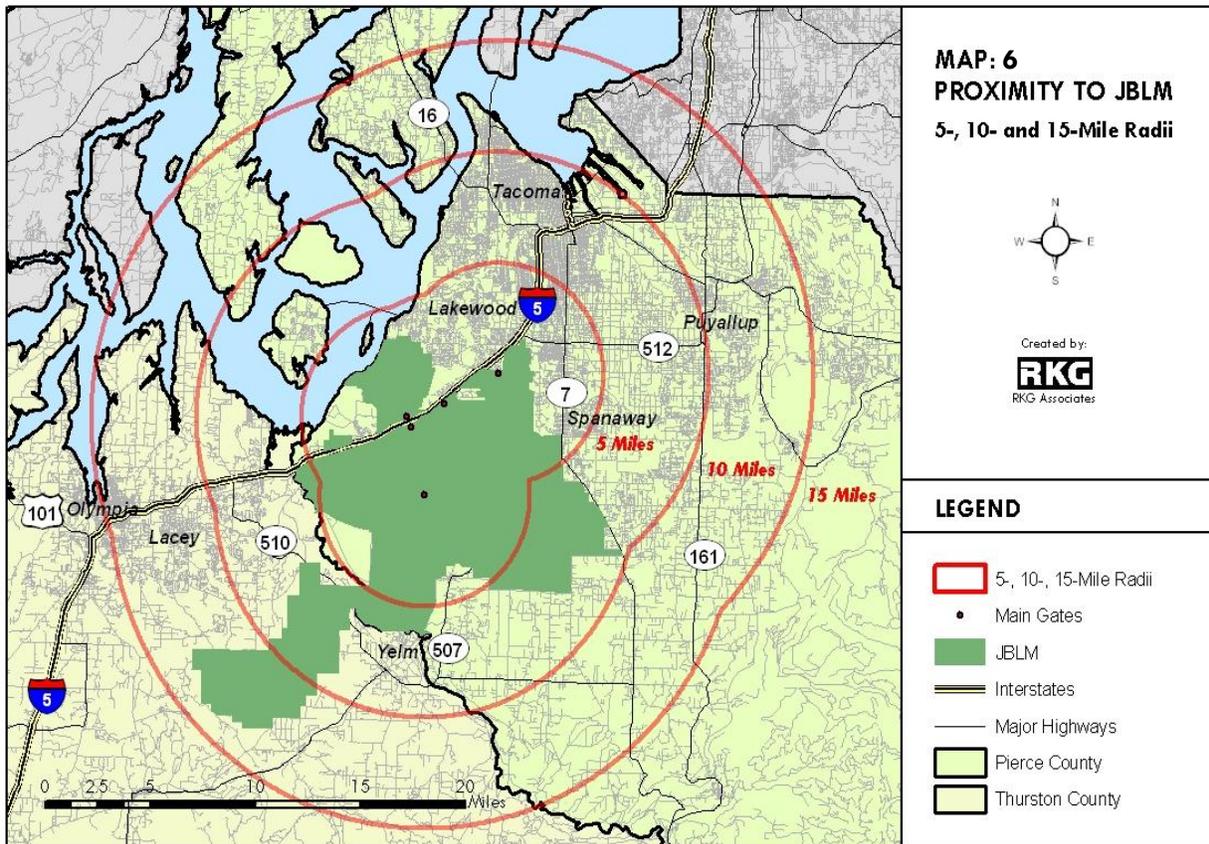
Table 26
Estimated Single-Family Housing Units For-Sale by Fair Market Value
2010

Home Price:	\$150k - \$200k	\$200k - \$250k	\$250k-\$300k	\$300k-\$350k	\$350k-\$400k	\$400k-\$450k	\$450k-\$500k	\$500k-\$550k	TOTAL
PIERCE COUNTY									
East Tacoma	151	124	80	33	21	12	8	5	433
Graham	43	58	37	24	15	8	4	3	193
Orting Valley/Southeast Pierce	7	21	38	35	27	13	9	6	154
Peninsula	43	76	101	77	59	45	33	25	460
South Hill/Puyallup	181	464	243	106	54	25	12	7	1,093
Spanaway/Roy	146	195	60	27	14	10	5	2	459
Sumner/Bonney Lake	45	123	133	79	46	28	20	13	487
West Tacoma	547	565	362	188	93	59	40	30	1,884
THURSTON COUNTY									
Black Lake/Littlerock/Delphi	22	33	31	24	15	10	6	3	145
Cooper Point	21	45	35	21	13	7	5	4	151
Griffin	5	8	8	7	6	4	5	3	45
Lacey Environs	89	151	81	40	31	22	13	9	437
North Thurston	17	26	29	24	20	13	9	6	144
Olympia/Lacey/Tumwater	131	241	143	65	37	22	12	7	656
Rochester	16	26	13	8	3	1	1	1	69
Summit Lake	0	1	2	2	2	2	2	1	12
Tenino/Bucoda	17	17	13	8	4	2	1	0	63
Yelm/Rainier	66	49	29	18	10	6	3	2	181
TOTAL	1,547	2,221	1,438	788	471	288	185	127	7,065

Source: Pierce and Thurston County Assessor's Offices & RKG Associates, Inc., 2010
Note: Housing Units with assessed improvement values below \$50,000 are excluded

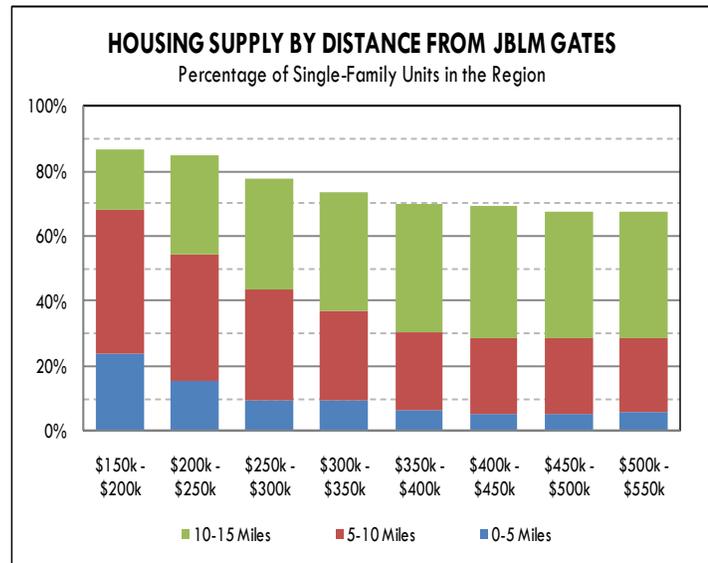
The highest concentrations of affordable for-sale units are located in submarkets that are heavily urban. In Pierce County for example, the West Tacoma (1,474 units) and South Hill/Puyallup (888 units) submarkets are estimated to have the greatest number of existing units for sale valued between \$150,000 and \$300,000 in any given year. In Thurston County, single-family units valued in this range are located in the Olympia/Lacey/Tumwater submarket (514 units). Each of these submarkets is stated anecdotally to be desirable areas for soldiers stationed at JBLM to locate due to their relative close proximity to the installation.

To gain additional perspective on the location of affordable units, RKG also estimated the percentage of affordable single-family units in the region by distance from the main gates at JBLM. This analysis was conducted “as the crow flies” and focuses on the 5-, 10- and 15-mile radii from the gates. Map 6 details the area covered by the different radii. The 15-mile radius around the gates encapsulates most of the heavily developed areas of the two counties, including Tacoma, Lacey, Spanaway, Puyallup and much of Olympia.



Most of the single-family housing units valued between \$150,000 and \$550,000 in the two-county region are located within 15 miles of the main gates at JBLM. In addition, the units deemed affordable to nearly every ranking soldier, those valued between \$150,000 and \$300,000, are heavily concentrated around the installation with nearly 80% located within 15 miles of the main gates (Figure 18). The proximity of these affordably-valued units to JBLM provides a greater supply for soldiers searching for off-base ownership opportunities. Of the total number of units within 15 miles, it should be noted that only a modest amount of these units exist within five miles due primarily to this area being largely occupied by military grounds.

Figure 18



Source: Pierce and Thurston County Assessor's Offices & RKG Associates, Inc., 2010

In addition to resale housing units, new construction must also be included in the supply of affordable housing. According to New Home Trends' Strategic Examiner report (4th Quarter 2009), Pierce and Thurston County had 599 new single-family housing units listed for-sale at the end of 2009. This amount is slightly lower than in previous years due, in large part, to the slowdown in the real estate industry. The median list prices for these units were \$277,975 in Pierce County and \$268,950 in Thurston County. While list prices are not inventoried for each unit, it can be assumed that many of the new units were likely priced similarly as each is part of larger subdivisions. These list prices are within the range of affordability for a large percentage of soldiers that will likely search for ownership opportunities.

Lastly, the foreclosure market needs addressing in that the housing market nationwide has recently been experiencing high levels of foreclosures. According to the most recent figures released by RealtyTrac, an online publisher of foreclosure, auction and bank-owned homes, foreclosures in Pierce and Thurston County number 6,938 and 1,151, respectively as of June 2010. However, determining the potential purchase price of a foreclosed home cannot be readily quantified as these prices are typically agreed upon by the mortgage originators. In addition, some of the foreclosed homes may be listed on the open market by way of a Realtor, so adding this inventory to the resale supply may be duplicating some properties. Therefore, addressing the foreclosure market as it relates to the available supply of housing in the region must remain qualitative in nature.

b. Rental Housing

There are approximately 4,863 unoccupied apartment units in the two-county region that could absorb future soldier population growth (Table 27). This unit count is based on data originating from the Dupre + Scott 3rd Quarter 2009 Apartment Vacancy Report. This amount is likely to fluctuate slightly based on additional units added to the market and changes in vacancy levels within different submarkets. However, Table 27 details approximate levels of supply among increasing rent rates/utility costs and room counts.

Most of the unoccupied apartment supply in the region has an average rent and utility rate between \$600 and \$900/monthly. These 2,923 units account for more than half (60.1%) of all unoccupied apartments in the region. Higher priced units, those priced more in line with JBLM soldiers' BAH, are comparatively limited. In addition, these higher priced units are primarily three-bedroom units. Not all soldiers with dependents will require a three-bedroom unit as many may be married with zero or one child.

One-bedroom units, which are assumed to be rented by soldiers with or without dependents, account for 34.2% (1,665 units) of all unoccupied units in the region. In addition, many are priced at levels that represent two-thirds to one-half of many locally-stationed soldiers' BAH. About one-quarter of these units (401 units) are found in the Lakewood submarket in Pierce County, located in close proximity to JBLM. The low average rent rates for these units likely reflect older apartment complexes with few amenities.

Table 27
Apartment Supply; Unoccupied Units by Rent and Utility Costs
October, 2009

Apartment Type	< \$500	\$500 - \$600	\$600 - \$700	\$700 - \$800	\$800 - \$900	\$900 - \$1,000	\$1,000 - \$1,100	\$1,100 - \$1,200	\$1,200 - \$1,300	> \$1,300	TOTAL
PIERCE COUNTY											
Studios	2	75	16	116	-	-	-	-	-	-	209
1-Bedrooms	-	-	460	543	255	87	-	-	-	-	1,344
2-Bedrooms	1	-	-	-	981	604	248	157	39	58	2,086
3-Bedrooms	1	-	-	-	-	-	-	176	5	137	319
Subtotal	3	75	476	659	1,235	691	248	333	43	195	3,957
THURSTON COUNTY											
Studios	-	-	12	-	-	-	-	-	-	-	12
1-Bedrooms	-	-	-	266	56	-	-	-	-	-	322
2-Bedrooms	-	-	-	-	220	34	225	-	-	-	478
3-Bedrooms	-	-	-	-	-	-	-	56	40	-	96
Subtotal	-	-	12	266	276	34	225	56	40	-	907
TOTALS											
Without Dependents ¹	2	75	487	925	310	87	-	-	-	-	1,885
With Dependents ²	2	-	460	809	1,511	724	473	389	83	195	4,643
TOTAL	3	75	487	925	1,511	724	473	389	83	195	4,863

Source: Dupre + Scott Apartment Advisors & RKG Associates, Inc., 2010

Note: ¹Total of studio and one-bedroom apartments

Note: ²Total of one-, two- and three-bedroom apartments

5. Implications

The affordability analysis seeks to measure the demand for ownership and rental housing among the projected soldier population growth between 2010 and 2016 versus the associated housing supply. However, it should be noted that competition for housing will also involve the natural population growth in the region that is expected over the next six years. The magnitude of this population growth can be projected; however, the various household incomes of this population are undetermined. Subsequently, determining the level of demand for certain priced housing is unquantifiable. According to population growth scenarios conducted by RKG utilizing REMI, Pierce and Thurston County are projected to increase by net 82,799 and 42,341 persons, respectively, between 2010 and 2016. Applying a 2.5 person average for household size to these figures shows that total demand for housing units is likely to increase by approximately 50,000 units in the two-county region by 2016. This includes the comparatively modest demand for housing of incoming soldiers to JBLM. To put this into perspective, the Existing Conditions Analysis states that housing units in the region have increased by approximately 65,000 units between 2000 and 2009, which equates to an annual growth of around 7,200 units. To accommodate the total projected growth, the region will likely need to add housing units at a pace similar to that of the average during the past nine years.

a. Ownership Affordability

Overall, the majority of incoming soldiers that will likely seek to purchase housing can afford units ranging between \$150,000 and \$350,000 if they are to maximize their incomes for housing. The results of the affordability analysis show a comparatively modest number of soldiers able to afford higher priced units. The highest demand will be soldiers able to afford housing units at around \$350,000 (111 soldiers) (Table 28). Currently, the resale supply in the region for single-family housing at this price point (788 units) far exceeds the projected demand. All other demand figures are also well below the existing supply available in the resale market at corresponding affordability thresholds. This supply does not include the newly constructed units currently on the market. At the end of 2009, there were approximately 600 of these new spec housing units for sale at unconfirmed list prices. Additionally, a high number of foreclosures exist in the region, but pricing of these units is also not quantifiable.

Table 28
Ownership Affordability Analysis
Supply vs. Demand

Affordability Thresholds	\$200,000	\$250,000	\$300,000	\$350,000	\$400,000	\$450,000	\$500,000	\$550,000	TOTAL
DEMAND: SOLDIER INCREASE 2010-2016									
Demand (w/ dependents)	-	7	13	105	57	17	11	-	210
Demand (w/o dependents)	17	54	18	6	-	-	-	-	95
Total Demand	17	61	31	111	57	17	11	-	305
SUPPLY: REALE HOUSING UNITS									
Supply (Resale) ¹	1,547	2,221	1,438	788	471	288	185	127	7,065
DIFFERENCE (Surplus/Deficit)	1,530	2,160	1,407	677	414	271	174	127	6,760

Source: RKG Associates, Inc., 2010

Note: ¹ Reflects current resale market in 2010

b. Rental Affordability

The results of the rental affordability analysis show a deficit in available higher-priced apartment units. The limited supply of apartments priced above \$1,200 (83 units) shows that soldiers in the region are either not maximizing their BAH for housing or these units are scarce due to competition among the non-soldier population (Table 29). Consequently, the soldier population growth that seeks rental housing outside of JBLM will likely not maximize their BAH on area rental housing. Additionally, many of these soldiers looking for rental property with more space and adequate amenities will continue to look in the traditional ownership market. Anecdotally, many area real estate professionals state that much of the single-family housing units are rented to area employees; military or otherwise. Without new apartment units that target soldier needs and affordability levels, many renters are likely to continue looking to rent in attached and detached single-family housing.

Table 29
Rental Affordability Analysis
Supply vs. Demand

Affordability Thresholds	< \$500	\$500 - \$600	\$600 - \$700	\$700 - \$800	\$800 - \$900	\$900 - \$1,000	\$1,000 - \$1,100	\$1,100 - \$1,200	> \$1,200	TOTAL
DEMAND: SOLDIER INCREASE 2010-2016										
Demand (w/ dependents)	-	-	-	-	-	-	-	111	183	294
Demand (w/o dependents)	-	-	-	-	86	11	6	44	39	186
Total Demand	-	-	-	-	86	11	6	155	222	480
SUPPLY: UNOCCUPIED APARTMENT UNITS										
Supply	3	75	487	925	1,511	724	473	389	83	4,669
DIFFERENCE (Surplus/Deficit)	3	75	487	925	1,425	713	467	234	(140)	4,189

Source: RKG Associates, Inc., 2010

I. ALLOCATION OF PROJECTED POPULATION GROWTH

RKG Associates developed a complex, Microsoft Excel-based model that allocates projected population growth into different areas within the two-county region. The results of the model are largely informed by the availability of land resources and zoning regulations as well as numerous factors relating to localized development trends and proximity to transportation networks and civic institutions. The purpose of the 'allocation model' is to provide a sense of the areas most likely to experience the greatest impacts due to continued military and natural population growth. In addition, the model was calibrated to examine growth impacts of the military population housed off-base as well as the overall population growth. The population projection figures used in this analysis originates from Joint Base Lewis-McChord and results taken from the REMI model. Data used to allocate the population growth derive from New Home Trends, Inc., Thurston Regional Planning Council (TRPC), and Pierce County Planning and Land Services (PALS).

The Consultant developed two separate population allocation models. Each model focuses on the population growth projected to occur between 2010 and 2016. The first model is calibrated to determine where the 785 incoming soldiers likely to live off-base¹³ and their dependents will locate. The second model is calibrated to determine where the remainder of the civilian population growth is likely to locate. The population figures used in the latter model include the natural population growth in the region, the non-soldier military population growth, and the indirect population growth related to the installation expansion. Each model maintains different inputs as the housing preferences of the soldier population are slightly varied from the remaining population.

¹³ This soldier population figure derives from the preceding Affordability Analysis.

1. Methodology

The first step in allocating population growth is to determine the magnitude and year-over-year change occurring in each population. The change in military personnel demanding off-base housing reflects the total increase in soldiers less the number of new barracks spaces and family housing units being developed on-base, which equals a projected 785 soldiers (see Affordability Analysis). However, the total population growth in the region is determined by using the REMI model¹⁴. RKG Associates ran a REMI simulation that includes all impacts due to military expansion to gauge the regional population growth. Using these population projections, the Consultant then subtracted the year-over-year growth in soldiers seeking off-base housing. The resulting population growth figures were used to represent the rest of the regional growth. Between 2010 and 2016, it is projected that the region will experience a net population change of 81,438 persons in Pierce County and 41,576 persons in Thurston County.

The military and regional population growth allocation models, as they will further be referenced, employ slightly different methods to project locational decisions of the new population based on unique attributes of each population. For instance, the military population growth is likely to demand housing located in close proximity to JBLM, while the majority of the regional population growth will likely not use the location of JBLM as a factor in deciding where to live. The following sections describe in detail the methods utilized in each model.

a. Regional Population Allocation Model

Two regional allocation models were used to project the distribution of the population growth: one for Pierce County and one for Thurston County. REMI provides individual population growth figures for each county; therefore, these unique populations cannot be distributed outside of their respective county and demand separate allocation models. However, each allocation model is constructed in the same manner and include the same weighting factors, which aid in determining where the population is to be allocated. Weighting factors in each model include proximity to transportation networks and employment centers, cumulative test scores of school districts, and local real estate development trends.

Values assigned to each weighting factor are applied at the TAZ (transportation analysis zone) level. In the allocation models, the population growth is distributed among the different TAZs in each county. Distribution at this level provides rather specific results as there are 686 TAZs in Thurston County and 1,130 in Pierce County. The Consultant ranked the TAZs using the weighting factors to determine the “attractiveness” (or likelihood that a portion of the new population is able and will locate there) of each TAZ. Each TAZ is given a value, or score, for each weighting factor that compares it against other TAZs in the county. For instance, if TAZ A is closer to a major highway than TAZ B, then TAZ A would receive a higher score in the transportation-focused weighting factor as it is deemed more likely to attract a larger share of the incoming population. From these weighting factor scores, a final composite “attractiveness” score is provided to the TAZ, comparatively ranking the zone based on its likelihood of attracting portions of the new population. The various weighting factors are detailed in the following points. Also included are the percentages that each factor represents in the overall “attractiveness” score.

- Access to Highways (15%) – Higher scores were given to TAZs within close proximity to major thoroughfares. These scores were based on a geospatial analysis and provided the highest scores to TAZs within one mile of the major roadways. It should

¹⁴ See Economic Impact: Existing Conditions Analysis for detailed description of REMI modeling process.

also be noted that the roads identified as major thoroughfares were vetted through the TRPC and Pierce County PALS.

- Proximity to Major Employment Centers (10%)– Similar to the Highways factor, a spatial analysis was utilized to determine the distance between each TAZ and major employment centers in each county. Higher scores were given to those TAZs with close proximity. The centers were based on the clustering of commercial land uses.
- Test Scores of School Districts (5%) – RKG Associates ranked each school district by elementary school test scores provided by greatschools.com, a national non-profit organization that provides quantitative and qualitative information regarding local schools. As with other weighting factors, Pierce and Thurston County were evaluated separately so the TAZs in the highest scoring school districts in each county received the same scores.
- Submarket Lot Inventory (15%) – This factor relates to the number of permitted residential lots available in each submarket. A higher amount of permitted lots in a submarket indicates that that particular submarket likely is more ready for immediate development. The scores for each TAZ relate to the submarket it resides in.
- Submarket Housing Sales Pricing (25%) – The Consultant used a composite score that reflects average sale prices for single-family housing units and a size ratio of square footage to assessed values of single-family houses by submarket. Submarkets with lower average sale prices and higher square footages per \$100,000 (“more space per dollar”) equate to the highest scores for TAZs contained within that submarket.
- Residential Submarket Growth Trends (30%) – With a relatively short projection period (2010 – 2016), RKG analyzed the recent development trends of each submarket to gauge the immediate future growth potential. The TAZs in submarkets experiencing the highest growth rates in housing development are given the highest scores in this weighting factor.

After the composite “attractiveness” score was assigned to each TAZ, the Consultant applied additional weighted factors to further differentiate the how the incoming population would be allocated. These factors include profiles of the current population distribution in the region and projected population growth patterns. The latter of the two reflects population projections developed by TRPC and Pierce County PALS. These projections are the result of periodic population recording and updates and maintain a level of policy-oriented, aspirational growth projections. Applying the results of these projections to the allocation model inherently provides for the inclusion of local and regional land use policies. For instance, if the City of Tacoma is projected to experience high population growth rates into the immediate future according to Pierce County PALS projections, then the TAZs that comprise the city would rank slightly higher in the allocation model than TAZs in another area projected to experience lower rates. The other factor included in the allocation model, current population densities, accounts for areas with high population concentrations, which likely have established commercial, civic and service amenities that cater to the current population. TAZs in areas of higher population concentrations are provided higher scores than TAZs with lower population concentrations and likely low levels of development. These highly populated TAZs are likely to attract a larger share of the incoming population.

Lastly, much of the projected population growth will demand new housing throughout the region. RKG acknowledges that some of the incoming population will fill housing units currently vacant, but this number is likely to be relatively modest given the magnitude of the net population growth. To understand the level of population growth each TAZ can accommodate through new housing units, the Consultant calculated the available capacity of each zone by determining land resources and utilizing current zoning regulations and household sizes. The available land was identified using the current real property assessment databases provided by the respective Assessor's Offices of each county.

RKG identified non-exempt, residentially-zoned parcels of land deemed vacant, underutilized, and underdeveloped and calculated the unique acreages by TAZ. Underutilized residentially-zoned land is identified as parcels less than five acres with improvement values below \$25,000, which reflects relatively poor condition. Improvement values below \$1,000,000 on parcels greater than five acres are also identified as underutilized as these parcels likely represent single housing units on large pieces of land, which reflect substantially low densities. Underdeveloped residentially-zoned land is identified as parcels located within the Urban Growth Area (UGA) maintaining a assessed value-to-square footage ratio below a specific percentage (30% in Pierce County and 50% in Thurston County) of county-wide averages, have total improvement values above \$25,000 and structures greater than 700 square feet in size. The value-to-square footage ratio used to identify underdeveloped residential parcels in Pierce County is \$23.91/square foot and \$43.97/square foot in Thurston County.

From these figures, total capacity for new housing development was calculated for each residentially-zoned parcel by multiplying the maximum number of units allowable under current zoning guidelines by the available acreage. The capacity relating to total population each TAZ can accommodate is calculated by multiplying the number of allowable housing units in each TAZ by the average household size of each TAZ, which was provided by TRPC and Pierce County PALS. For instance, if TAZ A has 50 acres of available land with allowable densities of 8 housing units per acre and an average household size of 2.2, then TAZ A would have a total capacity to accommodate 880 new persons (50 acres x 8 units/acre x 2.2 persons/household = 880 persons). It should be noted that population growth was primarily allocated to available vacant land as "greenfield" development is a more financially profitable and viable for housing developers.

b. Military Allocation Model

RKG Associates applied the same initial weighting factors as in the regional population allocation model when allocating the incoming military population. However, an additional factor is included that accounts for the concentrations of military personnel currently living off-base. These figures were obtained through the Joint Base Lewis-McChord Base Command and reflect the most recent and relevant data on the locations of soldiers living off-base. The Consultant placed additional emphasis on these areas as they have proven to maintain amenities desirable to military personnel, whether that is proximity to the installation or other unique characteristics. In the model, the TAZs comprising areas of higher soldier population, such as Lakewood, Lacey and Spanaway, are given higher scores than those TAZs with lower concentrations, such as Rochester in Thurston County and Graham in Pierce County.

The military allocation model also accounts for projected housing tenures of the incoming population. According to data obtained from JBLM Public Works Department, the proportions among the off-base soldier population is 61% renters and 39% homeowners. The Consultant divided the total number of incoming households into potential renters and owners and developed separate models to account for each. In the renter allocation model, a stronger

weight was given to TAZs with higher population densities, which primarily represent areas with a greater number of multi-family units. In the owner allocation model a higher weight was assigned to TAZs included in areas with a higher concentration of military residents, which provides a greater sense of the preferred locations of military personnel regardless of housing tenure.

Lastly, the incoming military population and their dependents was divided into those likely to reside in Pierce County and those likely moving into Thurston County. The accounting of off-base soldier residences provided by the JBLM Public Works Department was used to calculate this division. In the two-county region, 64% of off-base military households reside in Pierce County, while the other 36% live in Thurston County. Provided this ratio is maintained into the near future, RKG Associates split the projected increase in military households by these proportions resulting in 502 military households moving into Pierce County and 283 moving into Thurston County.

2. Allocation Results

a. Regional Population Allocation Model

The regional population (less the incoming military personnel and their dependents) is projected to increase by approximately 123,000 persons between 2010 and 2016. Of this total, two-thirds (81,438 persons) will locate in Pierce County, while the remainder (41,576 persons) will locate in Thurston County (Table 30). Map 7 shows that concentrations of the population growth are likely to locate near the confluence of major roadways, such as Interstate 5 and Route 101 in Thurston County and Route 512 and Meridian Avenue (Route 161) and Route 512 and Interstate 5 in Pierce County.

In Thurston County, Lacey is estimated to capture 4.3% (5,285 persons) of the regional population growth by 2016. This reflects the largest concentration of population growth in the county. Areas within Lacey, such as Hawk's Prairie and the Horizon Point subdivision, have been developing rapidly and are expected to continue to attract new households in the short-term due largely to their nearby commercial amenities and housing affordability, respectively. It should be noted that about 22% (26,830 persons) of the regional population are projected to locate in rural, unincorporated areas of Thurston County. However, most of this growth (13.3%, 16,400 persons) is expected to locate in unincorporated areas within the Urban Growth Area, which primarily includes areas surrounding the incorporated places within the county. The TAZs that comprise this area is shown in a light gray bordered by a dotted red line in Map 7.

In Pierce County, South Hill is projected to capture the largest share of incoming military households in the two-county (8.8%, 10,783 persons) region among incorporated areas. According to local real estate professionals, much of the growth in South Hill is due to proximity to Meridian Avenue, which provides a direct route into major employment centers in King County to the north. Another area with a high population capture rate is the unincorporated area located within the UGA (19.0%, 23,361 persons). Much of this land is located along Route 512 and along Route 162 south of Bonney Lake. Additionally, most of the unincorporated area south of Bonney Lake is designated for the future Cascadia development. While this development has experienced difficulties in initial phases due largely to financial constraints of the developers, the continuing high rate of population growth in the region likely will create new demand for housing and rejuvenate this project to some extent.

Table 30
Regional Population Demand (less Off-Base Military) Capture by Place
Pierce & Thurston County, Washington; 2010-2016

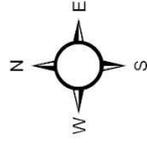
PIERCE COUNTY			THURSTON COUNTY		
Place	Total Capture	% Regional Capture	Place	Total Capture	% Regional Capture
INCORPORATED CITIES & TOWNS					
Bonney Lake	3,670	3.0%	Bucoda	73	0.1%
Buckley	542	0.4%	Lacey	5,285	4.3%
Carbonado	38	0.0%	Olympia	2,036	1.7%
DuPont	584	0.5%	Rainier	347	0.3%
Eatonville	149	0.1%	Tenino	106	0.1%
Edgewood	681	0.6%	Tumwater	2,365	1.9%
Fife	1,227	1.0%	Yelm	1,154	0.9%
Fircrest	132	0.1%			
Gig Harbor	828	0.7%			
Lakewood	561	0.5%			
Milton	745	0.6%			
Orting	1,601	1.3%			
Puyallup	2,776	2.3%			
Roy	51	0.0%			
Ruston	35	0.0%			
South Prairie	75	0.1%			
Steilacoom	306	0.2%			
Sumner	577	0.5%			
Tacoma	5,811	4.7%			
University Place	1,640	1.3%			
Wilkeson	84	0.1%			
UNINCORPORATED PLACES					
Artondale	881	0.7%	Grand Mound	584	0.5%
Elk Plain	1,595	1.3%	North Yelm	905	0.7%
Fox Island	532	0.4%	Rochester	1,555	1.3%
Frederickson	3,112	2.5%	Tanglewilde-Thompson Place	334	0.3%
Graham	1,410	1.1%			
Midland	933	0.8%			
Parkland	1,649	1.3%			
Prairie Ridge	708	0.6%			
South Hill	10,783	8.8%			
Spanaway	3,593	2.9%			
Summit	241	0.2%			
Waller	555	0.5%			
REST OF COUNTY					
Inside UGA	23,361	19.0%	Inside UGA	16,400	13.3%
Outside UGA	9,973	8.1%	Outside UGA	10,430	8.5%
TOTAL	81,438			41,576	

Source: RKG Associates, Inc., 2010

Map 7

**POPULATION GROWTH
CAPTURE BY PLACE**
(less off-base military
population growth)

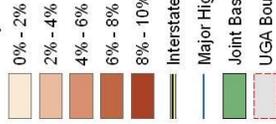
2010 - 2016



Created by:
RKG
May 2010

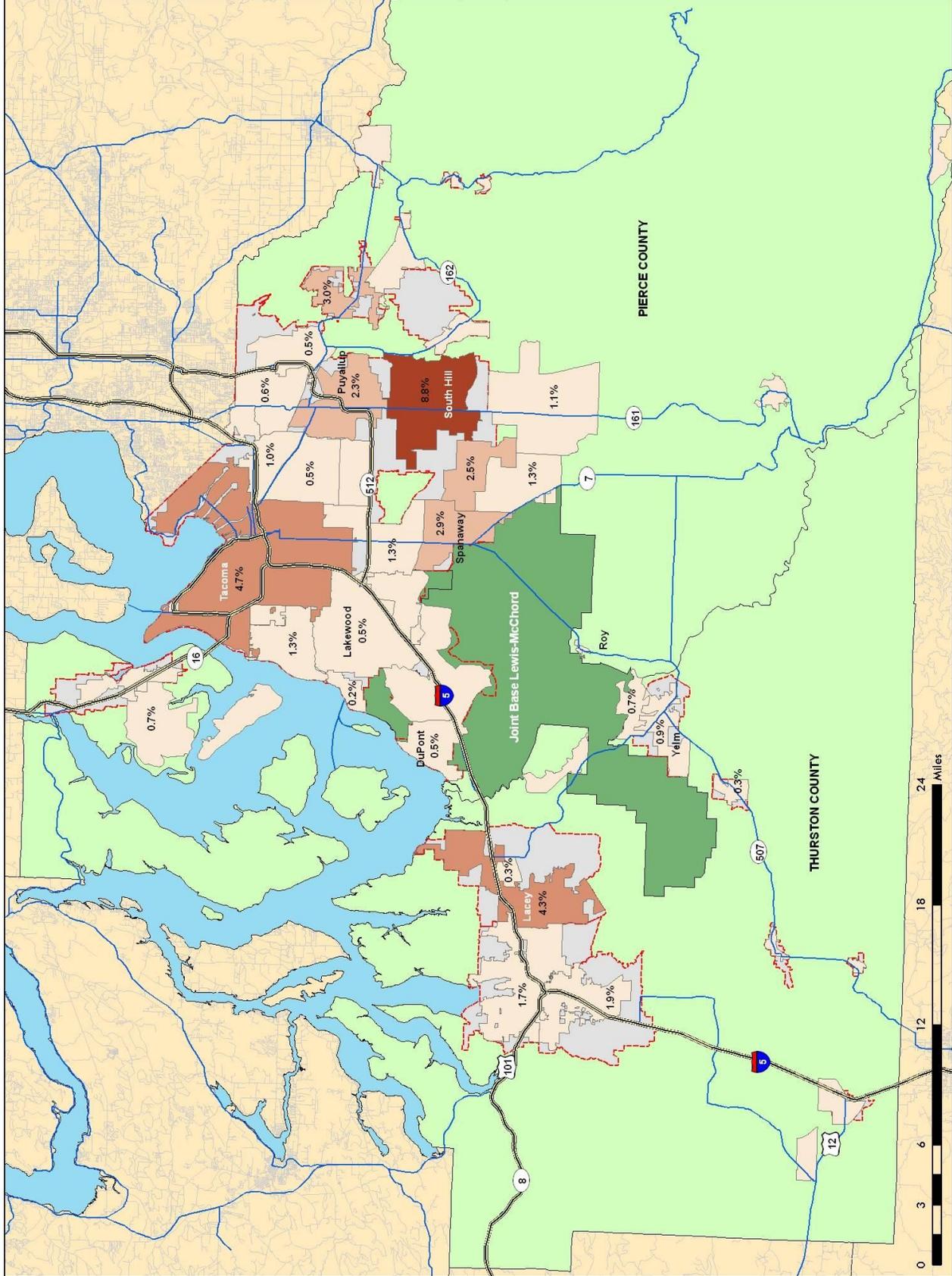
LEGEND

Percent Capture by Place



Notes:

- Unlabeled & Uncolor-coded
- Significant Capture Rates include:
19.0% - Unincorporated Pierce Co. (Inside UGA)
8.1% - Remainder of Pierce Co. (Outside UGA)
13.3% - Unincorporated Thurston Co. (Inside UGA)
8.5% - Remainder of Thurston Co. (Outside UGA)



Military Allocation Model

It is projected that 785 new soldiers will demand off-base housing near JBLM between 2010 and 2016. This soldier increase totals an estimated 2,126 net new persons after soldier dependents are included. Of this total, the majority of soldier households are projected to locate in Lacey (13.8%, 292 soldiers and dependents), Tacoma (13.1%, 277 soldiers and dependents), and Lakewood (12.3%, 261 soldiers and dependents) (Table 31). While the capture rates of these areas is high, it should be noted that each also occupy large areas of land allowing for a greater capture rate (Map 8). According to anecdotal information obtained from local real estate professionals, each of these areas is attractive to the military population for unique reasons. Easy accessibility to JBLM is often stated as a primary reason for soldiers to reside in Lakewood. Tacoma is a highly-urbanized city that provides the greatest array of entertainment and other social activities for residents, while Lacey is a rapidly growing area that is considered highly affordable.

It should be noted that other areas considered to be desirable for military personnel, such as Yelm and DuPont, are projected to capture more modest percentages of the incoming soldier population. In the short-term, Yelm is experiencing a substantial slowdown in housing development due to financial constraints of some developers as mentioned earlier in this analysis. On the other hand, DuPont is projected to capture a sizeable portion of the population (4.3%, 91 soldiers and dependents), but not at the level some real estate professionals expect. This conservative capture rate is largely due to availability of land for housing. According to the assessment database utilized in this analysis, large parcels of land located north of Center Drive, which have potential for new housing development, are currently zoned industrial. If this zoning changes in the near future, DuPont can expect to capture a higher rate of the new soldier population due largely to its proximity to JBLM.

Table 31
Off-JBLM Military Population Demand Capture by Place
Pierce & Thurston County, Washington; 2010-2016

PIERCE COUNTY			THURSTON COUNTY		
Place	Total Capture	% Regional Capture	Place	Total Capture	% Regional Capture
INCORPORATED CITIES & TOWNS					
Bonney Lake	1	0.1%	Bucoda	0	0.0%
Buckley	0	0.0%	Lacey	292	13.8%
Carbonado	0	0.0%	Olympia	141	6.6%
DuPont	91	4.3%	Rainier	1	0.1%
Eatonville	0	0.0%	Tenino	1	0.0%
Edgewood	14	0.7%	Tumwater	73	3.4%
Fife	9	0.4%	Yelm	45	2.1%
Fircrest	4	0.2%			
Gig Harbor	4	0.2%			
Lakewood	261	12.3%			
Milton	6	0.3%			
Orting	1	0.0%			
Puyallup	49	2.3%			
Roy	3	0.1%			
Ruston	2	0.1%			
South Prairie	0	0.0%			
Steilacoom	44	2.1%			
Sumner	2	0.1%			
Tacoma	277	13.1%			
University Place	97	4.6%			
Wilkeson	0	0.0%			
UNINCORPORATED PLACES					
Artondale	4	0.2%	Grand Mound	1	0.1%
Elk Plain	44	2.1%	North Yelm	5	0.3%
Fox Island	0	0.0%	Rochester	0	0.0%
Frederickson	39	1.8%	Tanglewilde-Thompson Place	16	0.7%
Graham	4	0.2%			
Midland	7	0.4%			
Parkland	29	1.4%			
Prairie Ridge	1	0.1%			
South Hill	82	3.9%			
Spanaway	64	3.0%			
Summit	13	0.6%			
Waller	15	0.7%			
REST OF COUNTY					
Inside UGA	107	5.0%	Inside UGA	117	5.5%
Outside UGA	84	4.0%	Outside UGA	71	3.4%
TOTAL	1,361	64.0%		765	36.0%

Source: RKG Associates, Inc., 2010

HOUSING

DRAFT Needs Assessment Technical Memorandum



Date: June 18, 2010
To: Housing Expert Panel: Marc Amrine, Grant Beck, Dave Bugher, James Colburn, Charlie Gray, Tami Merriman, Greta Powell, Catherine Rudolph, Tiffany Speir, Pete Swensson, Jerry Wilkins
From: RKG Associates, Inc.
Re: Housing Needs Assessment of the JBLM Growth Coordination Plan

INTRODUCTION

This technical memorandum is the second of in a series of three Housing studies prepared as part of the development of the Joint Base Lewis-McChord (JBLM) Growth Coordination Plan to be completed December 2010. The first study, the Housing Impact Existing Conditions Technical Memorandum, was issued on April 5, 2010 for the Housing Expert Panel, Growth Coordination Committee, and Regional Steering Committee to review and provide the consultant team with feedback. Input received on the Housing Impact Existing Conditions Technical Memorandum from the stakeholders engaged in this process is summarized in the following sections.

Comments from the Housing Expert Panel Meeting

RKG Associates convened a Housing Expert Panel meeting on April 16th, 2010 to discuss the findings in the Existing Conditions report. Two members of the panel were able to join the web conference. However, additional input was received via email in subsequent weeks regarding content in the report from other members of the panel and regional stakeholders with interest in the housing study. The following points highlight primary issues raised in the meeting and emails.

- Military Housing Demand - It is thought that much of the newer housing construction in the region is targeted to move-up buyers with the incoming soldier population largely filling existing

homes. This may hold true on a regional scale; however, the Existing Conditions report show prices for new homes in submarkets adjacent to JBLM, such as Spanaway/Roy and Yelm/Rainier, are generally lower than average prices countywide. This trend is due, in part, to local developments catering to the military population. In addition, two of the major homebuilders operating in the region, Quadrant and Soundbuilt, actively target the military population by constructing new homes priced appropriately for first-time homebuyers. It should also be noted that the recent decline in local home values has increased purchasing options available to the local military population.

The comment prompted RKG to further examine affordability thresholds for the military population stationed at JBLM. According to the 2008 Joint Housing Requirements Update report produced for Fort Lewis-McChord Air Force Base, it is projected that military family homeowners as a percent of all families in the study region will be higher than projected in the initial report. Much of this change is related to declining home prices and escalating military housing allowances. RKG's affordability analysis will be added to the housing existing conditions report.

- Water Rights Restrictions - Obtaining water rights for new housing development is proving difficult in some areas complicating permit approvals. This condition is most evident in areas of Thurston County, specifically Roy, Lacey and Yelm. These cities have attracted a substantial amount of military homebuyers since the recent concentrated growth began at JBLM and stakeholders involved are largely unsure how this issue will impact future development over the course of the next few years.

In response to this comment, RKG determined that the current levels of vacant lots and unsold spec homes in these cities is large enough to support the relatively low levels of future military growth anticipated between 2010 and 2016 as most of the military growth has occurred during the previous five years. However, this issue needs to be monitored closely as it is likely to impact future population allocation projections as they pertain to overall natural growth occurring in Thurston County. Additionally, the issue of available water rights is examined in further detail in the Utilities Needs Assessment.

- Current Pipeline Development - Expert panelists have a difference of opinion with respect to the absorption rate for current pipeline lot inventories. The Existing Conditions Technical Memorandum used conservative levels of absorption to project the length of time needed to fully absorb the current inventory of lots. However, some panelists believe these lots will absorb into the market faster as developer and builder financing conditions improve into the future. In addition, some stakeholders say that the lack of current permitting activity will aid in absorption as the number of available lots will decrease at a faster rate, therefore placing a premium on developing remaining lots. RKG maintains that it is important to monitor absorption levels in the regional housing market to prepare for future development patterns; however, the change in absorption is not expected to directly alter housing availability for the remaining incoming military population as local supply levels are largely adequate to absorb this growth.

Comments from the Growth Coordination Committee Meeting

RKG received comments from the Growth Coordination Committee during the meeting on April 9th, 2010. The comments from this meeting are noted in the following points.

- Residential Foreclosures - Foreclosures should be taken into consideration when analyzing availability of affordable homes for the incoming military population. The Existing Conditions Technical Memorandum does account for the level of foreclosures on a local scale in each county, which provides a sense for the impact these units have on the supply of available housing units. However, unless a foreclosed housing unit is listed for-sale by a bank or real estate broker, it typically does not have an associated list price. In fact, many of the noted foreclosures in local areas around the region do not have a list price, which complicates measuring their impact as it relates to affordability.
- Composition of Military Households – It was mentioned by a GCC member that the composition of military households can be quite different than other households. It was noted that extended family members often live with military dependents, particularly during periods of deployment. Parents, grandparents or friends move in with the family to provide support to the spouse of a military person and their children.
- Rate of Relocation of Military Households – The GCC discussed the rate of relocation occurring during the current deployment rounds. It is generally believed, and is corroborated by school enrollment numbers, that the relocation of spouses left behind during deployment is far less than historical levels. It is estimated that roughly 25% of military households with children have relocated outside the region during the current deployment round.
- Basic Allowance for Housing (BAH) - In order to receive full BAH reimbursements, commuting times from JBLM must remain at or below 60 minutes. This comment came from a representative of JBLM and was in response to the uncertainty of how housing allowances are determined. Additionally, it verifies that most urban areas in Pierce and Thurston County are eligible locations for soldiers to reside and continue to receive a monthly BAH.

As part of the scope of work, RKG Associates is projecting the locations of where the remaining incoming military population will likely choose to reside. The methodology and results of this allocation projection model are summarized later in this report. However, it is important to note that the model produced by RKG factors current concentrations of regional military population, but does not restrict where they may choose to reside in either county based on the 60-minute commute.

- Urban Redevelopment Needs - A greater emphasis will be placed on redevelopment in upcoming Growth Management Act (GMA) plans. This comment came in response to the levels of pipeline inventory for new housing reported in submarkets with modestly-sized urban cores. It is evident through examining population trends that growth in unincorporated areas is increasing at a rate that exceeds the rates of many incorporated areas. Therefore, policies are expected to be set in order to direct growth into the more established cities and towns. In conversations with planning officials and local real estate professionals occurring after the GCC meeting, it has been stated that the rapid growth in unincorporated areas is likely due, in part, to fewer regulations placed on these areas versus those of incorporated areas and the greater availability of large areas of raw land, which can be less costly than redevelopment.

Part of the population allocation model that RKG has developed for the incoming military population that will seek housing off-joint base includes a factor for redevelopment parcels with respect to available land capacity. This inclusion allows for growth to occur in heavily-urbanized areas located inside the urban growth area (UGA) that may maintain low levels of undeveloped land parcels suitable for new development.

NEEDS ASSESSMENT

This Needs Assessment intends to provide regional stakeholders a framework for how to address the greater issues relating to regional housing impacts due to growth at JBLM. The document explores needs and issues within three primary categories; [1] affordability, [2] growth projections, and [3] communication. These needs reflect the input from the Housing Expert Panelists and stakeholders involved in the regional housing market.

NEEDS ASSESSMENT METHODOLOGY

The issues and related opportunities in the Needs Assessment have been identified by the Housing Expert Panel and RKG Associates in group discussions and through one-on-one communication. The Consultant hosted an Expert Panel meeting with the goal of identifying needs on June 17. In addition to the meetings with the Expert Panel and other local stakeholders, needs are also based largely on data from the 2008 Joint Housing Requirements Update document and the growth allocation modeling process developed by RKG Associates.

The growth allocation model identifies areas in the region projected to receive the remaining incoming military population and their families choosing to live off-joint base. The total military population used in the model is derived from figures provided by the Plans, Integrations and Analysis Office of Joint Base Lewis-McChord. By identifying areas projected to capture a large share of the growth, these communities can plan accordingly. However, it is important to note that the resulting population growth figures are projections for each area and should be viewed as such.

Factors influencing the outcome projected by the model include unique variables assigned at the TAZ- (Transportation Analysis Zone) and community-level. RKG calculated available land capacities for each TAZ that include vacant and/or underutilized land parcels as well as parcels viewed as prime for redevelopment. On the demand side, competitive values (or scores) were assigned for each TAZ relating to a multitude of factors, including:

- current military residential concentrations,
- development densities, and
- housing affordability.

The model also assumes a portion of the growth will be absorbed by rental units in addition to ownership units. Therefore, it should be noted that the results of the model should not be directly translated into demand for new housing units.

Housing Affordability Needs Assessment

Needs

1. Off-Joint Base Housing Affordability - The issue of housing affordability for military personnel in the region is a concern shared by most stakeholders involved in the military growth process. Needs related to housing affordability include gaining a better understanding of the current and projected supply based on soldier income and housing allowance thresholds and identifying factors that are adversely affecting affordability. RKG Associates is in the process of developing a housing affordability analysis, which is expected to be complete in June. However, the recently published 2008 Joint Housing Requirements Update (Housing Update) provides quantitative insight into the surplus/deficit of affordable military housing available off-joint base. Lastly, many stakeholders have identified issues that are likely to inhibit growth in this market sector, which include local financial constraints in the development community and obstacles with proposed infrastructure.

A shortage exists of affordable housing units for active military residing outside JBLM according to the Housing Update. The report estimates a housing shortfall of approximately 4,600 rental units in the local market in 2010, which is defined as a 20-minute commute from principal duty stations at the installation. This shortage is determined by comparing the total available units and corresponding rent rates in the region against the specific needs and housing allowances of soldiers living off-joint base. However, this report, which was published in January 2009, quantifies the shortage in rental units but does not quantify the availability of affordable ownership units in the region. Instead, the report proposes the total number of active military homeowners based on the average home price in the region. With respect to affordable ownership opportunities in the region, the report offers a proforma analysis showing a widening affordability gap between 2009 and 2013. In short, this projection estimates an increased difficulty in obtaining homeownership during the next four years. While the next JBLM Housing Requirements report will not be conducted until 2013 at the earliest, RKG will quantify the need for additional affordable housing for the military in the June affordability analysis.

The recently documented shortage of affordable housing has been exacerbated by the slowdown in development due to financial and regulatory obstacles. As documented in the Existing Conditions Technical Memorandum, a substantial number of permitted lots have fallen into foreclosure as developers and builders have backed out of projects or filed for bankruptcy. This, in turn, hinders the pace of development as the banks that gain control of these properties have to find new buyers or develop a partnership with a builder that can proceed with construction. Other housing projects are also being delayed due to difficulties in obtaining water rights from Thurston County.

It should also be noted that anecdotal information states that complications in obtaining VA (Veteran's Administration) loans has delayed home purchasing opportunities for some military personnel and caused others to use FHA (Federal Housing Administration) loans. While this claim cannot be quantified, obtaining a publicly available loan package reduces the purchasing power of the soldier as FHA loans require a modest down payment, while VA loans do not. The complications pertaining to acquiring a VA loan are said to stem primarily from a low number of certified appraisers in the area and a lack of understanding from many lenders regarding military income sources.

Opportunities

The Housing Update does provide a clear representation of income and housing allowance thresholds of the local military population and the related affordability of housing, but the assumptions made reflect market conditions in 2008. It should be noted that the next Housing Requirements study is not expected to be conducted until 2013 at the earliest. In order to better understand the availability of affordable housing in the region, current market conditions need to be reflected as the market has steadily declined since early 2008. By providing an updated, publicly-available housing affordability analysis, the opportunity exists for local planners, housing officials from JBLM and the development community to better align housing needs of the local military population with the planning objectives of areas surrounding the installation. The results of the affordability analysis provided by RKG will provide greater insight into potential opportunities related to surplus/deficit levels of affordable housing in various areas surrounding JBLM and ways regional stakeholders can respond to these issues.

JBLM Residential Tracking Needs Assessment

Needs

2. Lack of Residency Data on JBLM Personnel - Regional stakeholders involved in the Growth Coordination Plan have stated a need for better information regarding residential locations of JBLM personnel living off-joint base. The Existing Conditions Technical Memorandum alludes to those residential submarkets that are likely location of the military population based on proximity to the installation, Realtor knowledge, and general housing affordability. However, even as these assertions of geospatial military densities are corroborated by local real estate professionals, they do not represent the actual quantity and magnitude of the military population living in these submarkets due to a lack of documented information.

Communications with representatives from JBLM reveal estimates for where the military population is residing off-joint base. However, this data reflects the entire military population stationed at JBLM and does not detail residential locations related to the population growth occurring at the installation. The Joint Base estimates that there are heavy concentrations of military personnel living in Lacey and Lakewood. The JBLM command reports that installation is currently housing approximately 24% of the JBLM personnel. This falls short of the target level of 30%, but this target may not be achievable, according to Joint Base Command due to federal funding limitations.

The need for better data tracking of military households living off-joint base is also expressed by stakeholders due to the transient nature of military soldiers and families. The perception exists that military personnel are less likely to remain in place for extended periods of time as many will be relocated to other installations or deployed for an unknown length of time, which can lead to greater housing turnover among this population. While overall population figures stationed at JBLM may remain relatively stable into the future, shifts occurring at the individual or family unit level can impact local housing markets in the region. For this reason, stakeholders believe that greater emphasis should be placed on closely documenting the residential locations of the military population living off-joint base.

RKG has developed a growth allocation model that projects where the remaining military populationscheduled to arrive to JBLM are likely to live. The results of the model reveal a projected population growth capture of military soldiers and family members by incorporated and unincorporated areas in Pierce and Thurston County. The model was designed to provide regional stakeholders and consultant team members a foundation with which to plan for the continued growth at JBLM. Between

2010 and 2016, RKG estimates that an additional 2,126 soldiers and related family members will seek housing in areas located off-joint base. This figure is based on data released by the Plans, Integration and Analysis Office of Joint Base Lewis-McChord and accounts for updated scheduled development and absorption of new housing units on the installation. Of this total, Lakewood (12.3%), Tacoma (13.1%), and Lacey (13.8%) are forecast to capture the highest rates of the incoming military population (Tables 1 & 2). It should be reiterated that these figures represent where growth is likely to be captured in the region and the results should not be viewed as direct demand for new housing as the model assumes that a portion of this growth will be absorbed by existing housing units, including those in the rental market.

Table 1
Off-JBLM Military Population Demand Capture by Place, Year over Year
Pierce County, Washington

Place	2010	2011	2012	2013	2014	2015	2016	TOTAL CAPTURE	REGIONAL CAPTURE
INCORPORATED CITIES & TOWNS									
Bonney Lake	0	(1)	(0)	2	(0)	(0)	(0)	1	0.1%
Buckley	0	(0)	(0)	0	(0)	(0)	(0)	0	0.0%
Carbonado	0	(0)	(0)	0	(0)	(0)	(0)	0	0.0%
DuPont	28	(58)	(29)	159	(0)	(8)	(1)	91	4.3%
Eatonville	0	(0)	(0)	0	(0)	(0)	(0)	0	0.0%
Edgewood	4	(8)	(4)	23	(0)	(1)	(0)	13	0.6%
Fife	3	(7)	(4)	19	(0)	(1)	(0)	11	0.5%
Fircrest	3	(5)	(3)	15	(0)	(1)	(0)	9	0.4%
Gig Harbor	1	(2)	(1)	6	(0)	(0)	(0)	4	0.2%
Lakewood	78	(160)	(81)	440	(1)	(23)	(2)	252	11.8%
Milton	2	(4)	(2)	10	(0)	(1)	(0)	6	0.3%
Orting	0	(0)	(0)	1	(0)	(0)	(0)	0	0.0%
Puyallup	15	(31)	(16)	85	(0)	(4)	(0)	49	2.3%
Roy	1	(2)	(1)	4	(0)	(0)	(0)	2	0.1%
Ruston	0	(1)	(0)	3	(0)	(0)	(0)	2	0.1%
South Prairie	0	(0)	(0)	0	(0)	(0)	(0)	0	0.0%
Steilacoom	13	(27)	(14)	75	(0)	(4)	(0)	43	2.0%
Sumner	1	(1)	(1)	4	(0)	(0)	(0)	2	0.1%
Tacoma	99	(202)	(102)	552	(1)	(28)	(2)	316	14.8%
University Place	29	(58)	(30)	161	(0)	(8)	(1)	92	4.3%
Wilkeson	0	(0)	(0)	0	(0)	(0)	(0)	0	0.0%
UNINCORPORATED PLACES									
Artondale	1	(2)	(1)	7	(0)	(0)	(0)	4	0.2%
Elk Plain	13	(27)	(14)	75	(0)	(4)	(0)	43	2.0%
Fox Island	0	(0)	(0)	0	(0)	(0)	(0)	0	0.0%
Frederickson	12	(24)	(12)	66	(0)	(3)	(0)	38	1.8%
Graham	1	(2)	(1)	6	(0)	(0)	(0)	4	0.2%
Midland	2	(4)	(2)	12	(0)	(1)	(0)	7	0.3%
Parkland	8	(17)	(8)	46	(0)	(2)	(0)	26	1.2%
Prairie Ridge	0	(1)	(0)	2	(0)	(0)	(0)	1	0.1%
South Hill	24	(50)	(25)	138	(0)	(7)	(1)	79	3.7%
Spanaway	20	(40)	(20)	110	(0)	(6)	(0)	63	2.9%
Summit	4	(8)	(4)	21	(0)	(1)	(0)	12	0.6%
Waller	4	(9)	(5)	25	(0)	(1)	(0)	14	0.7%
REST OF COUNTY									
Inside UGA	31	(63)	(32)	172	(0)	(9)	(1)	99	4.6%
Outside UGA	25	(51)	(26)	140	(0)	(7)	(1)	80	3.8%
TOTAL	425	(867)	(439)	2,380	(5)	(123)	(10)	1,361	

Source: Joint Base Lewis-McChord Plans, Analysis and Integration Office & RKG Associates, Inc., 2010

Table 2
Off-JBLM Military Population Demand Capture by Place, Year over Year
Thurston County, Washington

Place	2010	2011	2012	2013	2014	2015	2016	TOTAL CAPTURE	% REGIONAL CAPTURE
INCORPORATED CITIES & TOWNS									
Bucoda	0	(0)	(0)	1	(0)	(0)	(0)	0	0.0%
Lacey	92	(187)	(95)	512	(1)	(26)	(2)	292	13.8%
Olympia	44	(89)	(45)	246	(1)	(13)	(1)	141	6.6%
Rainier	0	(1)	(0)	3	(0)	(0)	(0)	1	0.1%
Tenino	0	(0)	(0)	1	(0)	(0)	(0)	1	0.0%
Tumwater	23	(46)	(24)	128	(0)	(7)	(1)	73	3.4%
Yelm	14	(29)	(15)	79	(0)	(4)	(0)	45	2.1%
UNINCORPORATED PLACES									
Grand Mound	0	(1)	(0)	2	(0)	(0)	(0)	1	0.1%
North Yelm	2	(3)	(2)	9	(0)	(0)	(0)	5	0.3%
Rochester	0	(0)	(0)	0	(0)	(0)	(0)	0	0.0%
Tanglewilde-Thompson Place	5	(10)	(5)	28	(0)	(1)	(0)	16	0.7%
REST OF COUNTY									
Inside UGA	37	(75)	(38)	205	(0)	(11)	(1)	117	5.5%
Outside UGA	22	(45)	(23)	125	(0)	(6)	(1)	71	3.4%
TOTAL	239	(487)	(247)	1,339	(3)	(69)	(6)	765	

Source: Joint Base Lewis-McChord Plans, Analysis and Integration Office & RKG Associates, Inc., 2010

Opportunities

Stakeholders believe that enhanced planning opportunities exist for individual communities if the residential locations of the growing military population were to be properly quantified and projected. For instance, school boards and public safety officials would likely to be better suited to prepare and respond to changes in anticipated levels of service as shifts in the local military population occur. While data relating to occupied housing by the military is not readily tracked in every community for these purposes, opportunities to capture this data exist through secondary sources. Stakeholders have mentioned possibly collecting data related to occupied military housing by building relationships with lending institutions that specialize in VA loans and property managers that maintain high levels of military tenants. However, as stated earlier in this report, some of the military population has recently strayed from obtaining VA loans so the comprehensiveness of this data is unknown.

Increased JBLM Coordination Needs Assessment

Needs

3. Communication and Coordination - Expert panelists have emphasized the need for JBLM to better communicate anticipated military growth figures and deployment schedules as these population shifts can greatly impact the local housing market. For instance, most stakeholders were unaware that the approximately 17,000 soldiers deployed are anticipated to return in full by October 2010. Additionally, many stakeholders want to know the percentage of those soldiers returning with previously established residences in the area compared to those that would be searching for new living quarters. Estimates provided by JBLM indicate that roughly 75% of military families are thought to remain in the region during deployment periods. However, this estimate does not account for those unaccompanied soldiers that were deployed and are expected back soon. As

such, data pertaining to substantial changes in area military population can have a significant effect on housing demand in the region.

In researching data for the Existing Conditions Technical Memorandum, military growth projections provided by JBLM changed depending on the source and/or time the data was requested. It was stated multiple times by housing and administrative representatives at JBLM that these projections are constantly in a state of flux and reflect changes in programs and decisions at the federal level. Stakeholders claim this uncertainty provides additional obstacles in attempting to plan for future growth potential in the region.

One factor that shows the impact of changes in military population at the local level is reported vacancy rates in multi-family rental units located near JBLM. In 3rd quarter 2009, vacancy rates in regional multi-family rental units were reported at a near five-year high according to Dupre + Scott Apartment Advisors. At this time, the percentage of soldiers deployed from the installation was also at a high. Additionally, the highest vacancy rates were found to be in submarkets located close to JBLM that are reportedly popular with JBLM personnel, such as Lacey (10.4%), Lakewood (13.3%), and South Tacoma (10.6%). RKG does not assume that proprietors of these facilities were unaware of the pending deployment schedule. However, this data should be readily available to those stakeholders in surrounding communities with a financial investment in the presence of the military population so proper preparation techniques can be employed to anticipate the shifts in military population.

Communication breakdowns have also occurred in reporting housing development activity on JBLM. The Existing Conditions Technical Memorandum states that an additional 313 units are to be developed by fiscal year 2012; however, this figure has recently changed after a discussion with another consultant, Davis Demographics. The figure reported in the memo does not reflect another community proposed for development in the northern portion of JBLM, which will account for an additional 250 units. Even the 250 unit figure is not finalized as it has reported ranged from approximately 200 to 500 units during the past few months. Discrepancies such as misreported and/or shifting unit counts for on-joint base housing developments are likely to greatly impact private-sector housing development programs as competition will increase or decrease. It should be noted that this change will be rectified in the Existing Conditions of the Draft JBLM Growth Coordination Plan.

Opportunities

Most stakeholders are aware of the changing military population figures, but express a desire for an official figure reflecting population projections to be released on a consistent basis. Clearly understanding the population projections and JBLM housing development program allows planners and local real estate professionals to properly adjust their projections and development schedules, respectively. An opportunity exists to create new relationships (or reinforce older ones) between military officials at JBLM and regional stakeholders that rely on credible projection data from the installation. During the Growth Coordination Plan research process, RKG has been established as a de facto source of JBLM information for some public officials and stakeholders. Introducing the public sector stakeholders with appropriate officials at JBLM should rank as a priority so open communication can continue after the planning process is complete.

Expert panelists suggest creating official growth and deployment figures to be released by a single department at JBLM responsible for maintaining these figures. Establishing this point of contact would

likely eliminate much of the confusion regarding varying figures as other departments at JBLM would know to refer potential requests to this person or office. Furthermore, updating the figures on a regular basis would also alleviate potential confusion among parties relying on these figures. A regular update would also reinforce the fluidity that occurs at the installation pertaining to personnel movements.

SUMMARY OF NEEDS ASSESSMENT

The primary needs identified through expert panel and stakeholder discussions are listed below along with opportunities related to each need. RKG Associates intends to continue to work with stakeholders to suggest and identify potential strategies to address each need in future Housing Expert Panel meetings. In these subsequent meetings, a greater understanding of housing affordability among military personnel will be established and final vetting of the military growth allocation model will be complete.

REFERENCES

Robert D. Niehaus, Inc. 2008 Joint Housing Requirements Update, Fort Lewis-McChord AFB Washington. Prepared for Headquarters, Department of the Army, Assistant Chief of Staff for Installation Management. January 14, 2009.

Need	Opportunities/Challenges	Potential Strategies	Ranges (High, Mid, Low)			Estimated Cost	Partners	Implementation Timing	Action Steps
			Need	Benefit	Cost				
Track the location, residential, needs and preferences of military personnel living off-base	<p><u>Opportunity</u> – To prepare real estate professionals and planners for upcoming shifts in military population and changing housing needs of military personnel</p> <p><u>Challenge</u> – Contact may prove difficult as residential locations of the military population living off-base are largely unknown</p>	1. Create an address database of military personnel living off-base that would coordinate with direct deposit process or other sources	High	Mid	Low	\$0 to \$25,000	<p><u>Lead:</u> Implementation LRA, JBLM-Garrison Command</p> <p><u>Other Key Partners:</u> JBLM (DHR, Finance, DES, NEC), Rental Housing Association, Master Builders Association of Pierce County and Olympia Master Builders</p>	0-2 years	<ul style="list-style-type: none"> • Arrange coordination meeting with key partners • Strategize the best methods for collecting data • Make recommendation to JBLM Command • Commence data gathering
		2. Conduct survey of soldiers through JBLM Housing Office and property managers living off-base within the region	Mid	Mid	Low	\$0 to \$25,000	<p><u>Lead:</u> Implementation LRA, JBLM-Garrison Command</p> <p><u>Other Key Partners:</u> JBLM (DHR, Finance, DES, NEC), Rental Housing Association, Master Builders Association of Pierce County and Olympia Master Builders</p>	3-5 years	<ul style="list-style-type: none"> • Arrange coordination meeting with key partners • Discuss survey objectives, methods and questions to ask • Seek JBLM approval • Hire local university to conduct survey on periodic basis (every 5 years) • Conduct survey
		3. Market the results of military housing survey to members of the real estate community	High	Mid	Low	\$0-\$25,000	<p><u>Lead:</u> Implementation LRA, Association of Realtors</p> <p><u>Other Key Partners:</u> Rental Housing Association, Chambers of Commerce, Master Builders Association of Pierce County and Olympia Master Builders</p>	0-2 years	<ul style="list-style-type: none"> • Hire local university to prepare executive summary of survey results for broad distribution • Post results on various partner websites
Communicate military growth figures and service impacts to public, private and military sectors	<p><u>Opportunity</u> – To develop and build local and regional partnerships to convey and transfer information and keep the community informed</p> <p><u>Challenge</u> – Growth figures may change regularly based on DoD mission changes</p>	4. Establish periodic (quarterly or semi-annually) memorandums or press releases to be released to the public regarding expansion or contraction of personnel levels	Mid	Mid	Low	\$0-\$25,000	<p><u>Lead:</u> JBLM Public Affairs Office, Chambers of Commerce</p> <p><u>Other Key Partners:</u> Implementation LRA, Master Builders Association of Pierce County and Olympia Master Builders</p>	0-2 years	<ul style="list-style-type: none"> • Arrange coordination meeting with key partners • Agree on content of press release • Set up schedule for disseminating information from JBLM to Implementation LRA or designee
Transparency of deployment & redeployment schedules for military personnel stationed at JBLM	<p><u>Opportunity</u> – Enable real estate professionals and rental managers time to prepare for shifts in regional population and demand</p> <p><u>Challenge</u> – Tracking mobilization of locally</p>	5. Establish periodic (quarterly or semi-annually) press release to the public regarding mobilization JBLM personnel	High	High	Low	\$0-\$25,000	<p><u>Lead:</u> JBLM-Public Affairs Office, Directorate of Plans, Training, Mobilization and Security (DPTMS), Chambers of Commerce</p>	0-2 years	<ul style="list-style-type: none"> • Establish communication chain and ground rules for releasing data • Agree on content of press release • Announce press release at scheduled meetings and release to press when available

HOUSING NEEDS STRATEGIES

JLBM Growth Coordination Plan

	<p>stationed military personnel is subset to overall mobilization schedule, which includes military personnel from other installations moving through JBLM</p> <p><u>Challenge</u> – Mobilization schedules are constantly in flux and are often classified</p>	<p>6. Connect JBLM officials with local Realtors, developers, and property manager to inform them how mobilizations may impact local housing</p>	High	Mid	Low	\$0-\$25,000	<p><u>Other Key Partners:</u> Implementation LRA, Master Builders Association of Pierce County and Olympia Master Builders, Rental Housing Association</p> <p><u>Lead:</u> Implementation LRA, JBLM Public Affairs Office</p> <p><u>Other Key Partners:</u> Association of Realtors, Chambers of Commerce, Builders Association of Pierce County and Olympia Master Builders, Rental Housing Association</p>	0-2 years	<ul style="list-style-type: none"> For major deployments and redeployments, hold coordination meeting sponsored by partners to inform the public about the range of potential impacts.
<p>Increase supply of quality of multi-family rental housing units in areas close to the base and with rent rates corresponding to military BAHs</p>	<p><u>Opportunity</u> – Focus higher density, affordable housing options within five miles of JBLM</p> <p><u>Challenge</u> – Demand for housing in region is largely for single-family ownership units, which may turn from ownership to rental due to lack of desired rental units</p> <p><u>Challenge</u> – Demand for larger units (3+ bedrooms) is high, but units are in short supply</p>	<p>7. Work with developers to increase supply of high density rental housing near JBLM</p>	Mid	Mid	Mid	\$100,000-\$500,000	<p><u>Lead:</u> Implementation LRA, Builders Association of Pierce County and Olympia Master Builders</p> <p><u>Other Key Partners:</u> local planners, real estate developers</p>	5-10 years	<ul style="list-style-type: none"> Work with local planners to incorporate higher density rental housing within close proximity of JBLM in growth management and comprehensive plans Prepare local redevelopment plans to identify vacant or redevelopment sites that could support higher density residential development. Establish or redirect a local redevelopment authority to spearhead projects in different jurisdictions. Inform builders/developers about how to get involved with JBLM efforts (Housing Services, other entity?) to house its service people & their dependents Make developers aware of housing demand price points and BAH payments
		<p>8. Appoint a JBLM representative to communicate changes in off-base housing needs</p>	Mid	Mid	Low	\$0-\$25,000	<p><u>Lead:</u> JBLM – Public Affairs,</p> <p><u>Other Key Partners:</u> Chambers of Commerce, Implementation LRA, and planning departments</p>	0-2 years	<ul style="list-style-type: none"> Host a quarterly meetings of Implementation LRA that includes a JBLM briefing about housing needs and other topics Make developers aware of housing demand price points and BAH payments